978-81-970087-5-7

INDRA GANESAN COLLEGE OF ENGINEERING

Madurai Main Road(NH-45B)Manikandam,Tiruchirapalli-620012

INTERNATIONAL CONFERENCE ON APPLIED SCIENCE AND TECHNOLOGY (ICOASAT-2021)

19-02-2021

CONFERENCE PROCEEDINGS

ACADEMIC YEAR 2020-2021

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

Preface

The "International Conference on Recent Advances in Applied Science and Technology" is being organized by IGCE, Trichy, Tamil Nadu dated 19/02/2021.

IGCE has a sprawling student friendly campus with modern infrastructure and facilities which complements the society and scrutiny of the major city of Trichy.

The, International Conference on Recent Advances in Applied Science and Technology was a notable event which brings academic, researchers, Engineers, industry experts and students together.

The purpose of the conference is to discuss applications and developments in the field of Engineering and Technology Education which may can gives international values. Through proper scrutiny and prier reviewer quality papers were recommended by the conference committee. The conferences apply focuses on the tools and techniques for the development on current technology.

We are indebted to the efforts of all the reviewers who undoubtedly have raised the quality of the proceedings. We are earnestly thankful to all the authors who have contributed their research works to the conference. We thank our management for their support and encouragement. We thank our principal for his guidance. We are also thankful for the cooperative advice from our advisory chairs and co-chairs. We thank all the members of our local organizing committee National and International Advisory committee

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

Director's Desk

IGCE, Campus is always a buzz with a plethora of activities and her become a dynamics venue where academic excellence take part in all domains and this conference helps to start the vast reserves of knowledge and skills of the participants & scholars. It gives me immense pride to state that as a result of the collective effort of the faculty students over the past few years. Experts from reputed institutes and organization delivered talks on wide-ranging topics and brought fresh insights into various filed of learning.As part of our vision to incorporate relevance and symbiosis in technical education an innovative initiate was launched through this conference.Education is what we imbibe from our books, our peers our teachers and our surroundings. As we move towards our goals, we must always keep in mind that we owe more to the world than it owes us. Each of us can and must contribute and help to build a universe that will nurture our future generation.

978-81-970087-5-7

Secretary Message

I am pleased to have the opportunity to welcome you to the conference on "International Conference on Recent Advances in Applied Science and Technology" in IGCE. Our country is continuously striving with crisis in various technical fields because of increase in population and industries, commercial and residential demands are more. This conference would be one of the steps to motivate the researches to think and work to remove this social hazard.I believe that is this conference, the delegates from different parts of the country would exchange their views and explore regarding efficient, secure and reliable researchers to overcome the hazards. Iexpress my gratitude to everyone who involved in making this conference a great successful.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

978-81-970087-5-7

Principal Message

I extend my warm greetings to the invites, as per quality educations and to improve the standard an institution has to develops research and development and this conference paves the way for it I hope.

There are various pillars of the education system in a nation, we have invited eminent dignitaries from different sectors to get a better understanding of these pillars of the education system and the several strategies involved.

We wish to welcome eminent experts come speakers and participants of various fields for this meeting hub who are here to make the conference delightful

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

978-81-970087-5-7

Table of Contents

13	Design Of Sedimentation Tank To Resuscitate Phytoremediation In Overloaded Obafemi Awolowo Sewage [1] Ms G Bharani, [2] Ms E Vinodha, [3] Saleem Khan
14	Some Later Ages Structural Characteristics Of Concrete Containing Empty Palm Oil Fruit Brunch Ash (Epo-Fba) As Partial Replacement Of Ordinary Portland Cement [1] Ms E Vinodha, [2] Thirupathi Raja G, [3] Joel Fernadaz
15	Pozzolanic And Mechanical Properties Of Date Palm Seed Ash (Dpsa) Concrete [1] Mr R Sivashankar, [2] Ms K Gayathri, [3] S Navaneethan Krishnan
16	Performance Of Concrete Made With Coconut Shell Ash (Csa) As An Admixture In Acidic Environment [1] Mr K Saravanan, [2] Gurusamy G, [3] Kokila P
17	Analysis Of The Effect Of Polypropylene Polymer (Crushed Plastic Waste) On Oven Dried Laterite Bricks [1] Mr S Dineshkumar, [2] Mr K Saravanan, [3] Arockia Raj
18	Effect Of Coconutshell Ash (Csa) As An Admixture On The Properties Of Cement Paste And Concrete [1] Mr K Sengottain, [2] Aishwarya, 3 Joel Fernadaze
19	Study Of Hydraulic Jump In A Rectangularflume By Comparing Rectangular Block Wier And Sluice Gate [1] Mr S Ramalingam, [2] Ms K Gayathri, [3] Arunkumar
20	Study Of Hydraulic Jump In A Rectangularflume By Comparing Rectangular Block Wier And Sluice Gate [1] Mr M Kaliraj, [2] Krishnaveni, [3] Aishwarya P
21	Geotechnical Characterization Of Laterites Stabilised With Sawdust Ash-Lime As Subgrade Material In Road [1] Ms K Gayathri, [2] Arunkumar, [3] Thirupathy
22	Analysis Of Sandcrete Block Production By Using Different Sources Of Sharp Sands In Some Parts Of South-East Geo-Political Zones. A Case Study Enugu And Ebonyi State [1] Ms G Bharani, [2] Ms E Vinodha, [3] Mahendran M
23	Integrated Solar And Hydraulic Jump Enhanced Waste Stabilization Pond [1] Ms E Vinodha, [2] Kokila, [3] Thamariselvi
24	Deep Learning Approaches For Image Deblurring And Super-Resolution 1Dr.P.Subharajam,. 2Arun R
25	Content-Based Image Retrieval Using Feature Extraction And Machine Learning 1.Dr.P.Subharajam,2. 2.Balamanikandaprabhu B R

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

26	**Semantic Role Labeling For Improved Understanding Of Textual Information** 1. Dr.P.Subharajam,2. Bharathi S
27	**Cross-Lingual Sentiment Analysis: Challenges And Solutions** 1. Dr.P.Subharajam,2. Gowtham C
28	**Context-Aware Neural Machine Translation For Multimodal Conversational Interfaces** 1. Dr.P.Subharajam,2. Indhumathi S
29	**Biometric Recognition Systems: Advancements In Face And Iris Recognition** 1. Dr.K. Pandiyarajan,2. Ishwarya P
30	**Anomaly Detection In Surveillance Videos: Leveraging Machine Learning Techniques** 1Dr.K. Pandiyarajan,2Kalaiyarasan V
31	**Image Forgery Detection And Authentication Using Digital Forensics** 1. Dr.K. Pandiyarajan,2. Keerthika K
32	**Sarcasm Detection In Social Media Text: A Deep Learning** 1. Dr.K. Pandiyarajan,2. Keerthika V
33	**Explainable Nlp Models: Interpretable Outputs For Enhanced User Trust** 1. Dr.K. Pandiyarajan,2. Krishi Gowtham R
34	**Fusion Of Multimodal Imaging For Improved Diagnosis In Healthcare** 1. Mrs.D.Indra Devi,2. Logadipa Sp
35	**Efficient Image Compression Algorithms For Transmission In Resource-Constrained Environments** 1. Mrs.D.Indra Devi,2. Mohamed Nowsath M
36	**Object Detection And Recognition In Aerial Imagery: Applications In Remote Sensing** 1. Mrs.D.Indra Devi,2. Moorthi C
37	**Transformative Trends In Pre-Trained Language Models: A Comprehensive Survey"** 1. Mrs.D.Indra Devi,2. Nancy C
38	**Emotion Analysis In Textual Data: Towards Human- Centric Ai Systems** 1. Mrs.D.Indra Devi,2. Praveen K
39	**Named Entity Recognition In Biomedical Text: Applications In Health Informatics"** 1. Mr.S.Vimalathithan,2. Ranjana S

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

40	Event Extraction From News Articles: Towards Real-Time Information Retrieval 1. Mr.S.Vimalathithan,2. Ravinya K
41	Neural Language Models For Code Generation: Bridging The Gap Between Natural Language And Programming Languages 1. Mr.S.Vimalathithan,2. Sakthivel M
42	Association Rule Mining In Big Data: Scalability And Performance Optimization" 1. Mr.S.Vimalathithan,2. Saranya P
43	Predictive Modeling For Customer Churn Analysis: A Comparative Study Of Machine Learning Algorithms 1. Mr.S.Vimalathithan,2. Suvalakshmi P
44	Semantic Role Labeling: Deep Learning Approaches For Accurate Verb Argument Structure Identification" 1. Mr.C.Jegadeesan,2. Sweatha B
45	Sentiment Analysis In Social Media: Harnessing The Power Of Deep Neural Networks 1. Mr.C.Jegadeesan,2. Vigneshwaran V
46	Cross-Lingual Named Entity Recognition: A Comparative Study Of Multilingual Nlp Models 1. Mr.C.Jegadeesan,2. Vijayalakshmi B
47	Mining Temporal Patterns In Time-Series Data: Applications And Challenges 1. Mr.C.Jegadeesan,2. Vincy Sharmila K
48	Privacy-Preserving Data Mining Techniques: Balancing Utility And Confidentiality 1. Mr.C.Jegadeesan,2. Yathesh M
49	Contextual Word Embeddings: Advances In Pre- Trained Language Models 1. Mr.P.Suresh Pandi, 2. Akshaya T
50	Dialogue Systems For Virtual Assistants: Enhancing Natural Language Understanding And Generation 1. Mr.P.Suresh Pandi,2. Appas Ali D
51	Clustering High-Dimensional Data: Novel Approaches For Improved Accuracy 1. Mr.P.Suresh Pandi, 2. Aravindh V K
52	Feature Selection In Data Mining: Enhancing Model Interpretability And Performance 1. Mr.P.Suresh Pandi, 2. Ayisha Siddeequa A

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012
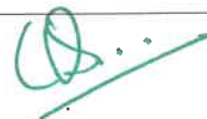
66	User Behavior Analysis In E-Commerce: A Web Mining Approach 1. Mr.S.Manikandan,2. Hariharan K
67	Web Structure Mining: Uncovering Patterns In Hyperlink Networks 1. Mr.S.Manikandan, 2. John P
68	Mobile Augmented Reality: Frameworks, Applications, And User Experience 1. Mr.S.Manikandan, 2. Kamali A
69	Temporal Data Mining: Analyzing Time Series Patterns For Predictive Modeling 1. Ms.G. Abinaya, 2. Kamatchi S
70	Mining Social Media Data For Opinion Analysis And Trend Prediction 1. Ms.G. Abinaya, 2. Keerthika N
71	Feature Selection And Dimensionality Reduction In High-Dimensional Data Sets 1. Ms.G. Abinaya, 2. Kiruthika M
72	Personalized Recommender Systems In Web Mining: Algorithms And Evaluation 1. Ms.G. Abinaya, 2. Mathavan N
73	Opinion Mining And Sentiment Analysis On Social Media: A Web Mining Perspective 1. Ms.G. Abinaya,2. Milton A
74	Mining Sequential Patterns In Time-Stamped Databases: Applications In Customer Behavior Analysis 1. Mrs.A.Suganya,2. Vijaya Dharani K
75	Fraud Detection In Financial Transactions: A Comparative Study Of Data Mining Approaches 1. Mrs.A.Suganya,2. Vinothini S
76	Ensemble Learning In Data Mining: Integrating Multiple Models For Improved Predictive Accuracy 1. Mrs.A.Suganya,2. Sivasangari C
77	Discovering Patterns In Big Data: Scalable Algorithms For Association Rule Mining 1. Mrs.A.Suganya,2. Monisha R
78	"Clustering Techniques For Anomaly Detection In Cybersecurity Data" 1. Mrs.A.Suganya,2. Priya P

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

53	Sequential Pattern Mining In Healthcare Data: Discovering Disease Progression Patterns 1. Mr.P.Suresh Pandi,2. Benasir S
54	Automatic Text Summarization: Extractive Vs. Abstractive Approaches 1. Mrs.A.Ramya,2. Ramya R
55	Bias And Fairness In Nlp: Addressing Ethical Concerns In Language Models 1. Mrs.A.Ramya,2. Sharvesh Charan.S.A
56	Anomaly Detection In Network Intrusion Data: A Machine Learning Perspective 1. Mrs.A.Ramya,2. Sharvesh Charan.S.A
57	Stream Data Mining: Real-Time Analysis And Pattern Recognition 1. Mrs.A.Ramya, 2. Shalini P 2.
58	Web Usage Mining For Improving Website Navigation And User Experience 1. Mrs.A.Ramya, 2. Shanmuganathan P
59	Neural Machine Translation: Improving Translation Quality Through Attention Mechanisms 1. Ms.J.Jenifer,2. Sheela.S
60	Coreference Resolution In Text: An Exploration Of Rule-Based And Machine Learning Approaches 1. Ms.J.Jenifer, 2. Sudhakaran C
61	Sarcasm Detection In Text: Challenges And Solutions In Nlp 1. Ms.J.Jenifer,2. Sugasini.G
62	Predictive Analytics In Healthcare: Mining Electronic Health Records For Disease Prediction 1. Ms.J.Jenifer, 2. Vaishnavi G
63	Discovering Patterns In Big Data: Scalable Algorithms For Association Rule Mining 1. Ms.J.Jenifer,2. Vigna Sri S
64	Clustering Techniques For Anomaly Detection In Cybersecurity Data 1. Mr.S.Manikandan, 2. Gnanaprakasam A
65	Web Content Mining: Extracting Knowledge From Textual Data On The Internet 1. Mr.S.Manikandan,2. Gowrisankar G

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

92	Context-Aware Mobile Applications: Leveraging Sensor Data For Intelligent Interaction 1. Mr.N. Mohanprabhu,2. Madhavan S
93	5g And Beyond: Enabling Technologies And Applications For Next-Generation Mobile Networks 1. Mr.N. Mohanprabhu,2. Mahendran S
94	Web Usage Mining For Personalized Content Recommendation Systems 1. Mrs.D.B.Rena,2. Muthaiya P
95	Mining Social Media For Opinion Analysis And Sentiment 1. Mrs.D.B.Rena,2. Neethimozhi A
96	Deep Learning Approaches For Image And Text Mining On The Web 1. Mrs.D.B.Rena,2. Nithya P
97	Temporal Evolution Of Web Data: Techniques For Mining Temporal Patterns 1. Mrs.D.B.Rena,2. Nivedha S
98	Privacy-Aware Web Mining: Balancing Personalization And User Privacy 1. Mrs.D.B.Rena,2. Priyanga.G
99	Design Of Low Power And Area Efficient 16 Bit Carry 1. Dr.1N.Vaijayanthi , 2A.R.Manikandan
100	Automatic Insulin Infusion With Glucose Monitoring And Measurement Of Physiological Ranges 1. Dr.N.Vaijayanthi
101	Fpga Implementation Of Wave Pipelined Circuits For Equalizer 1. Mr.B.G.Gopal, 2. P.Venkatesan
102	Autonomous Anti-Missile Defense System Using Pan-Tilt Interceptor Firing 1. Mr.B.G.Gopal1
103	Low Power And High Efficient Implementation Of Radix- Ns Mdc Scheme For Ofdm Systems 1. Dr.M.Bhuvaneswari ,2M.Sathya
104	Convolutional Neural Network Based Soil Classification And Crop Recommendation System 1. Dr.M.Bhuvaneswari
105	Design Of Low Power Comparators For Adc Application 1. Ms.R.Bhuvaneswari,2.N.Anbu Selvi
106	Development And Testing Of Remotely Operated Vehicle For Instruction Of Offshore Renewable Devices 1. Ms.R.Bhuvaneswari

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

79	Privacy-Preserving Data Mining: Techniques For Analyzing Sensitive Information Without Compromising Privacy 1. Dr.G.Balakrishnan,2. Aishwarya M
80	Fraud Detection In Financial Transactions: Anomaly Detection And Pattern Recognition" 1. Dr.G.Balakrishnan,2. Ajith Kumar R
81	Text Mining For Information Extraction: Extracting Insights From Unstructured Textual Data 1. Dr.G.Balakrishnan,2. Aravindh Samy P
82	Stream Data Mining: Real-Time Analysis Of Big Data Streams 1. Dr.G.Balakrishnan,2. Arjun V
83	Semantic Web Mining: Enhancing Information Retrieval Through Ontologies 1. Dr.G.Balakrishnan,2. Dharshini A
84	Cross-Domain Web Mining: Knowledge Transfer And Adaptation 1. Mrs.Hussain Bibi Sikkandar,2. Dinesh Kumar K
85	Mining Temporal Patterns In Time-Series Data: Applications In Predictive Maintenance 1. Mrs.Hussain Bibi Sikkandar,2. Gowtham K
86	Dynamic Web Content Classification: Handling Evolving Information On The Internet 1. Mrs.Hussain Bibi Sikkandar,2. Hariharan N
87	Web Mining For Cybersecurity: Detecting And Preventing Web-Based Threats 1. Mrs.Hussain Bibi Sikkandar,2. Hema Latha B
88	Security And Privacy Challenges In Mobile Health Applications: A Comprehensive Study 1. Mrs.Hussain Bibi Sikkandar,2. Jegathiswari.D
89	"Predictive Analytics For Customer Churn: A Comparative Study Of Machine Learning Algorithms" 1. Mr.N. Mohanprabhu,2. Joshi Dayana K
90	Energy-Efficient Algorithms For Mobile Device Communication In Iot Networks 1. Mr.N. Mohanprabhu,2. Kanagaraj K S
91	Mobile Edge Computing: Enhancing Performance And Reliability In Mobile Networks 1. Mr.N. Mohanprabhu,2. Kiruthiga V

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
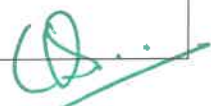Manikandam, Trichy-620 012

121	Liquid Petroleum Hydrocarbon Ocean Coastal Water Pollution Identification Using Deep Neural Network 1. Mrs.V.Elakkiya ,2.V.Dharshan ,3R.Loganathan
122	A Buck Integrated Spec Converter With Hybrid Optimized Pi Controller For Ev Charging Application 1. Mrs.V.Elakkiya
123	Detection Of Bbos Attacks Using Traffic Analysis Through Entropy Variation 1. Mrs.S.Rahamathnisha,2 S.Nathiya, 3N.Sukerthy
124	Anti Collision Mechanism In Vehicle Using Embedded System 1. Mrs.S.Rahamathnisha
125	Design And Evaluation Of Rectangular Micro Strip Antenna 1. Mrs.G.Keerthana, 2V.Deepika, 3J.K.Jerioth
126	Cost Effective Solar Inverter 1. Mrs.G.Keerthana
127	Reliable Low Power Multiplier Design Using Booth Algorithm In Fixed Width Replica Redundancy Block 1. Mrs.P.Jency Leena,2S.Abinaya,3A.Preethi Suriya
128	Design And Development Of Traffic Control System Based On Density 1. Mrs.P.Jency Leena
129	Automatic Vehicle Speed Control With Wireless In Vehicle Road Sign Delivery 1. Dr.R.Rajamohamed,2N.Kathiresan,3A.Mutharasan
130	Design Of Smart Steering Wheel For To Avoid Risk Factor Using Driver Monitoring System 1. Dr.R.Rajamohamed
131	A Novel Method For Segmentation Of Masses In Digital Mammogram 1Mrs.M.Nandhini, 2K.Rajalakshmi, 3S,Rajasri
132	Emission Reduction By Converting Conventional Bicycle To Voice Controlled Solar Electric Bicycle With Location Tracking 1Mrs.M.Nandhini
133	Segmentation Of Mri Brain Images Using K Means Algorithm 1Mrs.D.Kokila,2I.Monisha,3M.Sakthipriya
134	Hierarchical Industrial Load Management System 1Mrs.D.Kokila
135	Research On High-Frequency Isolation Type Of Dual-Pwm Variable Frequency Speed Regulation Dr.G. Malathy 1 Arul Joy Asha A 2,Arun Sebastin P 3

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

978-81-970087-5-7

107	Resource Efficient Image Sclaing Processor Using Vlsi Technology 1. Mrs.P.Santhana Selvi,2 .N.G.Anugeetha
108	Effect Of Alkali Pretreatment On Removal Of Lignin From Areca Nut (Areca Catechu L.) Husk For Second Generation Bio Ethanol Production Through Submerged Fermentation (Smf) Process 1. Mrs.P.Santhana Selvi
109	Iterative Joint Detection For Multiple Access Interference Cancellator Using Ps Cdma 1. Ms.M.Mahalakshmi, 2.P.Sumathi
110	Fuzzy Logic Controller Based Bldc Motor For Less Steady State Error And Good Dynamic Response 1. Ms.M.Mahalakshmi
111	Hv Multiplexer And Hv Transceiver For Voltage Monitoring Ic With Battery Management System 1. Ms.R.Nithya, 2.M.Prabu
112	Monitoring And Protection Of Earthing System Using Arduino 1. Ms. R.Nithya1
113	Design Of An Efficient Encoder For Dsrc Application Using Sols Technique 1. Mr.K.Kumar,2.G.Keerthana
114	Performance Analysis Of Three Phase Induction Motor Fed Mli Using Svm 1. Mr.K.Kumar
115	Indian Sign Languages Using Flex Sensor 1. Mr.J.Manokaran, 2.M.Lakshmi,3.F.Ayesha
116	Performance Evaluation Of Cnn And Color Based Segmentation And Feature Extraction Using Svm For Soil Classification 1. Mr.J.Manokaran
117	Automatic Energy Meter Reading With Gsm Based System 1. Mr.S.Balakrishnan,2.S.Chinnasamy,3.P.Gnanasekar
118	Simulation Of Inter Line Dynamic Voltage Restorer System 1. Mr.S.Balakrishnan1
119	Zigbeee Based Patient Health Monitoring System 1. Mrs.B.Saraswathi,2.C.P.Geetha Priya,3.S.Hemalatha
120	Smart Shopping Trolley Using Iot And Node Mcu 1. Mrs.B.Saraswathi

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
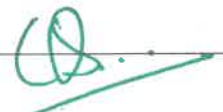Manikandam, Trichy-620 012

136	**Optimization Design And Dynamic Characteristics Analysis Of Multistage Magnetic Gearbox For Mw-Scale Wind Turbine** Dr.G. Malathy 1 Bharthasarathi M 2, ,Chitra .P
137	**Analysis Of A Novel Double-Stator And Dual- Pm Toroidal-Winding Linear Vernier Machine** Dr.G. Malathy 1 Deepika G 2 , Kanimozhi 3
138	**Energy Management Switch For A Self- Powered Wireless Sensor In Monitoring Power Systems** Dr.G. Malathy 1 Ezhumalai A 2 , Gayathri .K 3
139	**Energy Management Strategy For Hybrid Energy Storage System Based On Model Predictive Control** Dr.G. Malathy 1 Gayathri. S 2 , Kanimozhi 3
140	**Sensorless Control Of The Switched Reluctance Motor Based On The Sliding-Mode Observer** Dr.G. Malathy 1 Keerthana.S 2, Kumarivalli T 3
141	**Vibration Analysis Of Switched Reluctance Motor Based On Multi-Objective Genetic Algorithm** Mr.S. Vijay 1 Madhumitha.S 2, Mano.K 3
142	**Design And Development Of A New Transformerless Multi-Port Dc–Dc Boost Converter** Mr.S. Vijay 1 Mekala.M 2, , Pavithra .S 3
143	**An Integrated Parameter Identification Method Of Asynchronous Motor Combined With Adaptive Load Characteristics** Mr.S. Vijay 1 Praveen Raj R 2 , Rajasekaran Nv 3
144	**Loss Prediction Of Vehicle Permanent Magnet Synchronous Motor Based On Deep Learning** Mr.K.Seetharaman1 Revathi P2 , Rishon Guru .M 3
145	**Design And Optimization Of A Magnetic Coupling Structure With High Anti-Offset For Wireless Power Transfer** Mr.K.Seetharaman1 Santhosh .K 2 ,Srikumar Ms 3
146	**A Nine-Level Switched-Capacitor Step-Up Inverter With Low Voltage Stress** Mr.K.Seetharaman1 Sri Logesh Ms 2 , Subha T 3
147	**An Improved Differential Buck Circuit With Power Decoupling** Mr.S.Ponmathi Rajithkumar1 Valarmathi C 2 ,Viswanath R 3 1
148	**Method Of Identifying Buck Converter Load Without Load Current Measurements** Mr.S.Ponmathi Rajithkumar1 Valarmathi C 2 , Sanjeev Kumar R 3

149	On-Resistance Monitoring Method Using Active Voltage Vectors In Three-Phase Voltage Source Inverters Mr.S.Ponmathi Rajithkumar1 Arul Joy Asha A2 ,Pavitra S 3
150	Design And Examination Of Electrified Exhaust Brake System Using Direct Current Motor Mr.D. Praveen Sangeeth Kumar1 Bharthasarathi 2 , M,Praveen Raj R 3
151	Review Of Methods For Reducing Circulating Currents In Parallel Connected Modular Inverters Mr.D. Praveen Sangeeth Kumar1 Deepika G 2 , ,Rajasekaran Nv 3
152	Decentralized Multiple Control For Dc Microgrid With Hybrid Energy Storage Mr.D. Praveen Sangeeth Kumar1 Ezhumalai A 2 ,Revathi P 3
153	Novel Railway Power Feeding System Using Converter For High-Feeding Characteristics In Ac Railway System Mr.A. Richards Rethinasamy1 Gayathri .S 2 , Rishon Guru M 3
154	Linear Control Gain For Synthetic Inertia Of A Pmsg-Based Wind Turbine Generator Mr.A. Richards Rethinasamy1 Keerthana 2 .S,Santhosh K 3
155	Deep Learning Based A New Approach For Power Quality Disturbances Classification In Power Transmission System Mr.A. Richards Rethinasamy1 Madhumitha.S 2 , Srikumar Ms 3
156	Reactive Power Control Of D-Statcom In A Power Grid With Integration Of The Wind Power Mr. G. Karthick1 Mekala.M 2 , Srilogesh C 3
157	A Novel Flux-Switching Permanent Magnet Machine With Dual Sets Of Magnet Arrangements Mr. G. Karthick1 Praveen Raj R 2 ,Suba T 3
158	Characteristics Of Two-Phase Inverter-Fed Three-Phase Induction Motor Drive Mr. G. Karthick1 Revathi P2 , Valarmathi Cc 3
159	Comparative Analysis Of Unbalanced Three- Phase Grid Current Compensation Methods For The Scott Transformer Based Grid Ms. G.Soundaraya1 Santhosh 2 ,K, Sanjeev Kumar 3
160	Voltage Sensorless Mppt In A Differential Power Processing Photovoltaic System Ms. G.Soundaraya1 Sri Logesh Ms 2 , Subha T 3
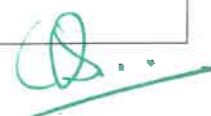
161	Safety Analysis Of Smart Grid Lines According To Dc Arc Generation Ms. G. Soundarayal Valarmathi C 2 Viswanath R T 3
162	Revisiting Link Prediction On Heterogeneous Graphs With A Multi-View Perspective 1Mrs. Kavitha N, 2Hariharan S
163	Multimodal Peripheral Alert To Improve Teaching-Learning For Blended Classroom 1Mr. Devan D P,2Anitha G
164	Detecting Incongruent News Articles Using Multi-Head Attention Dual Summarization 1Mrs. Saroja Devi S, 2Lokeshwaran V
165	Hardware Trojan Mitigation For Securing On-Chip Networks From Dead Flit Attacks 1Ms. Nancy V, 2Merciya Mary A
166	Achieving Hard Reliability In Rpl For Mission-Critical Iot Applications 1Ms. Getsyal A, 2Gopal P
167	A Novel Energy Efficient Load Balanced Cluster Assignment Algorithm For Iot Based Sensor Network 1Mrs. Rajeswari S, 2Karthick A
168	Endura : Enhancing Durability Of Multi Level Cell Stt-Ram Based Non Volatile Memory Last Level Caches 1Mrs. Padma Devi A, 2Mukesh Kanna S
169	Hardware Trojan Mitigation For Securing On-Chip Networks From Dead Flit Attack 1Mrs. Uthra Devi K, 2Santhiya K
170	Runtime Detection Of Time-Delay Security Attack In System-On-Chip 1Ms. Pushpalatha B, 2Saranya C
171	Wibs: A Modular And Scalable Wireless Infrastructure In A Cycle-Accurate Noc Simulator 1Mrs. Kavitha N, 2Lisha Y
172	Cost-Effective Distributed Edge Vehicle Selection For Multi-Tier Video Streaming Over Vehicular Network 1Mr. Devan D P, 2Pakkiyalakshmi A
173	Wcn : An Energy Efficient Negotiation Based Localization Algorithm For Large Scale Sensor Network 1Mrs. Saroja Devi S,2Mohamed Riyaj Khan M

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

174	**Computation Of Optimal Trajectory For Mobile Data Collectors In Iot Networks** 1Ms. Nancy V, 2Sankar C
175	**Load Profile Oriented Balanced Cluster Assignment In 5g Iot Based Sensor Network** 1Mrs. Padma Devi A, 2Thiruppathi S
176	**Text_Minor At Checkthat! 2022: Fake News Article Detection Using Robert** 1Mrs. Uthra Devi K, 2Swetha K
177	**Securing On-Chip Interconnect Against Delay Trojan Using Dynamic Adaptive Caging** 1Ms. Pushpalatha B, 2Vijay Joseph P
178	**Asner - Annotated Dataset And Baselines For Assamese Named Entity Recognition** 1Ms. Getsyal A, 2Vijayaraj S
179	**Generating Monolingual Dataset For Low Resource Language Bodo From Old Books Using Google Keep** 1Mrs. Rajeswari S, 2Tamilselvi M
180	**Dares: Deflection Aware Rerouting Between Subnetworks In Bufferless On-Chip Networks** 1Mrs. Padma Devi A, 2Sudhahar S
181	**Securing On-Chip Interconnect Against Delay Trojan Using Dynamic Adaptive Caging** 1Mrs. Uthra Devi K, 2Gopi U
182	**Deeq: Data-Driven End-To-End Equivalence Checking Of High-Level Synthesis** 1Ms. Pushpalatha B, 2Deepa T
183	**Hydra: A Near Hybrid Memory Accelerator For Cnn Inference** 1Mrs. Kavitha N, 2Irudhayaraj A
184	**Modeling And Analysis Of Confluence Attack By Hardware Trojan In Noc** 1Mr. Devan D P, 2Janani S
185	**A Deadlock-Free And Adaptive Prime Perspective Turn Model For 3d-Mesh Based Networkon-Chips** 1Mrs. Kavitha N, 2Dharshini K
186	**Fully Dynamic Algorithm For Steiner Tree Using Dynamic Distance Oracle** 1Mr. Devan D P, 2Janarthanan
187	**Popular Matching In A 3-Uniform 3-Partite Hypergraph** 1Mrs. Saroja Devi S, 2Harish R
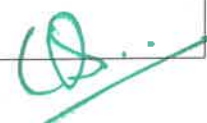
PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-82

188	**Topology Aware Cluster Configuration For Minimizing Communication Delay In Edge Computing** 1Ms. Nancy V,2Sudhahar S
189	**A Blockchain-Based Approach For Optimal Energy Dispatch And Fault Reporting In P2p Microgrid** 1Ms. Getsyal A,2Thiruppathi S
190	**Online Network Attack Detection Using Statistical Features** 1Mrs. Rajeswari S, 2Robinson Isaiah E
191	**Tree-Based Group Diffie-Hellman For Subgroup Communication In M2m Networks** 1Mrs. Padma Devi A, 2Swetha K
192	**Energy Efficient Approximate Macs** 1Mrs. Uthra Devi K, 2Tamilselvi M
193	**Daiss: Design Of An Attacker Identification Scheme In Coap Request/Response Spoofing** 1Ms. Pushpalatha B, 2Saranya C
194	**Analysis On How Executive Search Firms Find The Right Candidates For Leadership Roles** 1Dr.Thiagarajan ,2Aarthi V,3Anitha V
195	**Study On Employee Engagement Strategies In Information Technology Companies** 1Prasanna S,2Deepika P.L,3Gowsalya
196	**Study On How Digital Boom Has Changed The Business' Perspective About Marketing** 1Nivetha K,2Arul Prasath V,3Vimal Kumar J
197	**The Impact Of Ifrs Adoption On Financial Reporting Quality.** 1Karthikeyan B ,2Perumal D,3Arun K
198	**An Assessment Of The Impact Of Dividend Policies On Firm Value.** 1Dr. Raju A,2Raja Raja Cholan R,3Divya
199	**Study On Gig Economy And Hr Challenges** 1Dr.ThiagarajanB ,2Jaya Kala S,3Jaya Surya .M
200	**Study On Employee Well-Being And Mental Health Initiatives** 1Prasanna S,2Rame Sh R,3Honestraj M

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012
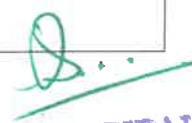
201	**Study On Impact Of Digital Boom On Consumer** 1Anburaj .A,2Prasanna S,3Jayarani T
202	**A Study On The Effectiveness Of Corporate Governance In Mitigating Financial Fraud** 1Nivetha K ,2Dr. Raju A,3Karuna Moorthy M
203	**An Analysis Of The Determinants Of Capital Structure In Multinational Corporations.** 1Kart Hike An .B,2Kalaiselvan P,3Kalaivendan R
204	**Ai In Recruitment** 1Prasanna S,2Anburaj A
205	**Diversity And Inclusion In The Workplace** 1Anburaj A,2Kamalam .R,3Jayasurya
206	**Study Of Customer Perception Towards Solar Rooftop** 1Karthikeyan B ,2Padmapriya S,3Pon Siva S
207	**Issues And Challenges In Digital Marketing Post Covid 19 In Hospitality Industry** 1Dr.Thiagarajan B,2Nivetha K,3Vimala N
208	**Women In Relation To Cosmetics Buying Behavior Of Indian Women In Relation To Cosmetics** 1Dr. Raju A,2Karthikeyan B ,3Maheshwari M
209	**The Evolution Of Remote Work** 1Nivetha .K,2Nandhini.V,3Nandhiga .R
210	**A Study On Employee Motivation In Retail Sect** 1Anburaj .A,2Sathyaseelan S,3Siranjeevi K
211	**How Employee Evaluation Parameters Affect The Turnover Rate Of An Organisation** 1Dr. Raju A,2Thiruppathi V,3Siranjeevi K
212	**Design And Analysis Of Composite Material Leaf Spring: Enhancing Performance And Weight Efficiency"** 1Mr. Ramesh Babu R, 2James Gragory .J, 3Premkumar. T
213	**Optimization Of Cutting Parameters In Cnc Turning Machines Using Firefly Algorithm: A Metaheuristic Approach For Efficiency Improvement** 1Mr. Ramesh Babu R, 2Dhanasekar .C, 3Felix Arokiadoss .S,

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

214	Experimental Investigation On Cnc Milling Machine For Quality Improvements: Optimization Of Process Parameters And Surface Finish 1Mr. Ramesh Babu R, 2John Fernandes .M, 3Pushparaj .N
215	Effect Of Pulsed Current On Micro And Macro Properties Of Stainless Steel Welds: A Comprehensive Investigation 1Mr. Ramesh Babu R, 2Dinesh.K, 3Dhusanthan.R
216	Defects In Submerged Arc Welding: Root Cause Analysis And Corrective-Preventive Action 1Mr. Ramesh Babu R, 2Hameanand.A,3 Hari Kishore.S
217	Analysis Of Mechanical Properties Of Al7075 Welded With Various Filler Rods (Al4043, Al5352) By Mig Welding 1Dr. Bharathi Raja S, 2S.Abdul Yasin, 3M.Mohammed Faizal
218	Design And Implementation Of A Solar-Powered Wireless Charger: Harnessing Sustainable Energy For Portable Device Charging" 1Dr. Bharathi Raja S, 2D.Yugesh, 3K.Santhosh Kumar
219	Investigation Of Cryogenic Treated Cobalt Coated Drill Bit: Enhanced Wear Resistance And Machining Performance 1Dr. Bharathi Raja S, 2R.Ajithkumar, 3K.Arun
220	Analysis Of Mechanical Properties Of Al-Zn Metal Matrix Composite Produced By Stir Casting Process 1Dr. Bharathi Raja S, 2B.Vinothraja, 3A.Vengatesh
221	Development Of Sorbitol-Based Nano Phase Change Material For Solar Thermal Energy Storage Systems 1Dr. Bharathi Raja S, 2S.Anandha Kumar, 3M.Selvakumar
222	Integration Of Electric Bike With Solar Panel: A Sustainable Commuting Solution" 1Mr. Samuel M, 2Shameer, 3A.Sriram
223	Optimization Of Cnc Cutting Parameters Using Taguchi Method: Enhancing Precision And Efficiency In Machining Processes 1Mr. Samuel M,2M.Ananth, 3M.Hariharasudhan
224	Development Of Digital Fuel Level Indicator Using Float Sensor For Automotive Applications 1Mr. Samuel M, 2D.Madhan, 3P.Vinayagamoorthy
225	Analysis Of Mechanical Properties Of Al-Graphite Metal Matrix Composite Produced By Stir Casting Process 1Mr. Samuel M, 2R.Chellaiah, 3A.Jawagar

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

226	Performance Evaluation Of Various Materials As Chills In Sand Casting Of Aluminum Alloy 1Mr. Samuel M, 2P.Murugan, 3S.Thirumurugan
227	Determining The Optimum Main Equipment Replacement Time For Power Plants: A Case Study Of The Port Harcourt Refinery 1Mr. Gurupranesh P, 2C.Devarajan, 3Karthick S
228	Optimizing Patient Flow And Resource Utilization In The Out-Patient Department Of A Public Hospital: A Case Study 1Mr. Gurupranesh P, 2S.Mohanraj, 3R.Sankaralingam
229	Modern Washing Machine: Principles Of Operation And Maintenance Guidelines 1Mr. Gurupranesh P, 2S.Dhamotharan, 3C.Dharanidharan
230	Upgrading Of Iron Ore Using Magnetic Separation And Shaking Table Techniques: A Comprehensive Study 1Mr. Gurupranesh P, 2M.Prakash, 3D.Sivakumar
231	Effects Of Pressure On The Mechanical Properties And Microstructure Of Die Cast Aluminum Alloys: An In-Depth Investigation 1Mr. Gurupranesh P, 2N.Dharman, 3P.Ponnar
232	Investigating The Effect Of Weight Percentage Of Silicon Carbide On The Mechanical Properties Of Composite Materials 1Mr. Madhan J, 2G.Sairam,3 M.Venkatesh
233	Influence Of Chromium And Manganese On Mechanical Properties And Corrosion Resistance Of Al-Si-Fe Alloy In 0.5m Hcl Solution 1Mr. Madhan J, 2R.Munishwaran, 3M.Rajamuni
234	Application Of Statistical Quality Control Techniques In The Food And Beverage Industry: A Case Study 1Mr. Madhan J, 2La.Ramanathan, 3R.Thirumoorthi
235	Suitability Assessment Of Coal Deposit Properties For Power Generation: A Comprehensive Study" 1Mr. Madhan J, 2Abinash P, 3Ajith Kumar M
236	Simulation, Development, And Performance Evaluation Of A Solar/Gas Hybrid Powered Absorption Air-Conditioning System 1Mr. Madhan J, 2Arun Pandian M R, 3Alaguraja M
237	Route Optimization In Municipal Solid Waste Management: A Case Study Analysis 1Mr. Saravanakumar C, 2Balasubramani K, 3Dineshkumar K

238	Production And Performance Evaluation Of Biodiesel From Hibiscus Sabdariffa And Hibiscus Surattensis Seeds 1Mr. Saravanakumar C, 2Ganesapandy K, 3Karthikeyan R
239	Potentials Of Extracts From African Star Apple And Cock's Comb Leaves As Corrosion Inhibitors For Medium Carbon Low Alloy Steel In Acidic Media 1Mr. Saravanakumar C, 2Murugappan P, 3Prasanth R
240	Performance Evaluation Of A Gas Turbine Power Plant Using Compressor Online And Offline Water Washing Techniques" 1Mr. Saravanakumar C, 2Praveen A, 3Rabin Singh X
241	Optimization Of Mix Ratio And Evaluation Of Thermophysical Properties On The Product Quality Of Composite Wheat–Cassava–Soy Flour Bread" 1Mr. Saravanakumar C, 2Ramesh.M, 3Renish Bharathi S
242	Modeling And Evaluation Of A Passive Flat-Plate Solar Collector For Sustainable Energy Harvesting" 1Mr. Ganesh R, 2Santhosh K, 3Sathish Selva A,
243	Modelling Procedure For Testing The Efficiency Of Various Concepts And Strategies In Supply Chain Management 1Mr. Ganesh R, 2Vasanth D, 3Vikram S
244	Modelling And Simulation Of Biodiesel Blends Performance In Compression Ignition Engines 1Mr. Ganesh R, 2Vishnu B, 3Yogavishuvabarathi G
245	Microstructure And Mechanical Properties Of Epoxy–Rice Husk Ash Composite 1Mr. Ganesh R, 2Vigneshwaran C, 3Dharmaseelan M
246	Mechanical Properties Of An Aluminum-Silicon Alloy: An In-Depth Investigation 1 Mr. Ganesh R, 2Mahamuni R, 3Naveen Kumar T
247	Measurement And Evaluation Of The Performance Properties Of Selected Locally Produced Lubricants (Engine Oil)" 1Mr. Prabahar K N, 2Ramakrishnan M, 3Subeekshiseeth Prasana D
248	Manufacturing Strategies For The Cassava Industry: Enhancing Sustainability And Efficiency" 1Mr. Prabahar K N, 2Aravindh M, 3Arunkumar T
249	Investigation Of Mechanical Properties Of Zeolite-Y And Zsm-5 Catalysts Synthesized From Locally Available Clays" 1Mr. Prabahar K N, 2Chelladurai R, 3Christin Yesudoss A

250	Integration Of Atomizer Into Economizer System For Improved Fuel Efficiency In Petrol Engines" 1Mr. Prabahar K N, 2Crown Meshak J, 3Dineshkumar B
251	Improvement Of Thermal Power Systems Performance Through Energy And Exergy Analysis" 1Mr. Prabahar K N, 2Dinesh Kumar R, 3Dinesh Kumar V
252	Heat And Mass Transfer Analysis Of A Gari Frying Machine" 1Dr. Joseph Raviselvan R, 2Faizal Dasthahir S.B, 3Gopi P
253	Fracture Mechanics Analysis Of Glass Fiber Reinforced Polyester Composites (Gfrp) Under Impact Loading" 1Dr. Joseph Raviselvan R, 2Gunaseelan R, 3Hariharan S
254	Failure Evaluation Of Engineering Projects: A Case Study Of A Pipeline And Product Marketing Company" 1Dr. Joseph Raviselvan R,2Jayaranjan As, 3Joyal S
255	Exergetic Efficiency Analysis Of A Passive Solar Air Heater With Phase Change Energy Storage Material 1Dr. Joseph Raviselvan R, 2Karthick M, 3Karthik L
256	Evaluation Of The Mechanical Properties Of Polypropylene/Calcium Carbonate Nanocomposite Under Various Creep Conditions 1Dr. Joseph Raviselvan R, 2Karthikeyan K, 3Karupaiya R
257	Evaluation Of Mechanical And Corrosion Properties Of Mild Steel In Environments Inhibited By Parkia Biglobosa Extracts" 1Mr. Manickam R, 2Kathiravan M, 3Kristen Kennis K
258	Energy Benchmarking And Carbon Footprint Reduction Opportunities In Cement Manufacturing Processes 1Mr. Manickam R, 2Kumaran R, 3Manikandan N
259	Effects Of Gas Metal Arc Welding Parameters On The Mechanical And Corrosion Behavior Of Austenitic Stainless Steel In Different Environments" 1Mr. Manickam R, 2Mathiyarasan S, 3Mohamed Burose A
260	Impact Of Faulty Design And Construction On Building Maintenance: A Case Study Analysis" 1Mr. Manickam R, 2Mohamed Ishaq S, 3Mohandoss M
261	Dynamic Modeling Of Machinery Replacement Problems" 1Mr. Manickam R, 2Muralidharan R, 3Mutharasu D

262	Development Of Environmentally Friendly Biodegradable Cutting Fluid From Soya Beans" 1Mr. Sebastin Joyal J, 2Muthu Kumar S, 3Naveen Raj R
263	Development Of Automobile Disk Brake Pads Using Eco-Friendly Periwinkle Shell And Fan Palm Shell Materials 1Mr. Sebastin Joyal J, 2Parthiban R, 3Pradeep N
264	"Development And Performance Evaluation Of An Agitated Quenching Tank/Bath" 1 Mr. Sebastin Joyal J, 2Praveen Kumar J, 3Praveen Kumar M
265	Determination Of The State Of Stress Between Adhesively Bonded Single Lap-Joints 1Mr. Sebastin Joyal J, 2Premkumar R, 3Ramachandran M
266	Design, Simulation, Construction, And Performance Evaluation Of A Solar Oven 1Mr. Sebastin Joyal J, 2Ramakannan A, 3Revanth S
267	Design, Simulation, Construction, And Performance Comparison Of Mixed-Mode Solar Crop Dryers With And Without Thermal Storage 1Mr. Veera Jagatheeshwaran J S,2Sabarinathan P, 3Saffar Hussain Sb
268	Design, Development, And Performance Evaluation Of A Multiple Sandcrete Blocks Moulding Machine" 1Mr. Veera Jagatheeshwaran J S, 2Sairaj M, 3Santhosh M
269	Design, Construction, And Testing Of An Outward Radial-Flow Reaction Water Turbine" 1Mr. Veera Jagatheeshwaran J S, 2Saravannan R, 3Selva Kumar S
270	Design, Construction, And Testing Of A Zeolite-Water Solar Adsorption Refrigerator 1Mr. Veera Jagatheeshwaran J S, 2Shyam Sundar R, 3Solairaj P
271	Design, Construction, And Testing Of A Charcoal-Fired Crucible Furnace For Melting 10kg Of Aluminum 1Mr. Veera Jagatheeshwaran J S, 2Sudhakar R, 3Sundaramaran P
272	Stabilization of Single-axis Gimbal System with Cascade PIDController using Relay Feedback Approach Dharunkumar R [1],Gunaseelan [2], DR. ANUSUYA M [3]
273	Numerical analysis of Aerodynamic Gust Response using the Open-Source SU2 Code Iyyapanmani A [1], Kalanchiya Muniyaraj B [2], DR. ANUSUYA M [3]

274	Study on Influence of Operating Wind Turbine on Upstream and Downstream flow using K-epsilon turbulence Model Manikandan M [1], Mohana Priya S [2], DR. ANUSUYA M [3]
275	Experimental and numerical study to estimate drag effect due tocone fore-body on a Bluff body model Muthuselvam A [1], Sudhakar R [2], DR. ANUSUYA M [3]
276	Numerical Study on Structural Health Monitoring for UnmannedAerial Vehicle Vishwa S [1], Sudhakar R [2], DR. ANUSUYA M [3]
277	Conceptual Design and Computational Investigation of the Secondary inlet of Rotary-wing Aircraft Engine Abinesh A [1], Anbarasan M [2], DR. ANUSUYA M [3]
278	Conceptual Design and Structural Analysis of Composite Micro Aerial Vehicle Arunkumar M [1], Balamurugan R [2], DR. ANUSUYA M [3]
279	Mechanical Characterization Studies on Cold Cracking Susceptibility of P92 Steel Weldments Dhanushraja P [1], Durai Pandi A [2], DR. ANUSUYA M [3]
280	Development of Eco-Friendly Emission Control Unit Using TiO_2 Coated Catalytic Converter Ganana sekar S [1], Hariharan A [2], DR. ANUSUYA M [3]
281	Design and Analysis of Suspension System for a three wheeler electric vehicle Harish Kumar P [1], Kanishkavardhini S [2], MRS.K.RAMYA [3]
282	Modeling and Simulation of power converters for Polymer Electrolyte Membrane Fuel Cell Karthik Raj M [1], Kishor kumar D [2], MRS.K.RAMYA [3]
283	Design and Analysis of LCV Chassis (Tata 407) Loganathan C [1], Manikandan S [2], MRS.K.RAMYA [3]

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

284	**Study of Self Compacting Concrete with Partial Replacement ofSand by Quarry Dust** Mohamed Ashif A [1], Sanjay Kumar M [2], MRS.K.RAMYA [3]
285	**Experimental Study on Flexural Response of Engineered Cementitious Composite (ECC) Strengthened Reinforced ConcreteBeams** Saranya Sree T R [1], Saravanan M [2], MRS.K.RAMYA [3]
286	**A Study on Seismic responses of Reinforced Concrete (RC) buildings with Lateral Force Resisting Systems** Sathishkumar V [1], Sheik Ameer M [2], MRS.K.RAMYA [3]
287	**Seismic Response of Multistoreyed Steel Frame with Viscous Fluid –Scissor Jack Dampers** Thamaraiselvan K [1], Velmurugan M [2], MRS.K.RAMYA [3]
288	**Implementing challenges of Extended Producer Responsibility** Vigneswaran K [1], Velmurugan M [2], MRS.K.RAMYA [3]
289	**Durability gaining in an old structure using Retrofitting Techniques** Vijaya kumar G [1], Yuvaraja A [2], MRS.K.RAMYA [3]
290	**Contamination of Soil by Tannery Waste Effluent** Anitarani S [1], Banu Priya G [2], MS. KALAIVANI T [3]
291	**Experimental Investigation on Flexural Behavior of Geopolymer Concrete** Bharathidhasan C [1], Jancy J [2], MS. KALAIVANI T [3]
292	**An Experimental Study on Behavior of Modified Bitumen using Recycled Plant** Jeevasen N [1], Kamaraj S [2], MS. KALAIVANI T [3]
293	**A Novel Approach to Treat Sago Industrial Wastewater Using Anaerobic Hybrid Reactor (AHR)** Karthick C [1], Karthick C [2], MS. KALAIVANI T [3]
294	**Application of Nano Technology in Self Compacting Concrete-A Review** Keerthana R [1], Kishore R [2], MS. KALAIVANI T [3]

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

295	Use of Polyethylene Terephthalate in Concrete-A Brief Review Kishore Kumar M [1], Mancy E [2], MS. KALAIVANI T [3]
296	Integrated Panchayat Response System Using Open Source GIS Pradhap J [1], Prasannaa.J [2], MS. KALAIVANI T [3]
297	A study on properties of concrete with ceramic waste replaced for fine aggregate Preethika M [1], Premalatha M [2], MS. KALAIVANI T [3]
298	A Green Supply Chain Agility Index for E- Commerce Business: An Indian Perspective Using Interpretive Structural Modeling Shri Harini Priya B [1], Snega M [2], MS. KALAIVANI T [3]
299	Experimental investigation of an indirect typenano coated flat plate solar collector for drying purpose Sobi Amirtha N [1], Sunil Kumar B [2], MS. KALAIVANI T [3]
300	Experimental study on the wear characteristics of heat treated aluminium hybrid composites Susila N [1], Yoga Priya R [2], MRS. SUGASHINI T [3]
301	Hybrid Solar Desalination and Water Heating System: A Review Abinesh T [1], Alex Immanvel S [2], MRS. SUGASHINI T [3]
302	An Application of Interpretive Structural Modeling to Assess Agility Index Balamurugan A [1], Divya B [2], MRS. SUGASHINI T [3]
303	CFD Assisted Design and Analysis of 10 Kw Double Throat Two Stage Air Supply Approach Downdraft Gasifier Gayathri M [1], Karthik D [2], MRS. SUGASHINI T [3]
304	Experimental Investigation of Inorganic PCM Based Solar ThermalStorage Device Enhanced With Heat Pipe Latchiya K [1], Manikandan K [2], MRS. SUGASHINI T [3]

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

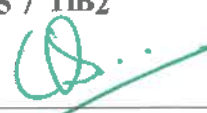|	
305	**Effect Of Preheating Temperatures on Impact Properties of Chromoly Alloy Steel 4130 Weld Using Gas Metal Arc Welding** Mohandoss S [1], Naveen R [2], MRS. SUGASHINI T [3]
306	**Development of an Intelligent System for Optimization of Blanking Die Design Parameters Selection** Sachunathan S [1], Sanduru K [2], MRS. SUGASHINI T [3]
307	**Design and optimization in production of Air Receivers** Santhiya A [1], Shanmugam S [2], MRS. SUGASHINI T [3]
308	**Development of Aluminium Matrix Nano Composite through Polymeric Method** Sneka T [1], Sophiya K [2], MRS. SUGASHINI T [3]
309	**Predicting the tensile strength of friction stir welded dissimilar aluminum alloy using ANN** Soundharya U [1], Vanila G [2], MRS. SUGASHINI T [3]
310	**A Study on the Effect of Process Parameters of Laser Hardening in Carbon Steels** Akshaya T [1], Appas Ali.D [2], MR. ARUL C [3]
311	**Process Optimization of GMAW over Aa6351 Aluminium Alloy using ANN** Aravindh V K [1], Ayisha Siddeequa A [2], MR. ARUL C [3]
312	**Modal Analysis of MWCNT Reinforced AA5083 Composite Material** Benasir S [1], Cibina S [2], MR. ARUL C [3]
313	**Effect of inlet valve modification on swirl ratio in a compression ignition engine** Devi K [1], Dhivyadharshini A [2], MR. ARUL C [3]
314	**Prediction of Tensile Strength and Elongation in Hybrid Aluminium Composite Using ANN** Divyakeerthan P [1], Gayathri P [2], MR. ARUL C [3]

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

315	Investigation of Antimicrobial Activity of Medical Grade HEPA Filter with Copper Deposition Gnanaprakasam A [1], Gowrisankar G [2], MR. ARUL C [3]
316	Investigation on the Microstructure and Wear Characteristics of Heat Treated Hybrid Aluminium Composites Hariharan K [1], John P [2], MR. ARUL C [3]
317	Pharmaceutical Inspection using Machine Vision Kamali A [1], Kamatchi S [2], MR. ARUL C [3]
318	Automated pH Monitoring System for Dyeing Process Keerthika A [1], Kiruthika M [2], MR. ARUL C [3]
319	Extrusion Process Parameters Optimization using Hybrid Algorithm Mathavan N [1], Miltan A [2], MR. ARUL C [3]
320	Power Optimization of Unmanned Aerial Vehicles using solarenergy Monisha R [1], Priya P [2], DR. JAYALAKSHMI PJ [3]
321	Open cv Based Autonomous RC-Car Priyadharshini G [1], Priyadharshini I [2], DR. JAYALAKSHMI PJ [3]
322	Automatic railway gate control using magnetic sensors Sathya Priya N [1], Sivaranjini M [2], DR. JAYALAKSHMI PJ [3]
323	Finite Element Analysis of landing grid Ship Assembly For 6.5 Tonnes in Vertical Loading conditions Sneka R [1], Sridhar P [2], DR. JAYALAKSHMI PJ [3]
324	Fluid Flow and Heat Transfer Analysis in a Micro-Channel with aBaffle Sumithira R [1], Swarnambigai V [2], DR. JAYALAKSHMI PJ [3]
325	Shear Strength of High – Strength Steel Fibre Reinforced Concrete Rectangular Beams Thirumavalavan [1], Vinith Roshan A [2], DR. JAYALAKSHMI PJ [3]
326	Characterization of Particulate-Reinforced Aluminium 7075 / TiB2 Composites Yuvaraj M [1], Yuvasri S [2], DR. JAYALAKSHMI PJ [3]

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

327	**A review of Advanced Casting Techniques** Yuvasri S [1], Miltan A [2], DR. JAYALAKSHMI PJ [3]
328	**Investigation on wear behavior of Al6061 hybrid metal matrixcomposite in braking applications** Aishwariya V [1], Anbazhagan S [2], DR. JAYALAKSHMI PJ [3]
329	**A Review of Cofiring Technologies to Reduce Greenhouse GasEmissions from Coal Fired Power Plants** Balamohan V [1], Benny A [2], DR. JAYALAKSHMI PJ [3]
330	**Low Power Real Time Surveillance CCTV Recording usingMsp430** Boomika P [1], Charulatha B [2], MRS. SAGAYA RANI A [3]
331	**Generate Electricity from Hybrid Road Speed Breaker** Chiranjeevi V [1], Deepika S [2], MRS. SAGAYA RANI A [3]
332	**Driver Fatigue Detection Using Image Processing and Accident Prevention** Dinesh M [1], Gowtham B [2], MRS. SAGAYA RANI A [3]
333	**A Novel Method of Supervision and Control of First Order LevelProcess Using Internet of Things** Hariharan S [1], Hemalatha G [2], MRS. SAGAYA RANI A [3]
334	**Electrical Demand Response Using Electric Vehicle and Renewable Energy Sources** Jeeva M [1], Jeevitha G [2], MRS. SAGAYA RANI A [3]
335	**Performance Analysis of Multilevel Spatial Modulation of DMTechnique (MLSM-MIMO)** Keerthana S [1], Kirubhashree D [2], MRS. SAGAYA RANI A [3]
336	**Solar Powered Intelligent Street Lighting System for Highway Application** Krishnan N [1], Magesh G [2], MRS. SAGAYA RANI A [3]

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

337	Broadbanding Microstrip Patch Antenna Using Electromagnetic Band Gap Structures Mahasuvetha M [1], Manikandan M [2], MRS. SAGAYA RANI A [3]
338	A Circularly Polarized Triangular Slot Reconfigurable Antenna for Wireless Applications Meenatchi A [1], Mohana Priya K [2], MRS. SAGAYA RANI A [3]
339	Implementation of Data Gathering System using Mobile Relay Node in Wireless Sensor Network Bharathidhasan C [1], Susila N [2], MRS. SHANMUGA PRIYA U F [3]
340	IOT Based Smart Security and Monitoring Devices for Agriculture Pragadhi R [1], Priyanga G [2], MRS. POONGKODI S [3]
341	Design and Stability Analysis of Buck-Boost Converter for Harnessing Energy from Bicycle Pedaling Priyanga K [1], Rajeshwari S [2], MRS. POONGKODI S [3]
342	Fuzzy Logic Based Direct Torque Control of Three Phase Induction Motor Ramya Devi K [1], Rasika A [2], MRS. POONGKODI S [3]
343	Performance Analysis of Sensor less BLDC Motor Using PI and ANFIS Controller Ravikumar M [1], Sabinath K [2], MRS. POONGKODI S [3]
344	Design of UPQC Based on Modular Multilevel Matrix Converter for Mitigation of Voltage Sag and Current Harmonics Sharmi A [1], Sheik Abdulla K [2], MRS. POONGKODI S [3]
345	An Experimental Investigation of PFC BLDC Motor Drive Using Bridgeless Cuk Derived Converter Soundarya V [1], Sriram C [2], MRS. POONGKODI S [3]
346	Three Phase Load Balancing and Energy Loss Reduction in Distribution Network using LABIEW Suganya G [1], Sushmeetha A [2], MRS. POONGKODI S [3]

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

347	Analysis of Power Quality in Grid-Connected Wind Energy System with UPFC using Soft Computing Techniques Thanasekaran S [1], Thasneem Begam Y [2], MRS. POONGKODI S [3]
348	Dimension Reduction of Multispectral Images Using PCA and Folded PCA Thirumeni v [1], Vaishnavi S [2], MRS. POONGKODI S [3]
349	A Low Cost Quad-Band Microstripline Bandpass Filter for Cellular, C-band downlink and WLAN Applications Yasika v [1], Vaishnavi S [2], MRS. POONGKODI S [3]
350	MPC for Internal Temperature of Distillation Column in Petroleum Refineries Rajeshwari S [1], Meenatchi A [2], MRS. SANTHANA SELVI P [3]
351	Functional Distance Based Test Vector Reordering for Low Power Testing of VLSI Circuits Sriram C [1], Ramya Devi K [2], MRS. SANTHANA SELVI P [3]
352	Three Port DC-DC Converter for Standalone Photovoltaic System Thasneem Begam Y [1], Manikandan M [2], MRS. SANTHANA SELVI P [3]
353	A Novel Integrated Approach of Wind Energy Conversion Systems with Optimized Matrix Converter Fed Grid Under Different Load Conditions Rasika A [1], Mohana Priya K [2], MRS. SANTHANA SELVI P [3]
354	Early stage Diagnosis of Red Lesions in Diabetic Retinopathy Ravikumar M [1], Vaishnavi KS [2], MRS. SANTHANA SELVI P [3]
355	Dual Band MIMO Antenna Using Decoupling Slots for WLAN Applications Sabinath K [1], Yasika A [2], MRS. SANTHANA SELVI P [3]
356	Design of Multiband Antenna using SRR Structure for LTE, Radar, ISM and X-band Applications Balamohan S [1], Deepika S [2], MRS. SANTHANA SELVI P [3]
357	Modelling and Analysis of Single Stage Single Phase Boost Inverter Rajeshwari S [1], Meenatchi A [2], MRS. SANTHANA SELVI P [3]

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

358	**High Throughput Quaternary Signed Digital Adder Design for Portable Electronic Applications** **Charulatha B [1], Hariharan S [2], MRS. SANTHANA SELVI P [3]**
359	**A Design, Simulation and Fabrication of Modified Sierpinski Gasket Fractal Antenna for Wideband Applications** **Charulatha B [1], Hariharan S [2], MRS. HEMALATHA V [3]**
360	**Simulation Study of Optical and Electrical Characteristics and Its Performance Behavior of a Quantum Dot Based Solar Cells** **Soundarya V [1], Priyanga G [2], MRS. HEMALATHA V [3]**
361	**A Non Invasive Identification of Malignant Thyroid Nodules with Ultrasound Images using Textural Features Classification** **Keerthana S [1], Sumithira R [2], MRS. HEMALATHA V [3]**
362	**Generation of Electricity using Waves** **Monisha R [1], Priyadharshini G [2], MRS. HEMALATHA V [3]**
363	**Energy from Outer Space by the use of Hybrid Solar Cells in Space Based Solar Power (SBSP)** **Hariharan K [1], Kamali A [2], MRS. HEMALATHA V [3]**
364	**Incremental Conductance Method of Maximum Power Point Tracking for Photovoltaic Array with Single Switch DC/DC Converter** **Benasir S [1], Divyakeerthan P [2], MRS. HEMALATHA V [3]**
365	**Intelligent Controller based Dynamic Sag Compensator** **Gowrisankar G [1], Kiruthika M [2], MRS. HEMALATHA V [3]**
366	**A New Modulation Strategy of L-Z-Source Inverter in DG System** **Gnanaprakasam A [1], Kamatchi S [2], MRS. HEMALATHA V [3]**
367	**A Modified Single Phase Multilevel Inverter Topology for Distributed Energy Resources** **Aravindh V K [1], Santhosh Kumar R [2], MRS. HEMALATHA V [3]**
368	**A Dynamic Carpooling System with Social Network Based Filtering** **Mathavan N [1], Priya P [2], MRS. HEMALATHA V [3]**

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

369	**Smart Public Transportation System using Android App** Mathavan N [1], Priya P [2], MRS. YAMUNA DEVI N [3]
370	**Colour Image Encryption Using Chaotic System** Gayathri M [1], Abinesh T [2], MRS. YAMUNA DEVI N [3]
371	**Comparative Study of Pentagon Shaped Patch Antenna with Different Substrates operating at WLAN Frequency** Naveen R [1], Sophiya K [2], MRS. YAMUNA DEVI N [3]
372	**Quantum Key Distribution (QKD): A Review on Technology, Recent Developments and Future Prospects** Mohandoss S [1], Manikandan K [2], MRS. YAMUNA DEVI N [3]
373	**Power Generation Using Solar Panel and IR Grid** Latchiya K [1], Vanila G [2], MRS. YAMUNA DEVI N [3]
374	**IOT Based Accident Prevention and Emergency Services** Sachunathan N [1], Soundharya U [2], MRS. YAMUNA DEVI N [3]
375	**Spectrum Sensing Techniques for Cognitive Radio Application: A Review** Yoga Priya R [1], Balamurugan A [2], MRS. YAMUNA DEVI N [3]
376	**IOT based Home Automation System through Adaptive DecisionMaking Fuzzy Algorithm** Sophiya K [1], Shri Harini Priya B [2], MRS. YAMUNA DEVI N [3]
377	**Telemedicine Approach For Patient Monitoring System Using Iot** Sunil Kumar B [1], Karthik D [2], MRS. YAMUNA DEVI N [3]
378	**An Efficient Fuzzy Based Feature Selection Algorithm for High Dimensional Data** Kamaraj S [1], Kishore R [2], MRS. YAMUNA DEVI N [3]
379	**A New Approach to Image Retrieval Based On Sketches Using Chamfer Distance** Prasannaa.J [1], Priya P [2], MRS. YAMUNA DEVI N [3]

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

380	**Normalized page count and text based metric for computing semantic similarity between web documents** **Prasannaa.J [1], Priya P [2], MRS. NUSRATH SULTHANA S [3]**
381	**Automating the Irrigation System** **Kamaraj J [1], Kishore Kumar M [2], MRS. NUSRATH SULTHANA S [3]**
382	**A Prototype Model for Automatic Vehicle Detection in Toll Plazaenabling Easy Entry** **Karthick C [1] Premalatha M [2], MRS. NUSRATH SULTHANA S [3]**
383	**An Incremental Learning with CGHSSL for Unsupervised Feature Selection of Benchmark Dataset** **Keerthana R [1], Shri Harini Priya B [2], MRS. NUSRATH SULTHANA S [3]**
384	**Performance Analysis Of Compressing Sensing Framework On Interactive Media Content** **Jancy J [1], Pradhap J [2], MRS. NUSRATH SULTHANA S [3]**
385	**Secure and Enhanced Information Encoding In Matrix Barcode** **Alex Immanvel S [1], Snega M [2], MRS. NUSRATH SULTHANA S [3]**
386	**Next Generation Vehicle Diagnostic Systems** **Banu Priya G [1], Mancy E [2], MRS. NUSRATH SULTHANA S [3]**
387	**Smart Security Surveillance Rover** **Yuvaraja A [1], Vigneswaran K [2], MRS. NUSRATH SULTHANA S [3]**
388	**Adoption Of Knowledge Management Framework In AcademicSetting – An Experimental Study Conducted for Capturing Student's Learning in Computer Laboratories** **Anitarani S [1], Jeevasen N [2], MRS. NUSRATH SULTHANA S [3]**
389	**Detection of Abnormalities in Color Fundus Images of Diabetic Retinopathy using Bootstrap Segmentation with Learning Classifier** **Anbarasan M [1], Dhanushraja P [2], MRS. NUSRATH SULTHANA S [3]**

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

390	**Combining Intelligent Web Caching with Web Pre-fetching Techniques to Predict Tourist Places** Arunkumar M [1], Kanishkavardhini S [2], MRS. SUJANA E [3]
391	**An efficient approach for analyzing and improving data quality in data integration** Arunkumar M [1], Kanishkavardhini S [2], MRS. SUJANA E [3]
392	**Geo- Intelligence System: A Frame Work for AgriculturalImprovements** Dhanushraja P [1], Kanishkavardhini S [2], MRS. SUJANA E [3]
393	**Smart Vehicle Collision Detection and SOS Service** Loganathan C [1], Sanjay Kumar M [2], MRS. SUJANA E [3]
394	**IOT based Garbage Monitoring System** Arunkumar M [1], Kanishkavardhini S [2], MRS. SUJANA E [3]
395	**A survey on healthcare and social network Collaborative service utilization using internet of things** Ganana sekar S [1], Santhosh Kumar R [2], MRS. SUJANA E [3]
396	**Posteriori Probability inspired Minimal Rule Generation in Associative Classification** Sathishkumar V [1], Velmurugan M [2], MR. PRABHU G [3]
397	**Pstree Based Associative Classification of Data Stream Mining** Saravanan M [1], Vijaya kumar G [2], MR. PRABHU G [3]
398	**Dynamic Virtual Machines Generation to Improve the Query Response Rate in Cloud Environment** Ganana sekar S [1], Santhosh Kumar R [2], MR. PRABHU G [3]
399	**A critical review on Parkinson's disease due to Pesticides exposure** Thamaraiselvan K [1], Yuvaraja A [2], MR. PRABHU G [3]

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

400	**Best Classification Threshold Identification for ImbalancedDatasets** Mohamed Ashif A [1], Sheik Ameer R [2], MR. PRABHU G [3]
401	**Sentiment Analysis System** Velmurugan M [1], Kamaraj S [2], MR. VIJAY ANAND K [3]
402	**A Study on the Comfort Properties of Multi Layer Weft KnittedFabrics** Saranya Sree T A [1], Jeevasen N [2], MR. VIJAY ANAND K [3]
403	**Effect of plasma Treatment on Antimicrobial properties of SilkSuture** Vishwa S [1], Arunkumar M [2], MR. VIJAY ANAND K [3]
404	**Development of sericin coated knitted polyester blend fabric Used for wound dressing** Iyyapanmani A [1], Dharunkumar R [2], MR. VIJAY ANAND K [3]
405	**Development of Mesta Fabric Composites for AutomotiveApplications** Dharunkumar R [1], Mohana Priya S [2], MR. VIJAY ANAND K [3]
406	**Development of Natural Fibre Composite for Acoustical and Thermal Insulation Applications** Sudhakar R [1], Anbarasan M [2], DR. ANITHA S [3]
407	**UV Protection for Window Textiles** Abinesh A S [1], Dharunkumar R [2], DR. ANITHA S [3]
408	**Investigation on Effect of Salt-Free Electrochemical Dyeing of Cotton With Reactive Dyes** Muthuselvam A [1], Kanishkavardhini S [2], DR. ANITHA S [3]

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

409	**Design and Development of Fibre Reinforced Composite for Road Barrier** **Vishwa S [1], Anitarani S [2], DR. ANITHA S [3]**
410	**Online Sewing Defect Monitoring For SNLS Machine by Image Processing Technique** **Bharathidhasan C [1], Susila N [2], DR. ANITHA S [3]**
411	**Development of Eco-friendly Water Repellent Fabrics** **Gayathri P [1], Sridhar P [2], MS. MARIA KIRUBA PRIYADHARSHINI F [3]**
412	**Investigation of micro polyester fabric finished with sericin** **Miltan A [1], Sumithira R [2], MS. MARIA KIRUBA PRIYADHARSHINI F [3]**
413	**Development of Wet Wipes from Natural HerbalExtracts** **Boomika P [1], Charulatha B [2], MS. MARIA KIRUBA PRIYADHARSHINI F [3]**
414	**Fabrication and characterization of wool fibre reinforced polypropylene composites** **Jeeva M [1], Magesh G [2], MS. MARIA KIRUBA PRIYADHARSHINI F [3]**
415	**Study of Kenaf-Cotton blended yarn for the Development ofSustainable Textiles** **Gowtham B [1], Mohana Priya K [2], MS. MARIA KIRUBA PRIYADHARSHINI F [3]**
416	**Process optimization for plasma treatment of recycled polyester knitted fabric using box & behnken design** **Sabinath K [1], Thirumeni v [2], MRS. SHANMUGA PRIYA U F [3]**
417	**DEVELOPMENT AND CHARACTERIZATION OF BAMBOO AND BANANA FIBER BASED NON WOVEN FABRICS FOR WOUND DRESSING APPLICATIONS** **Suganya G [1], Soundarya V [2], MRS. SHANMUGA PRIYA U F [3]**

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

1. Driving Factors For The Adoption Of Digital Twin Technology Implementation For Construction Project Performance In Nigeria

[1] Mr S Ramalingam, [2] Ms K Gayathri, [3] Aishwarya, [1]Associate Professor, [2] Assistant Professor, [3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: This Study Aims To Identify And Analyze The Driving Factors Influencing The Adoption Of Digital Twin Technology In Construction Projects Within The Nigerian Context. Through A Combination Of Literature Review, Case Studies, And Surveys, The Research Explores The Current Landscape Of Digital Twin Adoption In Nigeria's Construction Sector. Key Driving Factors Are Categorized Into Technological, Organizational, And Contextual Dimensions. The Technological Dimension Assesses Factors Such As System Compatibility, Data Interoperability, And Technology Readiness. Organizational Factors Include Management Support, Training Programs, And Collaboration Mechanisms, While Contextual Factors Encompass Regulatory Frameworks, Industry Culture, And Economic Considerations. Preliminary Findings Reveal A Growing Awareness Of Digital Twin Technology In The Nigerian Construction Industry, With A Positive Inclination Towards Its Adoption. Technological Factors, Such As Data Security And Interoperability, Emerge As Critical Considerations, Along With Organizational Factors Like Leadership Support And Workforce Training. The Outcomes Of This Research Are Anticipated To Guide Industry Stakeholders, Policymakers, And Technology Providers In Understanding And Leveraging The Driving Factors For Successful Digital Twin Implementation In Nigerian Construction Projects. The Study Contributes To The Global Discourse On The Adoption Of Digital Technologies In The Construction Sector, With A Focus On Tailoring Strategies To TheUnique Context Of Nigeria.

Key Words: Digital Twin, Construction Industry, Technology Adoption, Project Performance, Nigeria

2. Effect Of Immobilized Bacteria In Diatomaceous Earth And Reused Concrete Aggregate In Recovering Properties Of Self-Healing Recycled Aggregate Concrete

[1]Mr M Kaliraj, [2] Kokila, [3] Thamariselvi, [1]Assistant Professor, [2],[3] U.G Student Department OfCivil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: Self-Healing Mechanisms In Concrete, Especially In The Context Of Recycled Materials, Present A Promising Avenue For Sustainable Construction. This Study Investigates The Impact Of Incorporating Immobilized Bacteria In Diatomaceous Earth, Along With Reused Concrete Aggregate, On The Recovery Properties Of Self-Healing Recycled Aggregate Concrete (Sh-Rac). The Experimental Program Involves The Production Of Sh-Rac Specimens With Varying Percentages Of Reused Concrete Aggregate And Diatomaceous Earth. The Immobilized Bacteria Are Strategically Introduced To Enhance The Autogenous Healing Capacity Of The Concrete. The Research Assesses The Mechanical, Durability, And Microstructural Properties Of The Sh-Rac Specimens Through A Series Of Tests, Including Compressive Strength, Water Absorption, And Scanning Electron Microscopy. Preliminary Results Suggest That The Inclusion Of Immobilized Bacteria In Diatomaceous Earth Positively Influences The Self-Healing Capabilities Of Recycled Aggregate Concrete, Particularly When Utilizing Reused Concrete Aggregate. This Research Contributes Valuable Insights To The Field Of Sustainable Construction By Exploring Novel Combinations Of Materials To Optimize The Self-Healing Potential Of Recycled Concrete, Addressing Both Economic And Environmental Aspects. The Findings Hold Significance For Practitioners And Researchers Seeking Innovative Approaches To Improve The Long-Term Performance Of Recycled Aggregate Concrete In A Circular Economy Context.

Key Words: Self-Healing Concrete, Recycled Aggregate Concrete, Diatomaceous Earth, Immobilized Bacteria, Sustainable Construction.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

3. Modellingof Adsorption Efficiency For The Removal Of Lead AndCopper From Waste Water

[1]Ms K Gayathri, [2] Monika P, [3] Sumithra P, [1] Assistant Professor, [2]Assistant Professor Sudharsan Engineering College, [3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: Efficient Removal Of Heavy Metals From Wastewater Is Of Paramount Importance For Environmental Protection. This Study Focuses On Modeling The Adsorption Efficiency For The Removal Of Lead (Pb) And Copper (Cu) From Wastewater Using A Selected Adsorbent. Batch Experiments Are Conducted To Evaluate The Adsorption Capacity Of The Chosen Material Over A Range Of Concentrations For Lead And Copper. The Study Contributes To The Understanding Of The Adsorption Behavior Of Lead And Copper In Wastewater And Provides A Predictive Tool For Assessing The Efficiency Of The Chosen Adsorbent. Insights Gained FromThe Modeling Process Are Expected To Aid In The Design And Optimization Of Wastewater Treatment Systems, Particularly In The Context Of Heavy Metal Removal. Preliminary FindingsIndicate That The Adsorption Process Follows [Mention The Most Suitable Model], And The Equilibrium Data Fits Well With The [Mention The Selected Isotherm Model]. The Kinetics Study Reveals That The Adsorption Of Lead And Copper Is Well-Described By The [Mention The Selected Kinetic Model]. This Research Is Significant For Environmental Engineers, Policymakers, And Researchers Aiming To Develop Effective And Predictive Models For The Removal Of Heavy Metals From Wastewater. The Study Aligns With The Broader Goal Of Sustainable Water Management Practices By Providing Insights Into The Optimization Of Adsorption Processes For Heavy Metal Removal.

Key Words: Adsorption, HeavyMetals, Wastewater Treatment, Modeling, Lead, Copper.

4. Rice Husk Ash As A Partial Substitue To Cement In Concrete Mix

[1] Ms G Bharani, [2] Vinodha E, [3] Deepan S K, [1] Assistant Professor, [2]Assistant Professor, [3] U.GStudent Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: This Study Assesses The Feasibility Of Incorporating Rice Husk Ash (Rha) As A Partial Substitute For Cement In Concrete Mixtures. Rha, An Agricultural Byproduct, Exhibits Pozzolanic Characteristics That Can Enhance Concrete Properties. Experimental Mixes With Varying Rha Proportions Are Examined For Workability, Setting Time, And Compressive Strength. Preliminary Results Reveal Improved Workability And Promising Pozzolanic Activity, Influencing The Compressive Strength Positively. Microstructural Analyses Provide Insights Into The Interaction Between Rha And The Cementitious Matrix. The Study Contributes Valuable Information To The Pursuit Of Sustainable Construction Practices By Exploring The Potential Of Rha As A Partial Cement Replacement, Aligning With Efforts To Reduce The Environmental Impact Of Concrete Production.

Key Words: Rice Husk Ash, Cement Replacement, Concrete Sustainability, Compressive Strength, Pozzolanic Activity.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

5. Spatial Variation Of The Concentration Of Heavy Metals In TheVicinity Of A Dumpsite By Finite Volume Analysis

[1] Ms E Vinodha, [2] Mr M Kaliraj, [3] Akash S, [1]Assistant Professor, [2]Assistant Professor, [3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: The Spatial Distribution Of Heavy Metals In The Vicinity Of Dumpsites Poses Significant Environmental Concerns. This Study Employs Finite Volume Analysis To Investigate The Spatial Variation Of Heavy Metal Concentrations In Soil And Water Surrounding A Dumpsite. Heavy Metals Such As Lead (Pb), Cadmium (Cd), And Chromium (Cr) Are Of Particular Interest Due To Their Known Environmental Impact. The Concentrations Of Heavy Metals Are Analyzed Using Established Laboratory Techniques, And The Data Are Utilized To Construct Spatial Concentration Maps. Preliminary Findings Reveal Distinct Spatial Patterns In Heavy Metal Concentrations, With Higher Levels Detected In Closer Proximity To The Dumpsite. The Finite Volume Analysis Provides Insights Into The Dynamic Transport Mechanisms Influencing Heavy Metal Dispersion. Additionally, Statistical Analyses Are Employed To Identify Correlations Between Heavy Metal Concentrations And Environmental Factors, Such As Soil Composition And Groundwater Flow. The Spatial Modeling Approach Offers A Comprehensive Perspective On The Dispersion Patterns, Aiding In The Development Of Targeted Mitigation Strategies. The Findings Have Implications For Environmental Monitoring, Risk Assessment, And Regulatory Measures Aimed AtSafeguarding Ecosystems And Public Health In Dumpsite-Affected Areas. The Study Underscores The Importance Of Employing Advanced Modeling Techniques, Such As Finite Volume Analysis, To Assess The Spatial Dynamics Of Heavy Metal Pollution, Providing

Valuable Information For Environmental Scientists, Policymakers, And Local Communities Striving For Sustainable Waste Management Practices.

Key Words: Heavy Metals, Spatial Variation, Dumpsite, Finite Volume Analysis, Environmental Monitoring.

6. Route Survey And Payment Design Of The Road Linking FederalSecretariant And Imt Civil Soil Laboratory And Industrial Center

[1]Mr R Sivashankar, [2] Mr M Kaliraj, [3] Akash J, [1]Associate Professor, [2]Assistant Professor,
[3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering,Trichy.

Abstract: Efficient Transportation Infrastructure Is Integral To Economic Development And Urban Connectivity. This Study Focuses On The Comprehensive Route Survey And Pavement Design Of The Road Connecting The Federal Secretariat To The Institute Of Management And Technology (Imt) Civil Soil Laboratory And Industrial Center. The Project Aims To Enhance Accessibility, Improve Traffic Flow, And Ensure The Longevity Of The Road Infrastructure. Geospatial Technologies, Including Gis And Gps, Are Utilized To Optimize The Route Alignment And Incorporate Geographical Features. The Study Explores Various Pavement Materials, Including Asphalt And Concrete, To Determine The Most Suitable Option For The Specific Road Conditions. Structural Analyses Are Conducted To Ensure The Durability And Safety Of The Proposed Pavement Design. The Findings From The Route Survey And Pavement Design Are Integrated Into A Comprehensive Road Development Plan. Cost Estimates, Environmental Impact Assessments, And Construction Timelines Are Outlined To Facilitate Informed Decision-Making By Relevant Stakeholders. The Study Serves As A Model For Integrating Advanced Surveying Techniques And Pavement Design Principles To Enhance The Functionality And Longevity Of Roadways.

Key Words: Route Survey, Pavement Design, Road Engineering, Infrastructure, Transportation.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

7. Behaviour Of Gfrp Strengthened Masonry Wall Panels Under BaseShock Vibrations

[1] Mr K Saravanan, [2] Ms E Vinodha, [3] Musarf Ali S, [1]Assistant Professor, [2]Assistant Professor, [3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: In Seismically Prone Regions, The Resilience Of Masonry Structures Against Base Shock Vibrations Is Critical For Ensuring Public Safety And Minimizing Structural Damage. This Study Investigates The Behavior Of Glass Fiber Reinforced Polymer (Gfrp)- Strengthened Masonry Wall Panels Subjected To Base Shock Vibrations. The Objective Is To Assess The Effectiveness Of Gfrp Strengthening In Enhancing The Seismic Performance And Mitigating Potential Damage. The Applied Loads Replicate Seismic Forces To Evaluate The Response, Deformation Patterns, And Failure Modes. Instrumentation, Including Accelerometers And Strain Gauges, Captures The Dynamic Response Of The Wall Panels During Testing. Results From The Experimental Campaign Highlight The Influence Of Gfrp Strengthening On The Seismic Behavior Of Masonry Wall Panels. Enhanced Stiffness, Strength, And Energy Dissipation Capacities Are Observed In Gfrp-Strengthened Panels Compared To Their Unreinforced Counterparts. The Study Further Explores The Impact Of Varying Gfrp Strengthening Configurations On The Overall Seismic Performance. The Research Outcomes Contribute To The Advancement Of Seismic Retrofitting Strategies For Masonry Structures, Particularly Through The Application Of Gfrp Strengthening. The Research Outcomes Contribute To The Advancement Of Seismic Retrofitting Strategies For Masonry Structures, Particularly Through The Application Of Gfrp Strengthening. This Study Bridges The Gap Between Experimental Investigations And Numerical Simulations, Offering A Holistic Perspective On The Behavior Of Gfrp-Strengthened Masonry Wall Panels Under BaseShock Vibrations.

Key Words: Gfrp Strengthening, Masonry Wall Panels, Base Shock Vibrations, Seismic Performance, Structural Engineering.

8. Comparative Analysis Of The Strength Of Concrete Made From VariousAggregate

[1]Mr S Dineshkumar, [2] Ms K Gayathri, [3] Prabhu Jj, , [1]Assistant Professor, [2]Assistant Professor, [3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: This Study Presents A Comparative Analysis Of The Strength Of Concrete Specimens Produced With Various Types Of Aggregates. The Aim Is To Assess And Understand How Different Aggregates, Including Natural, Recycled, And Lightweight Aggregates, Impact The Mechanical Properties Of Concrete. Concrete Mixes Are Prepared With Distinct Types Of Aggregates, And Standard Tests Are Conducted To Evaluate Compressive Strength, Flexural Strength, And Split Tensile Strength. The Investigation Encompasses A Range Of Aggregate Properties, Such As Particle Size Distribution, Shape, And Specific Gravity, To Establish Correlations With The Observed Concrete Strength. In Addition To Mechanical Testing, The Study Considers The Influence Of Aggregate Characteristics On Workability, Durability, And Shrinkage Of The Concrete. The Results Contribute To A Comprehensive Understanding Of The Intricate Relationship Between Aggregate Properties And Concrete Strength. The Research Aims To Assist Engineers, Concrete Producers, And Construction Professionals In Making Informed Decisions Regarding Aggregate Selection For Optimal Concrete Performance.

Key Words: Concrete Strength, Aggregate Types, Comparative Analysis, Mechanical Properties, Construction Materials.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

9. Compressive Strength Of Concrete With Palm Kernal Shell As A Partial Replacement For Coarse Aggregate

[1]Mr K Sengottain, [2] Gandhi K, [3] Gayathri A, [1] Professor, [2] Associate Professor Miet Engg College, [3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: Pks, An Agricultural Waste Product, Presents An Opportunity For Sustainable Construction By Addressing Both Environmental Concerns And The Demand For BuildingMaterials. Compressive Strength Tests Are Conducted On Cured Specimens To Evaluate The Impact Of Pks On The Mechanical Properties Of The Concrete. The Study Explores The Optimal Percentage Of Pks Replacement That Balances The Desired Strength With The Sustainable Utilization Of Agricultural Waste. The Outcomes Of This Research Contribute To The Growing Body Of Knowledge On Sustainable Construction Materials, Providing Insights Into The Feasibility Of Utilizing Palm Kernel Shell As A Partial Replacement For Coarse Aggregate. The Study's Outcomes Are Relevant To Engineers, Architects, And Policymakers Seeking Innovative Approaches To Address The Sustainability Challenges In Construction Materials.By Exploring The Compressive Strength Of Concrete With Palm Kernel Shell, This Research Contributes To The Broader Goal Of Advancing Environmentally Friendly And Economically Viable Construction Practices.

Key Words: Concrete Compressive Strength, Palm Kernel Shell, Sustainable Construction, Partial Replacement, Coarse Aggregate.

10. Public Transportation : The Role Of Government And PrivateEnterprise

[1] Mr S Ramalingam, [2] Mounika M, [3] Thamarai Selvi K, [1] Associate Professor, [2],[3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: Efficient Public Transportation Is Integral To Urban Development, Addressing Mobility Challenges And Promoting Sustainable, Accessible Cities. This Study Examines The Dynamic Relationship Between Government Authorities And Private Enterprises In The Provision And Management Of Public Transportation Services. Focusing On Urban Contexts, The Research Explores The Roles, Responsibilities, And Collaboration Models Between Government Agencies And Private Entities. The Study Employs A Multi-Dimensional Approach, Considering Policy Frameworks, Regulatory Mechanisms, And Case Studies From Diverse Global Urban Settings. Government Interventions, Ranging From Infrastructure Investments To Regulatory Frameworks, Are Evaluated For Their Impact On The Efficacy And Accessibility Of Public Transportation. The Study Also Investigates Successful Public-Private Partnerships And Potential Challenges Associated With The Integration Of Private Enterprises Into Public Transportation Networks. In Conclusion, The Study Seeks To Provide Actionable Insights Into Fostering Effective Collaboration Between Government Agencies And Private Enterprises, Ultimately Enhancing The Overall Performance And Accessibility Of Public Transportation In Urban Environments.

Key Words: Public Transportation, Government Intervention, Private Enterprise, Urban Mobility, Sustainable Transportation.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

11. The Imperative Of Engaging Professional Builders In BuildingConstruction Works

[1] Mr M Kaliraj, [2] Manikandan G, [1] Assistant Professor, [2] U.G Student Department Of CivilEngineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: The Construction Industry Plays A Pivotal Role In Shaping The Built Environment, And The Involvement Of Qualified Professionals Is Essential For Ensuring The Success OfBuilding Projects. It Develops Into The Project Planning, Execution, And Quality Assurance Aspects Handled By Professional Builders, Highlighting Their Contributions To Timely Delivery, Cost-Effectiveness, And Adherence To Industry Standards. The Study Delves Into The Regulatory Frameworks And Accreditation Systems That Govern The Professional Standards Of Builders. It Discusses The Importance Of Recognizing And Adhering To These Standards In Fostering A Culture Of Professionalism Within The Construction Industry. By Understanding The Indispensable Role Of Professional Builders, Stakeholders Can Make Informed Decisions That Contribute To The Overall Efficiency, Sustainability, And Success Of Building Construction Projects.

In Conclusion, This Paper Advocates For A Heightened Awareness Of The Value Brought By Professional Builders And Emphasizes Their Imperative Engagement In Building Construction Works. The Study Contributes To Ongoing Conversations About Elevating Professional Standards Within The Construction Industry For The Benefit Of Both Practitioners And The Broader Community.

Key Words: Professionals Builders, Building Construction, Construction Industry, Project Management, Quality Assurance.

12. Investigation Of Crushability Of Concrete Of Different GraniteAggregate Sizes Using Impact Test

[1] Ms K Gayathri, [2] Mr K Saravanan, [3] Mounika M, [1] Assistant Professor, [2] Assistant Professor, [3]
U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: The Crushability, Defined As The Resistance Of Concrete To Fragmentation Under Impact Loading, Is A Critical Parameter Influencing The Durability And Performance Of Concrete Structures. The Research Aims To Assess How Varying Sizes Of Granite Aggregates Impact The Crushability Of Concrete And Subsequently Its Suitability For Construction Applications. Concrete Mixtures Are Prepared With Granite Aggregates Of Different Sizes, And Cylindrical Specimens Are Subjected To Impact Loading Using Standardized Test Methods. The Impact Tests Evaluate Parameters Such As Energy Absorption, Fracture Patterns, And Particle Size Distribution Post-Impact. Additionally, Compressive Strength Tests And Microstructural Analyses Are Conducted To Provide Complementary Insights Into The Mechanical Properties Of The Concrete. The Study Explores Correlations Between Aggregate Size, Energy Absorption During Impact, And Subsequent Concrete Fragmentation. It Aims To Identify Optimal Aggregate Sizes That Balance Mechanical Strength With Resistance To Impact-Induced Damage. The Research Contributes To The Understanding Of How Aggregate Characteristics

Affect The Crushability Of Concrete, Providing Valuable Insights For Optimizing Concrete Mix Designs For Specific Construction Applications. The Study's Findings Have Practical Implications For Designing Concrete Mixtures Tailored To Resist Impact Loading, Ultimately Contributing To The Advancement Of Construction Materials And Practices.

Key Words: Concrete Crushability, Granite Aggregate, Impact Test, Aggregate Size, Construction Materials.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

13. Design Of Sedimentation Tank To Resuscitate Phytoremediation InOverloaded Obafemi Awolowo Sewage Treatment Plant

[1] Ms G Bharani, [2] Ms E Vinodha, [3] Saleem Khan, [1]Assistant Professor, [2] Assistant Professor, [3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: The Objective Is To Alleviate Overloading Issues And Optimize The Treatment Capacity Of The Plant. The Design Process Involves Hydraulic Analyses, Sedimentation Kinetics, And Water Quality Assessments. Hydraulic Parameters, Including Flow Rates, Detention Times, And Particle Settling Velocities, Are Considered To Optimize The Dimensions And Configuration Of The Proposed Sedimentation Tank. Additionally, Plant-Specific Water Quality Parameters Are Evaluated To Ensure The Sedimentation Tank Effectively Captures Suspended Solids And Enhances The Overall Phytoremediation Process. The Study Further Explores The Potential Impact Of The Sedimentation Tank On The Removal Efficiency Of Contaminants, Including Nutrients And Heavy Metals, Contributing To The Overall Effectiveness Of Phytoremediation. The Proposed Sedimentation Tank Design Serves As A Cost-Effective Solution To Enhance The Treatment Capacity Of Overloaded Sewage Treatment Plants And Improve The Water Quality Of Treated Effluents. In Conclusion, The Study Underscores The Importance Of Hydraulic Design In Augmenting Phytoremediation Processes, Addressing Operational Challenges, And Ensuring Sustainable Wastewater Treatment Practices. The Findings Contribute To The Broader Discourse On Innovative Approaches To Sewage Treatment And Environmental Remediation In Urban Settings.

Key Words: Sedimentation Tank, Phytoremediation, Sewage Treatment Plant, Hydraulic Design, Water Quality.

14. Some Later Ages Structural Characteristics Of Concrete Containing Empty Palm Oil Fruit Brunch Ash (Epo-Fba) As Partial Replacement Of Ordinary Portland Cement

[1] Ms E Vinodha, [2] Thirupathi Raja G, [3] Joel Fernadaz, [1]Assistant Professor, [2][3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: Concrete Mixtures Are Designed With Varying Percentages Of Epo-Fba Replacing Opc. And Specimens Are Cast For Testing At Different Curing Ages. Compressive Strength, Flexural Strength, And Modulus Of Elasticity Are Evaluated To Assess The Mechanical Properties Of The Concrete At Later Ages. Additionally, Non-Destructive Testing Techniques Such As Ultrasonic Pulse Velocity And Dynamic Modulus Of Elasticity Are Employed To Provide Insights Into The Long-Term Performance And Durability Characteristics. The Study Aims To Correlate The Microstructural Observations With The Mechanical Performance Of Concrete Containing Epo-Fba. The Findings Of This Research Contribute To The Understanding Of The Structural Implications Of Using Epo-Fba As A Partial Replacement For Opc In Concrete, Especially At Later Ages. The Study's Outcomes Are Expected To Guide Concrete Producers, Engineers, And Researchers In Optimizing Mix Designs For Sustainable Construction Practices. In Conclusion, The Investigation Emphasizes The Potential Of Epo- Fba In Enhancing The Structural Characteristics Of Concrete At Later Ages, Paving The Way For Eco-Friendly Alternatives In The Construction Industry.

Key Words: Concrete, Empty Palm Oil Fruit Bunch Ash (Epo-Fba), Partial Replacement, Structural Characteristics, Later Ages.

15. Pozzolanic And Mechanical Properties Of Date Palm Seed Ash (Dpsa) Concrete

[1] Mr R Sivashankar, [2] Ms K Gayathri, [3] S Navaneethan Krishnan, [1] Associate Professor, [2] Assistant Professor, [3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: Concrete Mixtures Are Designed With Varying Proportions Of Dpsa, And Comprehensive Tests Are Conducted To Evaluate Pozzolanic Activity, Compressive Strength, Flexural Strength, And Durability Properties. The Study Assesses The Impact Of Dpsa On The Hydration Process, Microstructure, And Mechanical Behavior Of The Concrete. The Study Explores The Optimal Percentage Of Dpsa Replacement To Achieve The Desired Mechanical Properties While Considering The Influence On Workability And Durability. The Findings Contribute To The Growing Body Of Knowledge On Sustainable Construction Materials, Highlighting The Potential Of Dpsa As A Supplementary Cementitious Material. The Study's Outcomes Are Expected To Inform Concrete Producers, Engineers, And Policymakers Seeking Environmentally Friendly Alternatives For Concrete Production.

In Conclusion, This Investigation Underscores The Significance Of Dpsa In Enhancing Both The Pozzolanic And Mechanical Properties Of Concrete. The Study Aims To Pave The Way For The Widespread Adoption Of Dpsa As A Sustainable And Effective Supplementary Material In The Construction Industry.

Key Words: Date Palm Seed Ash (Dpsa), Pozzolanic Properties, Mechanical Properties, Sustainable Construction.

16. Performance Of Concrete Made With Coconut Shell Ash (Csa) As AnAdmixture In Acidic Environment

[1] Mr K Saravanan, [2] Gurusamy G, [3] Kokila P, [1] Assistant Professor, [2] Assistant Professor Jj College Of Engineering, [3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: Csa, A Byproduct Of Agricultural Waste, Is Explored For Its Potential To Enhance The Durability Of Concrete In Environments Where Resistance To Acid Attack Is Crucial. Concrete Mixtures Are Designed With Varying Percentages Of Csa Replacing A Portion Of The Cementitious Content. Specimens Are Subjected To An Acidic Environment, Mimicking Conditions Encountered In Industries Such As Chemical Processing And Wastewater Treatment. The Study Assesses The Mechanical Properties, Durability, And Microstructural Characteristics Of The Concrete Exposed To Acidic Conditions. The Findings Contribute To The Understanding Of How Csa Can Serve As An Effective Admixture To Mitigate The Effects Of Acid Attack On Concrete. The Study's Outcomes Are Expected To Inform Concrete Producers, Engineers, And Researchers Seeking Sustainable Alternatives For Enhancing The Durability Of Concrete Structures In Acidic Environments. In Conclusion, This Investigation Highlights The Potential Of Csa As A Valuable Admixture In Improving The Performance Of Concrete In AcidicConditions. The Study Aims To Contribute To The Development Of Environmentally Friendly And Durable Concrete Solutions For Industries Facing Challenges Related To Acid Exposure.

Key Words: Concrete, Coconut Shell Ash (Csa), Admixture, Acidic Environment, Durability.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

17. Analysis Of The Effect Of Polypropylene Polymer (Crushed PlasticWaste) On Oven Dried Laterite Bricks

[1] Mr S Dineshkumar, [2] Mr K Saravanan, [3] Arockia Raj, [1]Assistant Professor, [2] Assistant Professor, [3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: The Utilization Of Plastic Waste In Construction Materials Offers A Sustainable Solution To Address Environmental Concerns While Enhancing The Performance Characteristics Of Traditional Building Components. Laterite Bricks Are Produced By Blending Lateritic Soil With Cement, And In This Study, Varying Percentages Of Polypropylene Polymer Are Introduced As A Partial Replacement For Conventional Aggregates. The Research Assesses The Impact Of The Polymer Inclusion On The Compressive Strength, Flexural Strength, Water Absorption, And Durability Of The Laterite Bricks. Experimental Investigations Involve Comprehensive Mechanical Testing And Microstructural Analyses To Understand The Interactions Between The Polypropylene Polymer And The Laterite Matrix. Scanning Electron Microscopy (Sem) And Energy-Dispersive X-Ray Spectroscopy (Eds) Are Employed To Elucidate The Microstructural Changes And Bonding Mechanisms Within The Composite Material. The Outcomes Are Intended To Inform Construction Professionals, Researchers, And Policymakers About The Feasibility And Benefits Of Incorporating Polypropylene Polymer In Traditional Building Materials.

Key Words: Polypropylene Polymer, Crushed Plastic Waste, Laterite Bricks, Sustainable Construction, Mechanical Properties.

18. Effect Of Coconutshell Ash (Csa) As An Admixture On The PropertiesOf Cement Paste And Concrete

[1] Mr K Sengottain, [2] Aishwarya, 3 Joel Fernadaze, [1,2] Associate Professor, [3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: Csa, Derived From Agricultural Waste, Is Explored For Its Potential To Enhance The Sustainability And Performance Concrete Mixes. Experimental Investigations Involve The Systematic Incorporation Of Csa Into Cement Paste And Concrete Mixtures At Varying Replacement Percentages. The Research Assesses The Influence Of Csa On Workability, Setting Time, Compressive Strength, And Durability Properties. The Hydration Process Of Cement Paste Is Analyzed Through Techniques Such As Isothermal Calorimetry And Thermogravimetric Analysis. Scanning Electron Microscopy (Sem) And X-Ray Diffraction (Xrd), Are Employed To Investigate The Changes In The Cementitious Matrix Due To Csa Incorporation. Additionally, Durability Tests, Such As Water Absorption, Chloride Penetration, And Sulfate Resistance, Provide Insights Into The Long-Term Performance Of Concrete With Csa. In Conclusion, This Investigation Emphasizes The Potential Of Csa As A Valuable Admixture In Promoting Both The Sustainability And Performance Of Cement Paste And Concrete. The Study Aims To Contribute To The Development Of Environmentally Friendly And Durable Concrete Solutions, Aligning With The Broader Goals Of Sustainable Construction Practices.

Key Words: Coconut Shell Ash (Csa), Admixture, Cement Paste, Concrete Properties, Sustainable Construction.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Read
Manikandam, Trichy-620 012

19. Study Of Hydraulic Jump In A Rectangularflume By ComparingRectangular Block Wier And Sluice Gate

[1] Mr S Ramalingam, [2] Ms K Gayathri, [3] Arunkumar, [1]Associateprofessor, [2] Assistant Professor, [3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: Hydraulic Jumps Play A Crucial Role In Open Channel Flow, Influencing Energy Dissipation And Flow Characteristics. This Study Investigates Hydraulic Jumps In A Rectangular Flume, Comparing The Performance Of A Rectangular Block Weir And A Sluice Gate. The Objective Is To Analyze The Hydraulic Jump Characteristics And Energy Dissipation Efficiency Under Different Flow Conditions. The Study Involves The Installation Of Both A Rectangular Block Weir And A Sluice Gate To Induce Hydraulic Jumps. Flow Parameters, Such As Water Surface Profiles, Velocities, And Energy Dissipation, Are Measured To Characterize The Hydraulic Jump Phenomenon. The Study Explores The Influence Of Design Parameters, Including Geometry And Submergence, On The Hydraulic Jump Features. Insights From This Research Contribute To The Understanding Of Hydraulic Jumps In Rectangular Flumes And Provide Valuable Information For Hydraulic Structure Design And Open Channel Flow Management. The Comparative Analysis Of Different Control Mechanisms For Inducing Hydraulic Jumps Enhances The Knowledge Base For Optimizing Energy Dissipation In Open Channel Systems.

Key Words: Hydraulic Jump, Rectangular Flume, Rectangular Block Weir, Sluice Gate, Open Channel Flow.

20. Assess The Effect Of Improperuseof Engineering Code Of Conduct ToThe Construction Industry

[1] Mr M Kaliraj, [2] Krishnaveni, [3] Aishwarya P, [1] Assistant Professor, [2] Assistant Professor Care College Of Engineering, [3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: Professional Ethics And Adherence To A Code Of Conduct Are Fundamental Principles Governing The Engineering Profession. This Study Aims To Assess The Effects Of The Improper Use Of The Engineering Code Of Conduct On The Construction Industry. The Objective Is To Analyze The Consequences, Identify Contributing Factors, And Propose Recommendations For Mitigating The Negative Impacts. Through A Combination Of Literature Review, Case Studies, And Surveys, The Research Explores Instances Of Improper Use Of Engineering Codes Of Conduct Within The Construction Sector. It Investigates Ethical Violations, Deviations From Established Standards, And The Resultant Impact On Project Outcomes, Safety, And Public Trust. Surveys And Interviews With Engineering Professionals, Regulators, And Project Stakeholders Provide Insights Into The Prevalence And Root Causes Of Improper Conduct. The Study Evaluates The Implications On Project Timelines, Quality, And Overall Industry Reputation. The Outcomes Of This Study Are Intended To Inform Engineering Practitioners, Regulatory Bodies, And Educational Institutions About The Challenges Associated With The Improper Use Of Engineering Codes Of Conduct. Recommendations Will Be Proposed To Strengthen Ethical Awareness, Enforcement Mechanisms, And Educational Strategies Within The Construction Industry.

Key Words: Engineering Code Of Conduct, Construction Industry, Professional Ethics, Improper Use, Impact Assessment.

PRINCIPAL
Indra Ganesan College of Engineer
IG Valley, Madurai Main Roa
Manikandam, Trichy-620 01?

21. Geotechnical Characterization Of Laterites Stabilised With Sawdust Ash-Lime As Subgrade Material In Road Construction

[1] Ms K Gayathri, [2] Arunkumar, [3] Thirupathy, [1] Assistant Professor, [2,3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: The Objective Is To Analyze The Consequences, Identify Contributing Factors, And Propose Recommendations For Mitigating The Negative Impacts. It Investigates Ethical Violations, Deviations From Established Standards, And The Resultant Impact On Project Outcomes, Safety, And Public Trust. Surveys And Interviews With Engineering Professionals, Regulators, And Project Stakeholders Provide Insights Into The Prevalence And Root Causes Of Improper Conduct. The Study Evaluates The Implications On Project Timelines, Quality, And Overall Industry Reputation. The Research Aims To Categorize Instances Of Improper Conduct, Ranging From Conflicts Of Interest To Fraudulent Practices, And Analyze Their Varying Impacts. The Outcomes Of This Study Are Intended To Inform Engineering Practitioners, Regulatory Bodies, And Educational Institutions About The Challenges Associated With The Improper Use Of Engineering Codes Of Conduct. Recommendations Will Be Proposed To Strengthen Ethical Awareness, Enforcement Mechanisms, And Educational Strategies Within The Construction Industry.

Key Words: Engineering Code Of Conduct, Construction Industry, Professional Ethics, Improper Use, Impact Assessment.

22. Analysis Of Sandcrete Block Production By Using Different Sources Of Sharp Sands In Some Parts Of South-East Geo-Political Zones. A Case Study Enugu And Ebonyi State

[1] Ms G Bharani, [2] Ms E Vinodha, [3] Mahendran M, [1,2] Assistant Professor, [3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: Sandcrete Blocks Are Integral Components Of The Construction Industry In Nigeria. Contributing Significantly To Residential And Commercial Structures. This Study Focuses On The Analysis Of Sandcrete Blocks Production Using Different Sources Of Sharp Sands In Selected Areas Of The South-East Geo-Political Zones, Specifically Enugu And Ebonyi States. Laboratory Testing Includes Compressive Strength Measurements, Water Absorption Tests, And Assessments Of Other Relevant Properties Of Sandcrete Blocks Produced Using Sands From Different Sources. Statistical Analyses Are Employed To Compare The Performance Characteristics Of The Blocks And Identify Factors Influencing Their Quality. The Study Aims To Provide Insights Into The Influence Of Geological And Environmental Factors On The Quality Of Sandcrete Blocks In The Region. The Outcomes Of This Research Are Expected To Benefit Builders, Construction Professionals, And Policymakers Involved In The Development And Regulation Of Construction Materials. The Study's Findings Will Inform Decisions Regarding The Selection Of Suitable Sharp Sands For Sandcrete Block Production In The South-East Geo- Political Zones.

Key Words: Sandcrete Blocks, Sharp Sands, Construction Materials, South-East Nigeria, Enugu State, Ebonyi State.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

23. Integrated Solar And Hydraulic Jump Enhanced Waste StabilizationPond

[1] Ms E Vinodha, [2] Kokila, [3] Thamariselvi, [1] Assistant Professor, [2,3] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering, Trichy.

Abstract: Waste Stabilization Ponds (Wsps) Are Widely Employed For Wastewater Treatment Due To Their Simplicity And Cost-Effectiveness. This Study Proposes An Innovative Approach To Enhance The Performance Of Wsps By Integrating Solar Energy Utilization And Hydraulic Jump Principles. The Synergistic Effect Of These Technologies Aims To Optimize The Treatment Efficiency, Energy Sustainability, And Overall Environmental Impact Of Wastewater Treatment Processes. The Integrated System Incorporates Solar Panels To Harness Renewable Energy For Powering Pond Aeration Mechanisms. Solar-Driven Aerators Enhance The Oxygen Transfer Rate Within The Wsps, Promoting Microbial Activity And Accelerating The Degradation Of Organic Pollutants. Additionally, Hydraulic Jump Structures Are Strategically Placed Within The Ponds To Induce Increased Turbulence, Facilitating Particle Settling And Improving The Overall Treatment Performance. The Study Evaluates The Energy Efficiency Of The Solar-Aerated Ponds And The Hydraulic Jump's Influence On The Pond's Hydraulic And Treatment Characteristics. The Integrated System Offers A Potential Solution To Improve The Environmental Performance Of Wsps, Making Them More Resilient And Adaptable To Varying Operational Conditions.

Key Words: Waste Stabilization Pond, Integrated Solar System, Hydraulic Jump, Waste Water Treatment, Sustainable Technology.

24. Title : Deep Learning Approaches For Image DeblurringAnd Super-Resolution

1. [1] Dr.P.Subharajam,Assistant Professor, Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. [2] Arun R (Ii Yr), Student/ Cse ,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract:

"Deep Learning Approaches For Image Deblurring And Super-Resolution" Explores Cutting-Edge Methods In Using Neural Networks For Enhancing Image Quality. This Paper Delves Into The Application Of Deep Learning Techniques, Specifically Focusing On Deblurring And Super-Resolution Tasks, Aiming To Restore And Enhance Image Details Through Advanced Neural Network Architectures. The Study Investigates Various Models, Their Architectures, And Training Strategies, Providing Insights Into The Promising Advancements And Challenges In This Field.

Keywords:

Deblurnet Superresdl Image Deblur Dl Srgan Deep Deblur Sr Cnn Deblursr DeepImage Enhancement Neural Deblurring Super-Res Networks Deblursr Fusion

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

25. Title : Content-Based Image Retrieval Using FeatureExtraction And Machine Learning

1. Dr.P.Subharajam,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Balamanikandaprabhu B R (Ii Yr), Student/ Cse , Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract:

"Content-Based Image Retrieval Using Feature Extraction And Machine Learning" Investigates The Fusion Of Feature Extraction Techniques And Machine Learning Algorithms For Efficient Image Retrieval. This Paper Explores Methods To Automatically Extract Meaningful Features From Images And Employ Machine Learning Models To Organize And Retrieve Images Based On Their Content. By Analyzing And Leveraging Image Characteristics, This Study Aims To Enhance Retrieval Accuracy And Speed In Large Image Databases, Highlighting The Potential Of

Combining Feature Extraction And Machine Learning For Effective Content-Based Image Retrieval Systems.

Keywords:

Cbir Feature-Based Image Retrieval Ml Image Search Content Analysis Image Feature Extraction Cbir System Feature Learning Image Similarity Search Ml-Based Image Retrieval Content-Based Search

26. Title : Semantic Role Labeling For ImprovedUnderstanding Of Textual Information

1. Dr.P.Subharajam,Assistant Professor, Cse ,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Bharathi S (Ii Yr), Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract

"Semantic Role Labeling For Improved Understanding Of Textual Information" Focuses On The Application Of Advanced Linguistic Models To Decode The Underlying Relationships Between Elements In Text. This Paper Explores The Technique Of Semantic Role Labeling (Srl), Aiming To Identify And Classify The Roles Of Various Elements Within Sentences. By Assigning Semantic Roles To Words Or Phrases, This Study Enhances The Comprehension Of Textual Information, Providing A Deeper Understanding Of How Different Components Contribute To The Meaning Of A Sentence. The Research Showcases The Significance Of Srl In Advancing Natural Language Understanding And Information Extraction Tasks.

Keywords:

Srl Text Understanding Semantic Parsing Role Labeling Nlp Enhancement Information Extraction Semantic Analysis Textual Srl Text Understanding Models Enhanced Text Comprehension

PRINCIPAL
Indra Ganesan College of Engineering.
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

49.Title : Contextual Word Embeddings: Advances In Pre-Trained Language Models

1. Mr.P.Suresh Pandi, Assistant Professor, Cse, Indra Ganesan College Of
Engineering,Manikandam,Trichy-12.
2. Akshaya T (Ii Yr),Student/ Cse, Indra Ganesan College Of
Engineering,Manikandam,Trichy-12.

Abstract :

"Contextual Word Embeddings: Advances In Pre-Trained Language Models" Explores The Evolution And Advancements In Contextual Word Embeddings Offered By Pre-Trained Language Models. This Paper Delves Into The Development Of Models Like Bert, Gpt, And Their Variants, Focusing On Their Ability To Generate Contextualized Representations Of Words Within Sentences. It Examines How These Models Capture Nuanced Meanings And Context-Specific Information, Revolutionizing Natural Language Understanding Tasks. The Study Highlights The Transformative Impact Of Contextual Word Embeddings In Various Nlp Applications,Showcasing Their Contributions To Improved Language Understanding, Sentiment Analysis, AndInformation Retrieval.

Keywords:

Word Embeddings Contextual Embeddings Pre-Trained Models Language Model Advances Contextual Representation Word Vectorization Embedding Improvement Pre- Trained Embeddings Contextual Word Vectors Language Model Enhancements

50.Title : Dialogue Systems For Virtual Assistants: EnhancingNatural Language Understanding And Generation

1. Mr.P.Suresh Pandi, Assistant Professor, Cse, Indra Ganesan College Of
Engineering,Manikandam,Trichy-12.
2. Appas Ali D (Ii Yr),Student/ Cse, Indra Ganesan College Of
Engineering,Manikandam,Trichy-12.

Abstract :

"Dialogue Systems For Virtual Assistants: Enhancing Natural Language Understanding And Generation" Investigates Advancements In Creating Interactive Conversational Agents For Virtual Assistants. This Paper Explores Techniques And Models In Natural Language Understanding And Generation Tailored For Dialogue Systems. It Delves Into The DevelopmentOf Neural Architectures, Context-Aware Models, And Dialogue Management Strategies To Enable More Natural And Contextually Relevant Interactions. The Study Highlights The Significance Of These Systems In Augmenting User Experiences, Emphasizing Improvements In Understanding User Intents And Generating Human-Like Responses In Various Domains, From Customer Service To Personal Assistants.

Keywords:

Virtual Assistants Dialogue Systems Nlu/Nlg Enhancement Conversational Ai Natural Language Interaction Virtual Assistant Technology Dialog System Advancements Nl Understanding Improvement Generation Enhancement Conversational Interface

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

47.Title : Mining Temporal Patterns In Time-Series Data:Applications And Challenges

1. Mr.C.Jegadeesan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Vincy Sharmila K (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Mining Temporal Patterns In Time-Series Data: Applications And Challenges" Investigates The Exploration Of Temporal Patterns Within Time-Series Datasets. This Paper Delves Into Methodologies And Algorithms Aimed At Uncovering Meaningful Patterns, Trends, And Anomalies Over Time. It Explores The Application Of Techniques Such As Machine Learning, Statistical Analysis, And Pattern Recognition In Various Domains Including Finance, Healthcare, And Climate Science. The Study Addresses Challenges Such As Noise, Seasonality, And Irregularities In Time-Series Data, Emphasizing The Significance Of Accurate Temporal Pattern Mining For Predictive Modeling, Anomaly Detection, And Informed Decision-Making.
Keywords:

Temporal Pattern Mining Time-Series Analytics Pattern Discovery Time-Stamped Data Analysis Temporal Data Mining Time-Series Pattern Recognition Pattern Extraction Techniques Time-Based Analytics Data Sequencing Analysis Temporal PatternApplications

48.Title : Privacy-Preserving Data Mining Techniques: Balancing Utility And Confidentiality

1. Mr.C.Jegadeesan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Yathesh M (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Privacy-Preserving Data Mining Techniques: Balancing Utility And Confidentiality" Investigates Methods That Maintain Data Utility While Safeguarding Confidentiality In Mining Sensitive Information. This Paper Explores Cryptographic Protocols, Anonymization Techniques, And Differential Privacy Approaches To Protect Individual Privacy While Enabling Meaningful Analysis. It Addresses The Trade-Offs Between Data Utility And Confidentiality, Considering The Challenges Of Preserving Valuable Information While Mitigating The Risk Of Privacy Breaches. The Study Emphasizes The Importance Of Striking A Balance Between Utility And Confidentiality In Privacy-Preserving Data Mining, Promoting The Development Of Secure Yet Effective Data Analysis Methods.
Keywords:

Privacy-Preserving Mining Confidentiality Techniques Data Utility Protection Privacy- Utility Balance Confidential Data Mining Secure Data Analytics Privacy-Preserving Algorithms Utility-Confidentiality Tradeoff Protected Data Analysis Confidential Information Mining

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

49.Title : Contextual Word Embeddings: Advances In Pre-Trained Language Models

1. Mr.P.Suresh Pandi, Assistant Professor, Cse, Indra Ganesan College Of
Engineering,Manikandam,Trichy-12.

2. Akshaya T (Ii Yr),Student/ Cse, Indra Ganesan College Of
Engineering,Manikandam,Trichy-12.

Abstract :

"Contextual Word Embeddings: Advances In Pre-Trained Language Models" Explores The Evolution And Advancements In Contextual Word Embeddings Offered By Pre-Trained Language Models. This Paper Delves Into The Development Of Models Like Bert, Gpt, And Their Variants, Focusing On Their Ability To Generate Contextualized Representations Of Words Within Sentences. It Examines How These Models Capture Nuanced Meanings And Context-Specific Information, Revolutionizing Natural Language Understanding Tasks. The Study Highlights The Transformative Impact Of Contextual Word Embeddings In Various Nlp Applications,Showcasing Their Contributions To Improved Language Understanding, Sentiment Analysis, AndInformation Retrieval.

Keywords:

Word Embeddings Contextual Embeddings Pre-Trained Models Language Model Advances Contextual Representation Word Vectorization Embedding Improvement Pre- Trained Embeddings Contextual Word Vectors Language Model Enhancements

50.Title : Dialogue Systems For Virtual Assistants: EnhancingNatural Language Understanding And Generation

1. Mr.P.Suresh Pandi, Assistant Professor, Cse, Indra Ganesan College Of
Engineering,Manikandam,Trichy-12.

2. Appas Ali D (Ii Yr),Student/ Cse, Indra Ganesan College Of
Engineering,Manikandam,Trichy-12.

Abstract :

"Dialogue Systems For Virtual Assistants: Enhancing Natural Language Understanding And Generation" Investigates Advancements In Creating Interactive Conversational Agents For Virtual Assistants. This Paper Explores Techniques And Models In Natural Language Understanding And Generation Tailored For Dialogue Systems. It Delves Into The DevelopmentOf Neural Architectures, Context-Aware Models, And Dialogue Management Strategies To Enable More Natural And Contextually Relevant Interactions. The Study Highlights The Significance Of These Systems In Augmenting User Experiences, Emphasizing Improvements In Understanding User Intents And Generating Human-Like Responses In Various Domains, From Customer Service To Personal Assistants.

Keywords:

Virtual Assistants Dialogue Systems Nlu/Nlg Enhancement Conversational Ai Natural Language Interaction Virtual Assistant Technology Dialog System Advancements Nl Understanding Improvement Generation Enhancement Conversational Interface

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

51.Title   :   Clustering   High-Dimensional   Data: Novel Approaches For Improved Accuracy

1. Mr.P.Suresh Pandi, Assistant Professor, Cse, Indra Ganesan College Of
        Engineering,Manikandam,Trichy-12.

2. Aravindh V K (Ii Yr),Student/ Cse, Indra Ganesan College Of
        Engineering,Manikandam,Trichy-12.

Abstract :

"Clustering High-Dimensional Data: Novel Approaches For Improved Accuracy" Investigates Advanced Methodologies Designed To Enhance The Accuracy Of Clustering Algorithms In High-Dimensional Datasets. This Paper Explores Innovative Techniques Tailored To Address Challenges Posed By The Curse Of Dimensionality, Focusing On Algorithms That Effectively Handle Large Feature Spaces. It Delves Into Strategies Like Subspace Clustering, Dimensionality Reduction, And Density-Based Clustering To Improve The Precision Of Grouping Similar Data Points In High-Dimensional Spaces. The Study Highlights The Significance Of These Approaches In Various Fields, Including Image Processing, Bioinformatics, And Recommendation Systems, Emphasizing Their Potential To Unlock Meaningful Patterns From Complex, High-Dimensional Data.

Keywords:

High-Dimensional Clustering Data Clustering Techniques Novel Clustering Methods Dimensionality Reduction Accuracy Improvement High-D Data Analysis Advanced Clustering Models Feature Space Clustering Clustering Efficiency High-Dimensional Analysis

52.Title : Feature Selection In Data Mining: Enhancing ModelInterpretability And Performance

1. Mr.P.Suresh Pandi, Assistant Professor, Cse, Indra Ganesan College Of
        Engineering,Manikandam,Trichy-12.

2. Ayisha Siddeequa A (Ii Yr),Student/ Cse, Indra Ganesan College Of
        Engineering,Manikandam,Trichy-12.

Abstract :

"Feature Selection In Data Mining: Enhancing Model Interpretability And Performance" Explores The Critical Role Of Selecting Relevant Features In Improving Both The Interpretability And Performance Of Data Mining Models. This Paper Investigates Various Techniques Aimed At Identifying And Prioritizing Informative Features While Discarding Redundant Or Noisy Ones. It Delves Into Methodologies Such As Filter, Wrapper, And Embedded Approaches, Highlighting Their Impact On Model Interpretability, Generalization, And Computational Efficiency. The Study Emphasizes The Significance Of Feature Selection In Enhancing The Effectiveness Of Data Mining Algorithms Across Diverse Domains, Facilitating More Accurate And Comprehensible Models.

Keywords:

Feature Selection Model Interpretability Data Mining Techniques Performance Improvement Variable Selection Feature Importance Model Enhancement Interpretive Modeling Selective Feature Extraction Data Attribute Selection

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

53.Title : Sequential Pattern Mining In Healthcare Data:Discovering Disease Progression Patterns

1. Mr.P.Suresh Pandi, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Benasir S (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Sequential Pattern Mining In Healthcare Data: Discovering Disease Progression Patterns" Investigates The Application Of Sequential Pattern Mining Techniques To Uncover Patterns In The Progression Of Diseases Within Healthcare Data. This Paper Explores Methodologies Aimed At Analyzing Sequential Data To Identify Common Progressions, Transitions, Or Associations Among Medical Events Or Conditions Over Time. It Delves Into Algorithms And Approaches Specifically Tailored To Handle Healthcare Data Sequences, Emphasizing Their Potential To Reveal Valuable Insights Into Disease Evolution, Treatment Effectiveness, And Patient Outcomes. The Study Highlights The Significance Of Sequential Pattern Mining In Healthcare For Better Understanding Disease Trajectories And Informing Personalized Treatment Strategies.

Keywords:

Healthcare Data Mining Disease Progression Patterns Sequential Pattern Analysis Medical Sequence Mining Health Data Analytics Disease Trajectory Discovery Pattern Recognition In Health Healthcare Pattern Mining Medical Sequence Patterns Disease Progression Analysis

54.Title : Automatic Text Summarization: Extractive Vs.Abstractive Approaches

1. Mrs.A.Ramya, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Ramya R (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Automatic Text Summarization: Extractive Vs. Abstractive Approaches" Compares And Contrasts Two Fundamental Methodologies In Text Summarization. This Paper Investigates Extractive Techniques, Which Select And Compile Important Segments From The Original Text, And Abstractive Methods, Which Generate Condensed Summaries By Understanding And Paraphrasing The Content. It Delves Into The Strengths, Limitations, And Advancements Within Each Approach, Exploring Their Effectiveness In Producing Concise Yet Informative Summaries. The Study Aims To Provide Insights Into The Trade-Offs Between Extractive And

Abstractive Methods, Showcasing Their Applications And Challenges In Developing Robust Automatic Text Summarization Systems.

Keywords:

Text Summarization Extractive Vs. Abstractive Summary Generation Nlp Summarization Techniques Text Condensation Extractive Summarization Abstractive Summarization Summarization Models Content Condensation Summarization Methods

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

55.Title : Bias And Fairness In Nlp: Addressing Ethical Concerns In Language Models

1. Mrs.A.Ramya, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Sharvesh Charan.S.A (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Bias And Fairness In Nlp: Addressing Ethical Concerns In Language Models" Examines The Ethical Implications And Challenges Surrounding Bias In Natural Language Processing (Nlp) Models. This Paper Investigates Approaches Aimed At Identifying, Mitigating, And Rectifying Biases Present In Language Models. It Explores Techniques To Ensure Fairness And Mitigate Unintended Discrimination Across Diverse Demographics, Emphasizing The Importance Of Ethical Considerations In Nlp. The Study Highlights The Significance Of Addressing Bias And Promoting Fairness In Language Models To Build More Inclusive And Equitable Ai Systems.

Keywords:

Nlp Bias Fairness In Language Models Ethical Nlp Concerns Bias Mitigation Fairness Assessment Ethical Ai In Nlp Bias Detection Fairness Evaluation Responsible Language Models Ethical Nlp Practices

56.Title : Anomaly Detection In Network Intrusion Data: AMachine Learning Perspective

1. Mrs.A.Ramya, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Sathasivam P (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Anomaly Detection In Network Intrusion Data: A Machine Learning Perspective" Explores The Application Of Machine Learning Techniques For Identifying Anomalies In Network

Intrusion Data. This Paper Investigates Various Algorithms And Methodologies Tailored To Detect Abnormal Activities Within Network Traffic. It Delves Into The Challenges Of Distinguishing Anomalous Behavior From Normal Patterns, Addressing Issues Such As Class Imbalance And Evolving Attack Strategies. The Study Emphasizes The Significance Of Machine Learning In Bolstering Network Security By Effectively Identifying And Mitigating Potential Threats In Real-Time.

Keywords:

Network Intrusion Detection Anomaly Detection Machine Learning Approach IntrusionDetection Systems Network Security Analytics Anomaly Identification Intrusion Detection Methods Ml-Based Anomaly Detection Network Anomaly Analysis Security Threat Detection

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

57.Title : Stream Data Mining: Real-Time Analysis And PatternRecognition

1. Mrs.A.Ramya, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Shalini P (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Stream Data Mining: Real-Time Analysis And Pattern Recognition" Delves Into The Techniques And Methodologies Used In Real-Time Analysis And Pattern Recognition For Streaming Data. This Paper Explores Algorithms And Models Tailored To Handle Continuous Data Streams, Enabling Efficient Analysis And Recognition Of Evolving Patterns. It Delves Into Challenges Such As Data Velocity, Concept Drift, And Resource Constraints In Stream Data Mining. The Study Underscores The Significance Of Real-Time Stream Data Mining In Various Applications, From Internet-Of-Things (Iot) Devices To Financial Markets, Highlighting Its Role In Enabling Timely Decision-Making And Proactive Responses To Dynamic Data.

Keywords:

Stream Data Mining Real-Time Analytics Streaming Data Analysis Pattern Recognition Dynamic Data Mining Continuous Data Processing Stream Pattern Analysis Real-Time Pattern Recognition Streaming Analytics Dynamic Pattern Mining

58.Title : Web Usage Mining For Improving Website NavigationAnd User Experience

1. Mrs.A.Ramya, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Shanmuganathan P (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Web Usage Mining For Improving Website Navigation And User Experience" Investigates The Utilization Of Web Usage Mining Techniques To Enhance Website Navigation And User Experience. This Paper Explores Methods That Analyze User Interaction Data To Glean Insights Into Browsing Behavior, Preferences, And Patterns. It Delves Into The Application Of These Insights To Optimize Website Structures, Content Recommendations, And Navigation Paths. TheStudy Emphasizes The Significance Of Web Usage Mining In Refining User Experiences, Increasing Engagement, And Tailoring Online Interfaces To Better Suit User Preferences And Needs.

Keywords:

Web Usage Mining Website Navigation Analysis User Experience Enhancement User Behavior Tracking Website Optimization Navigation Improvement Usage Pattern Analysis Web Data Analytics User Journey Mapping Navigation Personalization

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

59.Title : Neural Machine Translation: Improving Translation Quality Through Attention Mechanisms

1. Ms.J.Jenifer, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Sheela.S (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Neural Machine Translation: Improving Translation Quality Through Attention Mechanisms" Explores Advancements In Translation Quality Using Neural Machine Translation (Nmt) And Attention Mechanisms. This Paper Investigates How Attention Mechanisms Enhance Nmt By Focusing On Relevant Parts Of The Input Sentence During Translation, Improving Accuracy And Context Preservation. It Delves Into The Effectiveness Of Attention- Based Models In Capturing Complex Linguistic Nuances And Addressing Issues Like Long-Range Dependencies In Translations. The Study Highlights The Significance Of Attention Mechanisms In Advancing Machine Translation Systems, Paving The Way For More Accurate And Contextually Aware Language Translations.

Keywords:

Neural Mt Translation Quality Enhancement Attention Mechanisms Nmt Advancements Language Translation Models Attention-Based Translation Translation

Accuracy Improvement Neural Translation Attention Translation Attention Models Nmt Attention Mechanisms

60.Title : Coreference Resolution In Text: An Exploration OfRule-Based And Machine Learning Approaches

1. Ms.J.Jenifer, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Sudhakaran C (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Coreference Resolution In Text: An Exploration Of Rule-Based And Machine Learning Approaches" Delves Into Techniques And Methodologies For Resolving Coreferences Within Textual Data. This Paper Investigates Both Rule-Based And Machine Learning-Driven Approaches Aimed At Identifying And Linking Referring Expressions To Their Corresponding Entities In Text. It Explores The Strengths And Limitations Of These Methodologies, Considering Challenges Such As Ambiguity And Context Dependencies. The Study Highlights The Significance Of Coreference Resolution In Natural Language Understanding, Showcasing The Effectiveness Of Rule-Based And Machine Learning Methods In Tackling This Complex LinguisticTask.

Keywords:

Co-Reference Resolution Textual Anaphora Resolution Rule-Based Approaches Machine Learning Methods Anaphora Resolution Co-Reference Analysis Reference Resolution Nlp Resolution Techniques Rule-Based Vs. Ml Comparison Textual Coherence Enhancement

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

61.Title : Sarcasm Detection In Text: Challenges And Solutions In Nlp

1. Ms.J.Jenifer, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Sugasini.G (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Sarcasm Detection In Text: Challenges And Solutions In Nlp" Delves Into The Complexities Of Identifying Sarcasm Within Textual Data And Explores Methodologies And Models Designed To Detect This Nuanced Form Of Language. This Paper Investigates The Unique Linguistic Challenges Posed By Sarcasm, Such As Incongruity And Context Dependence, And Delves Into Solutions Within Natural Language Processing (Nlp). It Explores Machine Learning Techniques, Linguistic Cues, And Contextual Analysis As Potential Solutions To Tackle Sarcasm Detection Challenges. The Study Underscores The Significance Of Sarcasm Detection In Improving Sentiment Analysis And Understanding Subtle Nuances In Text.

Keywords:

Sarcasm Detection Nlp Challenges Sentiment Analysis Humor Recognition Irony Detection Sarcastic Text Analysis Nlp Solutions Language Ambiguity Contextual Analysis Sarcasm Identification

62.Title : Predictive Analytics In Healthcare: Mining Electronic Health Records For Disease Prediction

1. Ms.J.Jenifer, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Vaishnavi G (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Predictive Analytics In Healthcare: Mining Electronic Health Records For Disease Prediction" Investigates The Application Of Predictive Analytics In Leveraging Electronic Health Records (Ehrs) For Disease Prediction. This Paper Explores Data Mining And Machine Learning Techniques Aimed At Analyzing Comprehensive Patient Data Within Ehrs To Forecast The Likelihood Of Diseases Or Medical Conditions. It Delves Into Methodologies For Feature Selection, Model Development, And Validation Within Healthcare Datasets. The Study Highlights The Significance Of Predictive Analytics In Improving Early Detection, Prognosis, And Personalized Patient Care Through The Utilization Of Ehr Data.

Keywords:

Healthcare Predictive Analytics Electronic Health Records (Ehr) Disease Prediction Models Health Data Mining Predictive Disease Analytics Ehr Analytics Medical Record Analysis Disease Risk Prediction Health Data Insights Predictive Health Modeling

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

63.Title : Discovering Patterns In Big Data: Scalable Algorithms For Association Rule Mining

1. Ms.J.Jenifer, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Vigna Sri S (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Discovering Patterns In Big Data: Scalable Algorithms For Association Rule Mining" Explores Advanced Algorithms Designed To Extract Valuable Patterns From Large-Scale Datasets. This Paper Investigates Scalable Approaches For Association Rule Mining, Focusing On Techniques Capable Of Handling The Volume, Velocity, And Variety Of Big Data. It Delves Into Distributed And Parallel Algorithms, Optimizations, And Novel Methodologies Tailored For Efficient Pattern Extraction. The Study Emphasizes The Significance Of These Scalable Algorithms In Uncovering Actionable Insights And Knowledge Discovery From Vast And Complex Datasets, Enabling Informed Decision-Making In Various Domains.

Keywords:

Big Data Patterns Association Rule Mining Scalable Algorithms Pattern Discovery Large-Scale Data Mining Data Analytics Rule-Based Analysis Scalable Pattern Mining Big Data Algorithms Mining Association Rules

64.Title : Clustering Techniques For Anomaly Detection InCybersecurity Data

1. Mr.S.Manikandan, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Gnanaprakasam A (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Clustering Techniques For Anomaly Detection In Cybersecurity Data" Explores The Application Of Clustering Algorithms To Identify Anomalies Within Cybersecurity Datasets. This Paper Investigates Methodologies Utilizing Clustering For Distinguishing Normal Behavior From Potentially Malicious Activities. It Delves Into The Adaptation Of Clustering Techniques Such As K-Means, Dbscan, Or Hierarchical Clustering To Detect Anomalies In Network Traffic Or System Logs. The Study Emphasizes The Significance Of Leveraging Clustering For Anomaly Detection In Bolstering Cybersecurity Measures, Aiming To Proactively Identify And Mitigate Threats Within Complex And Dynamic Data Environments.

Keywords:

Anomaly Detection Cybersecurity Clustering Intrusion Detection Security Analytics Cluster-Based Anomaly Detection Cyber Threat Detection Unsupervised Learning Clustering Algorithms Network Security Anomaly Detection Techniques

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

65.Title : Web Content Mining: Extracting Knowledge FromTextual Data On The Internet

1. Mr.S.Manikandan,   Assistant   Professor,   Cse,   Indra   Ganesan   College   Of Engineering,Manikandam,Trichy-12.

2. Gowrisankar G (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Web Content Mining: Extracting Knowledge From Textual Data On The Internet" Delves Into Methodologies And Techniques For Extracting Valuable Insights And Knowledge From The Vast Amount Of Textual Data Available On The Web. This Paper Investigates Approaches Such As Natural Language Processing, Text Mining, And Information Retrieval Aimed At Extracting, Structuring, And Analyzing Textual Content From Websites And Web Pages. It Explores The Challenges Of Unstructured Data On The Internet And Showcases How Web Content Mining Enables The Extraction Of Valuable Information For Various Applications, Including Search Engines, Recommendation Systems, And Market Analysis.

Keywords:

Web Mining Textual Data Extraction Knowledge Discovery Internet Data Mining Information Retrieval Content Extraction Text Mining Web Data Analysis Knowledge Extraction Web Information Retrieval

66.Title : User Behavior Analysis In E-Commerce: A Web MiningApproach

1. Mr.S.Manikandan,   Assistant   Professor,   Cse,   Indra   Ganesan   College   Of Engineering,Manikandam,Trichy-12.

2. Hariharan K,Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"User Behavior Analysis In E-Commerce: A Web Mining Approach" ExaminesMethodologies For Analyzing User Behavior Within E-Commerce Platforms Using Web MiningTechniques. This Paper Investigates Approaches Such As Clickstream Analysis, BrowsingPatterns, And Purchase Histories To Understand User Preferences, Interactions, And PurchasingBehaviors. It Explores How Web Mining Enables The Extraction Of Valuable Insights ForPersonalized Recommendations, Targeted Marketing, And Enhancing User Experience In E-Commerce. The Study Underscores The Significance Of User Behavior Analysis In OptimizingOnline Retail Strategies And Improving Customer Satisfaction Within The E-Commerce Domain.

Keywords:

User Behavior Analysis E-Commerce Analytics Web Mining Techniques Online Shopping Behavior Customer Journey Analysis User Data Analysis E-Commerce Insights Online Consumer Behavior Behavioral Analytics E-Commerce Data Mining

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

67.Title : Web Structure Mining: Uncovering Patterns InHyperlink Networks

1. Mr.S.Manikandan, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. John P (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Web Structure Mining: Uncovering Patterns In Hyperlink Networks" Explores Techniques And Algorithms Aimed At Analyzing The Structure Of Hyperlink Networks On The Web. This Paper Investigates Methodologies For Extracting Patterns, Relationships, And Connectivity Insights From The Web's Link Structure. It Delves Into Graph-Based Analysis, Link Analysis Algorithms, And Network Metrics Used To Uncover Valuable Information About Website Relationships, Authority, And Information Flow. The Study Emphasizes The Significance Of Web Structure Mining In Understanding Web Architecture, Search Engine Ranking, And Information Dissemination Across The Internet.

Keywords:

Web Structure Mining Hyperlink Analysis Link Pattern Discovery Graph Mining Network Structure Analysis Hyperlink Relationships Web Graph Analysis Link-Based Pattern Recognition Structure Analysis Techniques Network Pattern Discovery

68.Title : Mobile Augmented Reality: Frameworks, Applications, And User Experience

1. Mr.S.Manikandan, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Kamali A (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Mobile Augmented Reality: Frameworks, Applications, And User Experience" Explores The Landscape Of Augmented Reality (Ar) On Mobile Devices. This Paper Investigates Various Frameworks And Technologies Used In Implementing Ar Applications On Mobile Platforms. It Delves Into The Diverse Applications Of Mobile Ar Across Industries, Showcasing Its Potential In Gaming, Education, Healthcare, And More. Additionally, It Examines The User Experience

Aspects, Highlighting Challenges And Advancements In Enhancing Interaction And Immersion Within Mobile Ar Environments. The Study Emphasizes The Significance Of Mobile Ar In Revolutionizing User Experiences And Fostering Innovation In Numerous Domains.

Keywords:

Augmented Reality (Ar) Mobile Ar Frameworks Ar Applications User Experience (Ux) Ar Technology Mobile Ar Development Ar User Interface Ar Content Creation Mobile Ar Experiences Ar App Development

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

69.Title : Temporal Data Mining: Analyzing Time Series Patterns For Predictive Modeling

1. Ms.G. Abinaya, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Kamatchi S (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Temporal Data Mining: Analyzing Time Series Patterns For Predictive Modeling" Explores Methodologies And Techniques Focused On Mining Time Series Data For Predictive Modeling. This Paper Investigates Algorithms And Approaches Aimed At Extracting Patterns, Trends, And Anomalies Within Temporal Datasets. It Delves Into Time Series Analysis, Feature Engineering, And Predictive Modeling Techniques Tailored To Forecast Future Trends Or Events Based On Historical Temporal Data. The Study Emphasizes The Significance Of Temporal Data Mining In Various Domains Such As Finance, Healthcare, And Climate Science, Showcasing Its Role In Enabling Accurate Predictions And Informed Decision-Making Based On Time-Evolving Patterns.

Keywords:

Temporal Data Mining Time Series Analysis Predictive Modeling Sequential Pattern Mining Temporal Pattern Recognition Time-Based Predictions Forecasting Techniques Pattern-Based Modeling Time Series Predictions Temporal Data Analytics

70.Title : Mining Social Media Data For Opinion Analysis AndTrend Prediction

1. Ms.G. Abinaya, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Keerthika N (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Mining Social Media Data For Opinion Analysis And Trend Prediction" Delves Into Methodologies For Extracting Insights And Predicting Trends From Social Media Content. This Paper Investigates Techniques In Sentiment Analysis, Topic Modeling, And Machine Learning Aimed At Understanding Opinions And Forecasting Emerging Trends Within Social Media Data. It Explores The Significance Of Mining Vast Amounts Of User-Generated Content To Derive Valuable Insights For Businesses, Marketers, And Policymakers. The Study Highlights The Role Of Social Media Data Mining In Shaping Strategies, Understanding Public Opinion, And Predicting Societal Trends In The Digital Age.

Keywords:

Social Media Mining Opinion Analysis Trend Prediction Sentiment Analysis Social Media Analytics Opinion Mining Trend Forecasting Social Sentiment Analysis Data- Driven Trend Analysis Predictive Social Analytics

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

71.Title : Feature Selection And Dimensionality Reduction InHigh-Dimensional Data Sets

1. Ms.G. Abinaya, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Kiruthika M (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Feature Selection And Dimensionality Reduction In High-Dimensional Data Sets" Explores Methods And Strategies To Manage High-Dimensional Data By Focusing On Feature Selection And Dimensionality Reduction Techniques. This Paper Investigates Algorithms And Approaches Aimed At Identifying Relevant Features And Reducing The Number Of Dimensions In Datasets. It Delves Into Methodologies Such As Filter, Wrapper, And Embedded Methods, Emphasizing Their Role In Enhancing Model Efficiency, Interpretability, And Predictive Accuracy. The Study Highlights The Significance Of These Techniques In Handling The Challenges Posed By High- Dimensional Data, Fostering Better Data Understanding, And Improving Machine LearningModel Performance.

Keywords:

Feature Selection Dimensionality Reduction High-Dimensional Data Variable Selection Data Reduction Techniques Feature Subset Selection Principal Component Analysis (Pca) Feature Extraction Dimension Reduction Methods Data Dimensionality Management

72.Title : Personalized Recommender Systems In Web Mining:Algorithms And Evaluation

1. Ms.G. Abinaya, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Mathavan N (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Personalized Recommender Systems In Web Mining: Algorithms And Evaluation" Explores The Design, Implementation, And Evaluation Of Personalized Recommendation Algorithms Within Web Mining. This Paper Investigates Techniques That Leverage User Behavior, Preferences, And Contextual Data To Generate Personalized Recommendations. It Delves Into Algorithms Such As Collaborative Filtering, Content-Based Filtering, And Hybrid Methods, Emphasizing Their Role In Enhancing User Experience And Engagement. Additionally, It Explores Evaluation Metrics And Methodologies For Assessing The Effectiveness And Accuracy Of Personalized Recommender Systems. The Study Highlights The Significance Of These Systems In Tailoring Content And Services To Individual Users Within Web-Based Platforms.

Keywords:

Recommender Systems Personalization Algorithms Web Mining User-Centric Recommendations Recommendation Evaluation Collaborative Filtering Content-Based Filtering Hybrid Recommenders Evaluation Metrics Personalized Web Recommendations

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

73. Title : Opinion Mining And Sentiment Analysis On SocialMedia: A Web Mining Perspective

1. Ms.G. Abinaya, Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Milton A (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Opinion Mining And Sentiment Analysis On Social Media: A Web Mining Perspective" Explores Methodologies And Techniques For Extracting Opinions And Sentiments From Social Media Content. This Paper Investigates Web Mining Approaches, Natural Language Processing, And Machine Learning Algorithms Tailored For Sentiment Analysis On Social Platforms. It Delves Into The Challenges Of Interpreting Nuanced Sentiments, Handling Informal Language, And Context-Based Emotions. The Study Emphasizes The Significance Of Opinion Mining In Understanding Public Sentiments, Trends, And User Opinions On Social Media, Offering Insights Valuable For Businesses, Brand Perception, And Societal Analysis.

Keywords:

Opinion Mining Sentiment Analysis Social Media Analytics Web Mining Techniques Textual Sentiment Analysis Opinion Extraction Sentiment Detection Social Media Sentiment Web-Based Sentiment Analysis Mining Social Media Opinions

74. Title : Mining Sequential Patterns In Time-Stamped Databases: Applications In Customer Behavior Analysis

1. Mrs.A.Suganya,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Vijaya Dharani K (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Mining Sequential Patterns In Time-Stamped Databases: Applications In Customer Behavior Analysis" Explores The Utilization Of Sequential Pattern Mining Techniques In Databases With Timestamped Data. This Paper Investigates Algorithms Designed To Discover Temporal Sequences Of Events And Their Implications In Analyzing Customer Behaviors. It Delves Into Methodologies For Uncovering Patterns Such As Purchasing Sequences Or Navigation Patterns In Time-Stamped Datasets. The Study Highlights The Significance Of Mining Sequential Patterns In Understanding And Predicting Customer Behavior, Aiding In Marketing Strategies, Personalized Recommendations, And Enhancing Customer Experience.

Keywords:

Sequential Pattern Mining Time-Stamped Databases Customer Behavior Analysis Sequence Pattern Analysis Time-Series Database Mining Temporal Data Analysis Sequential Data Mining Behavior Sequence Analysis Time-Stamped Data Patterns Customer Journey Mining

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

75. Title : Fraud Detection In Financial Transactions: A Comparative Study Of Data Mining Approaches

1. Mrs.A.Suganya,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Vinothini S (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Fraud Detection In Financial Transactions: A Comparative Study Of Data Mining Approaches" Examines Various Data Mining Methodologies For Detecting Fraud Within Financial Transactions. This Paper Investigates And Compares Different Algorithms And Techniques Used To Identify Fraudulent Patterns In Transactional Data. It Delves Into The Strengths And Limitations Of Approaches Such As Anomaly Detection, Supervised Learning, And Ensemble Methods. The Study Emphasizes The Significance Of Effective Fraud Detection Methods In Safeguarding Financial Systems And Enhancing Security Measures By Uncovering Fraudulent Activities.
Keywords:

Fraud Detection Financial Transactions Data Mining Techniques Fraud Analytics Comparative Study Transactional Fraud Analysis Machine Learning In Finance Fraudulent Transaction Detection Data-Driven Fraud Prevention Comparative Data Mining

76. Title : Ensemble Learning In Data Mining: IntegratingMultiple Models For Improved Predictive Accuracy

1. Mrs.A.Suganya,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Sivasangari C (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Ensemble Learning In Data Mining: Integrating Multiple Models For Improved Predictive Accuracy" Explores The Application Of Ensemble Techniques To Enhance Predictive Accuracy In Data Mining. This Paper Investigates Methodologies That Combine Diverse Models To Produce More Robust And Accurate Predictions. It Delves Into Techniques Such As Bagging, Boosting, And Stacking, Highlighting Their Role In Leveraging The Strengths Of Individual Models To Achieve Superior Predictive Performance. The Study Emphasizes The Significance Of Ensemble Learning In Improving Model Generalization And Overall Accuracy Across VariousDomains In Data Mining And Predictive Analytics.
Keywords:

Ensemble Learning Predictive Accuracy Data Mining Techniques Model Integration Machine Learning Ensembles Aggregated Models Combined Predictions Ensemble Methods Fusion Learning Model Aggregation

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

77. Title : Discovering Patterns In Big Data: Scalable Algorithms For Association Rule Mining

1. Mrs.A.Suganya,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Monisha R (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Discovering Patterns In Big Data: Scalable Algorithms For Association Rule Mining" Investigates Scalable Algorithms Designed For Association Rule Mining In Large-Scale Datasets. This Paper Explores Advanced Techniques Tailored To Handle The Vastness And Complexity Of Big Data While Extracting Meaningful Patterns And Relationships. It Delves Into Distributed, Parallel, And Optimized Approaches Aimed At Efficiently Uncovering Associations And Correlations Within Massive Datasets. The Study Underscores The Significance Of Scalable Algorithms In Extracting Actionable Insights From Big Data, Enabling Informed Decision- Making And Knowledge Discovery In Diverse Fields.

Keywords:

Big Data Patterns Association Rule Mining Scalable Algorithms Pattern Discovery Large-Scale Data Mining Data Analytics Rule-Based Analysis Scalable Pattern Mining Big Data Algorithms Mining Association Rules

78. Title : "Clustering Techniques For Anomaly Detection In Cybersecurity Data"

1. Mrs.A.Suganya,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Priya P (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Clustering Techniques For Anomaly Detection In Cybersecurity Data" Explores The Application Of Clustering Algorithms To Identify Anomalies Within Cybersecurity Datasets. This Paper Investigates Methodologies Leveraging Clustering To Distinguish Normal Behavior From Potentially Malicious Activities In Network Traffic Or System Logs. It Delves Into The Adaptation Of Clustering Techniques Such As K-Means, Dbscan, Or Hierarchical Clustering To Detect Anomalies. The Study Emphasizes The Significance Of Clustering For Enhancing Cybersecurity Measures By Proactively Identifying And Mitigating Threats Within ComplexAnd Dynamic Data Environments.

Keywords:

Anomaly Detection Cybersecurity Clustering Intrusion Detection Security Analytics Cluster-Based Anomaly Detection Cyber Threat Detection Unsupervised Learning Clustering Algorithms Network Security Anomaly Detection Techniques

PRINCIPAL
Indra Ganesan College of Engineer
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

79. Title : Privacy-Preserving Data Mining: Techniques For Analyzing Sensitive Information Without Compromising Privacy

1. Dr.G.Balakrishnan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Aishwarya M (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Privacy-Preserving Data Mining: Techniques For Analyzing Sensitive Information Without Compromising Privacy" Delves Into Methodologies And Approaches Designed To Conduct Data Mining While Safeguarding Sensitive Information. This Paper Investigates Cryptographic Protocols, Anonymization Techniques, And Differential Privacy Methods Aimed At Protecting Individual Privacy While Enabling Meaningful Analysis. It Explores Strategies To Balance Data Utility With Confidentiality, Addressing The Challenges Of Preserving Valuable Information While Ensuring Privacy And Compliance With Regulations. The Study Emphasizes The Importance Of Privacy-Preserving Data Mining In Fostering Trust, Protecting Privacy Rights, And Enabling Valuable Analysis In Various Domains.

Keywords:

Privacy-Preserving Mining Confidentiality Techniques Data Utility Protection Privacy- Utility Balance Confidential Data Mining Secure Data Analytics Privacy-Preserving Algorithms Utility-Confidentiality Tradeoff Protected Data Analysis Confidential Information Mining

80. Title : Fraud Detection In Financial Transactions:Anomaly Detection And Pattern Recognition"

1. Dr.G.Balakrishnan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Ajith Kumar R (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Fraud Detection In Financial Transactions: Anomaly Detection And Pattern Recognition" Explores Methodologies Aimed At Detecting Fraudulent Activities Within Financial Transactions. This Paper Investigates Approaches Using Anomaly Detection And Pattern Recognition Techniques To Identify Irregularities Or Suspicious Behaviors In Transactional Data. It Delves Into Algorithms And Models Designed To Discern Abnormal Patterns And Recognize Fraudulent Activities Within Financial Systems. The Study Highlights The Significance Of Combining Anomaly Detection And Pattern Recognition In Enhancing Fraud Detection Mechanisms, Safeguarding Financial Systems, And Minimizing Risks Associated With Fraudulent Behavior.

Keywords:

Fraud Detection Financial Transactions Anomaly Detection Pattern Recognition Transactional Fraud Fraud Analytics Anomaly Identification Fraudulent Activity Detection Financial Fraud Prevention Transactional Pattern Analysis

PRINCIPAL
Indra Ganesan College of Engineer
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

81. Title : Text Mining For Information Extraction: Extracting Insights From Unstructured Textual Data

1. Dr.G.Balakrishnan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Aravindh Samy P (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Text Mining For Information Extraction: Extracting Insights From Unstructured Textual Data" Explores Techniques And Methodologies For Extracting Valuable Insights From Unstructured Text. This Paper Investigates Text Mining Approaches, Including Natural Language Processing And Machine Learning Methods, Aimed At Extracting Structured Information From Unstructured Textual Data. It Delves Into Methods For Entity Extraction, Sentiment Analysis, And Topic Modeling, Showcasing Their Role In Deriving Meaningful Insights And Knowledge From Diverse Textual Sources. The Study Emphasizes The Significance Of Text Mining In Converting Unstructured Data Into Actionable Information, Facilitating Decision-Making Processes And Knowledge Discovery Across Various Domains.

Keywords:

Text Mining Information Extraction Unstructured Data Text Analytics Knowledge Discovery Textual Insights Natural Language Processing Unstructured Text Analysis Data Extraction Techniques Text-Based Information Retrieval

82. Title : Stream Data Mining: Real-Time Analysis Of Big DataStreams

1. Dr.G.Balakrishnan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Arjun V (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Stream Data Mining: Real-Time Analysis Of Big Data Streams" Explores Methodologies And Techniques For Real-Time Analysis Of Continuously Arriving Data Streams. This Paper Investigates Algorithms And Approaches Designed To Handle High-Velocity And High-Volume Data Streams. It Delves Into Techniques Such As Online Learning, Adaptive Models, And

Incremental Algorithms Tailored For Immediate Analysis And Decision-Making. The Study Emphasizes The Significance Of Stream Data Mining In Enabling Timely Insights, Proactive Responses, And Efficient Handling Of Big Data Streams Across Diverse Applications.

Keywords:

Stream Data Mining Real-Time Analytics Big Data Streams Data Stream Processing Stream Mining Techniques Continuous Data Analysis Stream Pattern Recognition Real- Time Big Data Stream Data Analysis Data Stream Mining

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

83. Title : Semantic Web Mining: Enhancing InformationRetrieval Through Ontologies

1. Dr.G.Balakrishnan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Dharshini A (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Semantic Web Mining: Enhancing Information Retrieval Through Ontologies" Delves Into The Integration Of Semantic Web Technologies And Mining Methodologies For Improved Information Retrieval. This Paper Investigates How Ontologies And Semantic Annotations Enhance The Extraction And Organization Of Information From Web Resources. It Explores Techniques That Leverage Semantic Structures To Enhance Search, Retrieval, And Knowledge Discovery On The Web. The Study Highlights The Significance Of Semantic Web Mining In Facilitating More Precise, Contextually Relevant, And Structured Information Retrieval, Enabling A Richer Understanding Of Web Content.

Keywords:

Semantic Web Web Mining Information Retrieval Ontology-Based Mining Semantic Technologies Knowledge Representation Semantic Search Ontology-Driven Retrieval Web-Based Ontologies Semantic Data Analysis

84. Title : Cross-Domain Web Mining: Knowledge Transfer AndAdaptation

1. Mrs.Hussain Bibi Sikkandar,Assistant Professor,Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12

2. Dinesh Kumar K (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Cross-Domain Web Mining: Knowledge Transfer And Adaptation" Explores Methodologies And Techniques For Transferring Knowledge And Adapting Mining Models Across Different Domains In Web-Based Data. This Paper Investigates Approaches That Leverage Shared Information And Patterns From One Domain To Enhance Understanding Or Prediction In Another Domain. It Delves Into Transfer Learning, Domain Adaptation, And Multi-Task Learning Techniques, Showcasing Their Role In Leveraging Knowledge From Related Domains To Improve Models' Performance In New Or Diverse Areas. The Study Emphasizes The Significance Of Cross-Domain Web Mining In Transferring Valuable Insights And Adapting Models To Various Domains, Fostering Robust And Adaptable Mining Techniques.

Keywords:

Cross-Domain Mining Knowledge Transfer Adaptation Techniques Domain Adaptation Web Data Transfer Transfer Learning Knowledge Adaptation Domain Shift Transferable Knowledge Cross-Domain Adaptability

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

85.Title : Mining Temporal Patterns In Time-Series Data:Applications In Predictive Maintenance

1. Mrs.Hussain Bibi Sikkandar,Assistant Professor,Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12

2. Gowtham K (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Mining Temporal Patterns In Time-Series Data: Applications In Predictive Maintenance" Investigates The Analysis Of Time-Series Data To Uncover Patterns And Trends Relevant To Predictive Maintenance Strategies. This Paper Explores Methodologies And Algorithms Designed To Extract Temporal Patterns Indicative Of Machinery Failures Or Degradation. It Delves Into Techniques For Anomaly Detection, Trend Analysis, And Predictive Modeling WithinTime-Stamped Datasets. The Study Emphasizes The Significance Of Mining Temporal Patterns In Facilitating Predictive Maintenance, Enabling Early Identification Of Equipment Malfunctions, Reducing Downtime, And Optimizing Maintenance Schedules For Enhanced Operational Efficiency.

Keywords:

Time-Series Analysis Temporal Pattern Mining Predictive Maintenance Machine Health Monitoring Time-Series Predictions Equipment Monitoring Anomaly Detection Maintenance Forecasting Time-Stamped Data Analysis Maintenance Pattern Recognition

86.Title : Dynamic Web Content Classification: HandlingEvolving Information On The Internet

1. Mrs.Hussain Bibi Sikkandar,Assistant Professor,Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12

2. Hariharan N (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Dynamic Web Content Classification: Handling Evolving Information On The Internet" Explores Techniques And Methodologies For Classifying Ever-Changing Web Content. This Paper Investigates Approaches That Adapt To Evolving Information On The Internet, Addressing Challenges Posed By Dynamic Web Content. It Delves Into Dynamic Classification Algorithms, Continuous Learning Models, And Adaptive Strategies Aimed At Effectively Categorizing And Organizing Real-Time Web Data. The Study Emphasizes The Significance Of Dynamic Web Content Classification In Keeping Pace With The Constantly Evolving Online Information Landscape, Facilitating Accurate And Up-To-Date Categorization Of Web Content.

Keywords:

Dynamic Content Classification Web Content Evolution Evolving Information Adaptive Classification Dynamic Web Analysis Real-Time Web Classification Evolving Data Handling Web Content Dynamics Adaptive Information Processing Content Evolution Management

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

87.Title : Web Mining For Cybersecurity: Detecting AndPreventing Web-Based Threats

1. Mrs.Hussain Bibi Sikkandar,Assistant Professor,Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12
2. Hema Latha B (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Web Mining For Cybersecurity: Detecting And Preventing Web-Based Threats" Explores The Utilization Of Web Mining Techniques To Identify And Mitigate Cybersecurity Threats Originating From Web-Based Sources. This Paper Investigates Methodologies And Algorithms That Analyze Web Data To Uncover Patterns Indicative Of Potential Threats, Such As Malicious Urls, Phishing Attempts, Or Malware Propagation. It Delves Into Techniques For Anomaly Detection, Behavior Analysis, And Pattern Recognition Within Web-Based Data Streams. The Study Emphasizes The Significance Of Web Mining In Fortifying Cybersecurity Measures, Enabling Proactive Threat Detection, And Bolstering Defenses Against Web-Based Attacks.

Keywords:

Web Mining Cybersecurity Threats Threat Detection Web-Based Security Web Threat Intelligence Cyber Threat Prevention Mining Security Threats Web Data Analysis Cyber Defense Threat Detection Techniques

88.Title : Security And Privacy Challenges In Mobile HealthApplications: A Comprehensive Study

1. Mrs.Hussain Bibi Sikkandar,Assistant Professor,Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12
2. Jegathiswari.D (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Security And Privacy Challenges In Mobile Health Applications: A Comprehensive Study" Delves Into The Multifaceted Issues Surrounding Security And Privacy In Mobile Health (Mhealth) Applications. This Paper Investigates The Vulnerabilities And Risks Inherent In Mhealth Apps, Addressing Concerns Related To Data Privacy, Confidentiality, And Potential Security Breaches. It Explores Comprehensive Strategies, Encryption Methods, And Access Control Mechanisms Designed To Safeguard Sensitive Health Data On Mobile Platforms. The Study Emphasizes The Significance Of Addressing These Challenges To Foster Trust, Compliance With Regulations, And The Widespread Adoption Of Secure And Privacy-Aware Mhealth Technologies.

Keywords:

Mobile Health Apps Security Challenges Privacy Concerns Healthcare Apps Mhealth Security Privacy Risks App Security Health Data Privacy Mobile Health Technology Comprehensive Study

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

89.Title : "Predictive Analytics For Customer Churn: AComparative Study Of Machine Learning Algorithms"

1. Mr.N. Mohanprabhu,Assistant Professor,Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12

2. Joshi Dayana K (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Predictive Analytics For Customer Churn: A Comparative Study Of Machine Learning Algorithms" Explores Various Machine Learning Methodologies For Predicting Customer Churn In Businesses. This Paper Investigates And Compares The Performance Of Different Algorithms In Accurately Forecasting Customer Attrition. It Delves Into The Strengths, Weaknesses, And Predictive Capabilities Of Models Like Logistic Regression, Decision Trees, Random Forests, And Neural Networks In Capturing Patterns Indicative Of Customer Churn. The Study Aims To Identify The Most Efficient Algorithm For Predicting Churn, Providing Insights That Can Empower Businesses To Proactively Manage Customer Retention Strategies And Enhance Overall Customer Satisfaction And Loyalty.

Keywords:

Customer Churn Prediction Predictive Analytics Machine Learning Algorithms Comparative Study Churn Modeling Customer Retention Predictive Modeling Algorithm Comparison Churn Analysis Ml Churn Prediction

90.Title : Energy-Efficient Algorithms For Mobile DeviceCommunication In Iot Networks

1. Mr.N. Mohanprabhu,Assistant Professor,Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12

2. Kanagaraj K S (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Energy-Efficient Algorithms For Mobile Device Communication In Iot Networks" Explores Novel Algorithms Designed To Optimize Communication Between Mobile Devices Within Iot (Internet Of Things) Networks While Minimizing Energy Consumption. This Paper Investigates Strategies Focused On Reducing Power Consumption During Data Transmission, Considering The Resource-Constrained Nature Of Mobile Devices In Iot Environments. It Delves Into Techniques Such As Adaptive Transmission Protocols, Low-Power Communication Modes, And Intelligent Routing Algorithms Tailored For Energy Efficiency. The Study Emphasizes The Significance Of These Algorithms In Prolonging Device Battery Life, Improving Network Sustainability, And Facilitating Seamless Communication In Iot Ecosystems.

Keywords:

Iot Networks Mobile Device Communication Energy-Efficient Algorithms Wireless Communication Iot Connectivity Mobile Iot Devices Energy Optimization Communication Efficiency Wireless Iot Networks Device Energy Management

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

91.Title : Mobile Edge Computing: Enhancing PerformanceAnd Reliability In Mobile Networks

1. Mr.N. Mohanprabhu,Assistant Professor,Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12

2. Kiruthiga V (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Mobile Edge Computing: Enhancing Performance And Reliability In Mobile Networks" Explores The Paradigm Of Edge Computing And Its Role In Augmenting Performance And Reliability Within Mobile Networks. This Paper Investigates Architectures And Strategies That Leverage Edge Resources To Process Data Closer To End-Users, Reducing Latency And Enhancing Overall Network Performance. It Delves Into Methodologies Such As Offloading Computation, Caching, And Edge-Based Processing To Alleviate Network Congestion And Improve Service Delivery. The Study Emphasizes The Significance Of Mobile Edge Computing In Enabling Faster Response Times, Supporting Bandwidth-Hungry Applications, And Enhancing The Reliability Of Mobile Network Services.

Keywords:

Mobile Edge Computing Mec Technology Edge Computing Networks Mobile Network Performance Reliability Enhancement Edge-Cloud Integration Network Offloading Edge-Based Services Edge Infrastructure Mobile Edge Applications

92.Title : Context-Aware Mobile Applications: LeveragingSensor Data For Intelligent Interaction

1. Mr.N. Mohanprabhu,Assistant Professor,Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12

2. Madhavan S (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Context-Aware Mobile Applications: Leveraging Sensor Data For Intelligent Interaction" Explores The Integration Of Sensor Data In Mobile Applications To Enable Context-Awareness And Intelligent Interactions. This Paper Investigates Methods That Utilize Sensor Information, Such As Gps, Accelerometer, And Ambient Light Sensors, To Dynamically Adapt Application Behavior Based On The User's Context. It Delves Into Context-Awareness Frameworks And Algorithms Aimed At Providing Personalized And Adaptive User Experiences. The Study Emphasizes The Significance Of Leveraging Sensor Data To Create Responsive And Intelligent Mobile Applications That Cater To Users' Changing Contexts And Needs.

Keywords:

Context-Aware Apps Sensor Data Utilization Mobile Interaction Intelligent Applications Contextual Sensing Smart Device Interaction Sensor Fusion Mobile Sensor Integration Adaptive Mobile Apps Contextual Intelligence

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

93.Title : 5g And Beyond: Enabling Technologies And Applications For Next-Generation Mobile Networks

1. Mr.N. Mohanprabhu,Assistant Professor,Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12
2. Mahendran S (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"5g And Beyond: Enabling Technologies And Applications For Next-Generation Mobile Networks" Explores The Advancements, Technologies, And Applications Poised To Redefine Mobile Networks Beyond 5g. This Paper Investigates The Emerging Capabilities And Innovations In Telecommunications, Including Ultra-Fast Speeds, Low Latency, And Massive Connectivity. It Delves Into Technologies Like Network Slicing, Edge Computing, And Ai- Driven Network Management, Showcasing Their Roles In Transforming Industries, Enabling Iot, And Fostering New Applications. The Study Emphasizes The Significance Of These Advancements In Shaping The Future Of Mobile Networks, Unlocking Opportunities For Enhanced Connectivity, Innovative Services, And Transformative Experiences.

Keywords:

5g Networks Next-Gen Mobile Enabling Technologies Wireless Innovation Future Mobile Networks Advanced Wireless Beyond 5g Mobile Connectivity Network Evolution Next-Gen Applications

94.Title : Web Usage Mining For Personalized Content Recommendation Systems

1. Mrs.D.B.Rena,Assistantprofessor,Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12
2. Muthaiya P (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Web Usage Mining For Personalized Content Recommendation Systems" Delves Into The ApplicationOf Web Usage Mining TechniquesTo Enhance Personalized Content Recommendation Systems. This Paper Investigates Methodologies That Analyze User Behaviors, Preferences, And Navigation Patterns To Generate Tailored Recommendations. It Explores Techniques Such As Collaborative Filtering, Content-Based Filtering, And Hybrid Models To Provide Users With More Relevant And Personalized Content Suggestions. The Study Emphasizes The Significance Of Web Usage Mining In Refining Recommendation Systems, Enabling Enhanced User Experiences, And Improving Content Engagement On Web Platforms.

Keywords:

Web Usage Mining Personalized Recommendations Content Recommendation Systems User Behavior Analysis Usage Pattern Mining Recommendation Algorithms Web User Profiling Personalized Content Delivery Behavioral Targeting User-Centric Recommendations

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main
Manikandam, Trichy

95.Title : Mining Social Media For Opinion Analysis AndSentiment Prediction

1. Mrs.D.B.Rena,Assistantprofessor,Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12
2. Neethimozhi A (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Mining Social Media For Opinion Analysis And Sentiment Prediction" Explores Methodologies And Algorithms For Extracting Opinions And Predicting Sentiments From Social Media Content. This Paper Investigates Techniques In Natural Language Processing And Machine Learning Aimed At Understanding And Categorizing Opinions Expressed In Social Media Posts. It Delves Into Sentiment Analysis, Emotion Detection, And Opinion Mining To Uncover And Predict Sentiments Across Diverse Platforms. The Study Emphasizes The Significance Of Mining Social Media For Opinion Analysis, Providing Insights Valuable For Businesses, Marketers, And Researchers To Understand Public Sentiment, Trends, And User Opinions In The Digital Landscape.

Keywords:

Social Media Mining Opinion Analysis Sentiment Prediction Text Mining Social Sentiment Analysis Opinion Mining Textual Sentiment Analysis Social Media Analytics Nlp (Natural Language Processing) Social Media Insights

96.Title : Deep Learning Approaches For Image And TextMining On The Web

1. Mrs.D.B.Rena,Assistantprofessor,Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12
2. Nithya P (Iv Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Deep Learning Approaches For Image And Text Mining On The Web" Explores Advanced Methodologies In Leveraging Deep Learning Techniques For Mining Information From Diverse Web Data, Including Images And Text. This Paper Investigates Neural Network Architectures, Such As Cnns (Convolutional Neural Networks) For Images And Rnns (Recurrent Neural Networks) For Text, Designed To Extract And Analyze Information From Web Content. It Delves Into Techniques For Image Recognition, Object Detection, Natural Language Processing, And Sentiment Analysis To Enable Comprehensive Understanding And Extraction Of Insights From Web-Based Multimedia Data. The Study Emphasizes The Significance Of Deep Learning In Advancing Image And Text Mining, Facilitating A Deeper Understanding Of Web Content And Fostering Innovative Applications Across Various Domains.

Keywords:

Deep Learning Image Mining Text Mining Web Data Analysis Neural Networks Image Recognition Textual Analysis Web Content Processing Convolutional Networks Web- Based Deep Learning

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

97.Title : Temporal Evolution Of Web Data: Techniques ForMining Temporal Patterns

1. Mrs.D.B.Rena,Assistantprofessor,Cse,Indra   Ganesan   College   Of
Engineering,Manikandam,Trichy-12
2. Nivedha S (Iv Yr),Student/ Cse, Indra Ganesan College Of
Engineering,Manikandam,Trichy-12.

Abstract :

"Temporal Evolution Of Web Data: Techniques For Mining Temporal Patterns" Investigates Methodologies And Techniques Focused On Mining Temporal Patterns Within Web Data. This Paper Explores Algorithms And Approaches Designed To Uncover And Analyze How Information On The Web Evolves Over Time. It Delves Into Temporal Analysis, Trend Detection, And Pattern Recognition Techniques Tailored For Time-Stamped Web Datasets. The Study Emphasizes The Significance Of Understanding Temporal Evolution In Web Data, Providing Insights Into Trends,Changes, And Dynamic Patterns That Influence Information Dissemination And User Behaviors Online.

Keywords:

Tpemporal Evolution Web Data Analysis Temporal Patterns Time-Stamed Data Temporal Mining Techniques Time Series Analysis Web Data Analytics Temporal Trend Analysis Dynamic Web Data Temporal Pattern Recognition

98.Title   :   Privacy-Aware   Web   Mining: Balancing Personalization And User Privacy

1. Mrs.D.B.Rena,Assistantprofessor,Cse,Indra   Ganesan   College   Of
Engineering,Manikandam,Trichy-12
2. Priyanga.G (Iv Yr),Student/ Cse, Indra Ganesan College Of
Engineering,Manikandam,Trichy-12.

Abstract :

"Privacy-Aware Web Mining: Balancing Personalization And User Privacy" Delves Into Methodologies And Strategies Aimed At Maintaining User Privacy While Conducting Web Mining Activities For Personalization Purposes. This Paper Investigates Approaches That Navigate The Balance Between Deriving Insights For Personalized Services And Safeguarding User Privacy Rights. It Explores Techniques Such As Anonymization, Differential Privacy, And Privacy-Preserving Algorithms Designed To Protect Sensitive Information While Extracting Valuable Patterns From Web Data. The Study Emphasizes The Significance Of Privacy-Aware Web Mining In Ensuring User Trust, Compliance With Privacy Regulations, And Delivering Personalized Experiences Without Compromising Individual Privacy.

Keywords:

Privacy-Aware Mining User Privacy Personalization Balance Web Data Analytics Privacy-Personalization Tradeoff User Data Protection Ethical Web Mining Privacy- Preserving Techniques Personalized Privacy Measures Balancing User Privacy

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

99. Design Of Low Power And Area Efficient 16 Bit Carry Select Adder

Dr.[1]N.Vaijayanthi , [2]A.R.Manikandan

Abstract:

In This Paper, A Novel 16-Bit Carry Select Adder (Csla) Is Proposed To Perform Fast Arithmetic Operation In Many Dataprocessing Processors. The Proposed Design Combines The Modified 16-Bit Carry Select Adder And A Carry Select Adder By Sharing The Common Boolean Logic Term. The Area And Power Of The Novel 16-Bit Carry Select Adder Significantly Reduces When Compared With Modified 16-Bit Carry Select Adder[2].This Work Evaluates The Performance Of The Proposed Design In Terms Of Total Number Of Gates, Area, Delay And Power Using Cadence Virtuoso Gpdk 180nm Technology. In This Proposed Design The Transistor Count Of A 16-Bit Carry Select Adder Reduced From 470 To 432 Gates Which Reduce The Area By 13.64µm2 . Moreover, The Power Consumption Has Reduced From 9.206n Watts To 6.648n Watts. The Delay Of The Novel 16-Bit Carry Select Adder Increased By 29.626*10-18s. The Result Analysis Shows That The Novel 16-Bit CslaIs Better Than Modified And Regular 16-Bit Csla

Keywords: Carry Select Adder, Area-Efficient, Low Power, Hardware Sharing, Boolean Logic.

100. Automatic Insulin Infusion With Glucose Monitoring And Measurement Of PhysiologicalRanges

Dr.N.Vaijayanthi

Abstract:

For Individual's Affected By Type 1 Diabetes (T1d), A Chronic Disease In Which The Pancreas Does Not Produce Any Insulin, Maintaining The Blood Glucose (Bg) Concentration As Much As Possible Within The Safety Range (70–180 Mg/Dl) Allows Avoiding Short- And Long-Term Complications. The Tuning Of Exogenous Insulin Infusion Can Be Difficult, Especially Because Of The Inter- And Intra-Day Variability Of Physiological And Behavioral Factors. Continuous Glucose Monitoring (Cgm) Sensors, Which Monitor Glucose Concentration In The Subcutaneous Tissue Almost Continuously, Allowed Improving The Detection Of Critical Hypo- And Hyper-Glycolic Episodes. Moreover, Their Integration With Insulin Pumps For Continuous Subcutaneous Insulin Infusion Allowed Developing Algorithms That Automatically Tune Insulin Dosing Based On Cgm Measurements In Order To Mitigate The Incidence Of Critical Episodes. In This Work, We Aim At Reviewing The Literature On Methods For Cgm-Based Automatic Attenuation Or Suspension Of Basal Insulin With A Focus On Algorithms, Their Implementation In Commercial Devices And Clinical Evidence Of Their Effectiveness And Safety.

Keywords: Type 1 Diabetes, Glucose Sensors, Glucose Prediction, Kalman Flter, Hypoglycemia,Insulin Pump

101. Fpga Implementation Of Wave Pipelined Circuits For Equalizer

[1]Mr.B.G.Gopal, [2]P.Venkatesan

Abstract:

The Wave Pipeline Effect Is Based On The Equalization Of All Path Delays In Order To Allow Several Awaves Of Data To Travel Along The Circuit With A Separation Several Times Smaller Than The Maximum Combinational Delay Of The Circuit. The Construction Of Wave Pipelines Requires Gates And Buffers With Data Independent Delay, And A Well-Characterized Interconnection Network Delay Model, In Order To Allow The Equalization Process To Be Managed By The Designer. These Features Are Inherently Present In Several Ram-Based Fpgas Architectures. Look-Up Tables (Luts) Permit The Delay Of Digital Blocks With Different Types Of Gates Or Different Logic Depth To Be Equalized; Moreover, The Delay Of A Fpga Interconnection Network Is Completely Parameterized And Is A Priori Known. This Paper Describes A Lut-Based Wave Pipeline Array Multiplier Manually Implemented Using A Xilinx Chip. The Results Show That, Even For A Single-Phase Non- Skewed Clocking Strategy, A Throughput As High As 85 Mhz (Measured) Can Be Achieved, With 8 Waves Running In A 13-Lut Logic Depth Combinational Array With Registered I/O, Producing An Initial Latency Of 9 Clock Cycles. For The Fpga Architecture And The Topology Selected, Such A Large Throughput/Latency Ratio Would Be Impossible Using Classical Pipelining.

Keywords: Ram, Fpgas, Look-Up Tables, Xilinx Chip, Latency

102. Autonomous Anti-Missile Defense System Using Pan-Tilt Interceptor Firing Mechanism

Mr.B.G.Gopal[1]

Abstract:

Research Into Missile Defense Is A High Dod Priority. Due To Rising Tensions BetweenTheU.S.. And Adversaries Who Have The Capability To Overwhelm Current Systems And Destroy U.S. Air Bases Vital In A Great Power Struggle. An Adversary's Capability To Overwhelm Missile Defense Systems, Combined With The High Cost Of Maintaining And Fielding Those Systems, Warrants Research Into A New Type Of Missile Defense System. Specifically, We Focus On The Autonomous Aerial Defense Against Missiles Autonomous Aerial Defense Against Missiles (Aadam) System. This System Tests The Viability Of A Conceptual, Relatively Lower-Cost Missile Defense System Which Employs Small-Scale Unmanned Aerial Vehicles Unmanned Aerial Vehicle (Uav)In Place Of Existing And Other Proposed Means, Such As Missiles And High-Energy Weapons. This System Is Tested Against A Modeled Patriot System. Rather Than A Complete Replacement Of Current Missile Defense Systems, The Aadam System Is Intended To Be Integrated As An Addition To The Layered Missile Defense System. Against Cruise Missile Threats. The Aadam System Allows For Flexible And Reusable Missile Interceptors, Leading To Potentially More Intercepts Across The System Compared To Existing Missile Defense Systems. Results Indicate The Aadam System Is A Comparable System That Can Be Inte Grated Into The Layered Cruise Missile Defense System.

Keywords: Aerial Defense Against Missiles, Unmanned Aerial Vehicle, Dod

103. Low Power And High Efficient Implementation Of Radix- Ns Mdc Scheme For OfdmSystems

[1] Dr.M.Bhuvaneswari ,[2]M.Sathya

Abstract:

The 4g And 5g Wireless Communications Is Dominated By Mimo-Ofdm Which Defines As Multi Input And Multi Output Orthogonal Frequency Division Multiplexing. The Multiple Signals Over Multi Antennas Can Be Send Or Capable Through This Multi Input And Multi Output And The Radio Channels Can Be Divided Into Largely Spaced Sub Channels Through Orthogonal Frequency Division Multiplexing. The Communication System Uses This Data Without Loss In Reliability. In Previous Time Division Multiple Access, Code Division Multiple Access Are Used With A Combination Of Mimo. But In Spite Of All These Mimo With Ofdm Is Much Famous. It Is Because Of Its High Data Rate, High Message Deliver Capacity, High Throughput. .At Wires Lan And Some Standard Networks At Mobile Communications It Is Famous For These Reasons. If The Data Size Increases Then The Memory Size Also Increases Rapidly In Mdc Based Mimo- Ofdm, But In Simplest Manner Data Flow Can Be Controlled By Using Multipath Delay Commutator. Simplicity Is The Main Reason For Implementing Mimo Based Ofdm And In Order To Increase Reliability The Bigger Obstacles Can Be Eliminated, It Is Possible By Making The User Data Into A Closely Spaced Narrow Sub Channels. To Implement Fast Fourier Transform (Fft) Processors For Multiple Input Multiple Output-Orthogonal Frequency Division Multiplexing (Mimo-Ofdm) Systems With Variable Length, This Project Presents A Multipath Delay Commutator (Mdc)-Based Architecture And Memory Scheduling. The Fft/Ifft Processor Can Be Implemented Based Mimo-Ofdm System Based On The Mdc Architecture. Ram, Fifo, Input Buffer And Output Sorting Buffer Are Implemented Using This Design And By Using Xilinx Ise 12.3i The Functionality Verification And The Synthesis Are Carried Out And The Reduced Delay Values Are Showed.

Keywords: Orthogonal Frequency Division Multiplexing (Ofdm), Memory Scheduling, Fast Fourier Transform (Fft), Multiple-Input And Multiple-Output (Mimo), Pipeline Based Multipath Delay Commutator (Mdc), Wimax, Output Sorting,.

104. Convolutional Neural Network Based Soil Classification And Crop RecommendationSystem

Dr.M.Bhuvaneswari

Abstract:

It Is The Web Based Application Which Is Helpful For The Farmers. Over The Most Recent Couple Of Many Years Analysts Are Keen Ashore Planning And Its Arrangement Because Of Different Reasons. The Purposes Behind An Expansion In The Focal Point Of The Exploration Local Area Are, The Expanding Interest For Agriculture Land And Soil Wellbeing Examination, As The Strength Of The Dirt, Is Fundamental For The Solid Creation Of Yields. Picture Order Is One Such Methodology For Soil And Land Wellbeing Investigation. It Is A Mind-Boggling Measure Having The Impacts Of Different Components. This Paper Has Proposed The Investigation Of Flow Explores The Issues It Tended To, And Its Possibilities. The Accentuation Is Centered On The Logical Investigation Of Different Progressed And Effective Grouping Systems And Procedures. Here, It Has Been Endeavored To Consider The Components These Methodologies Have Routed To Improve The Precision Of The Characterization. Appropriate Usage Of The Quantity Of Highlights Of Distantly Detected Information And Choosing The Best Reasonable Classifier Are Generally Significant For Improving The Precision Of The Grouping. The Information - Based Arrangement Or Nonparametric Classifier Like Neural Network Have Acquired Ubiquity For Multisource Information Grouping As Of Late. Not With Standing, There Is As Yet The Extent Of Additional Exploration, To Lessen Vulnerabilities In The Improvement Of Precision Of The Image Grouping Instruments. By Using Support Vector Machine Algorithm Is Used To Recommend The Crops Based On The Soil. In This PaperWe Are Suggesting The Factory Information Also For Every Crop Using Knn Classifier Or The FarmerWill Sell His Product Online Also.

Keywords: Convolutional Neural Network, K Nearest Neighborhood, Support Vector Machine.

105. Design Of Low Power Comparators For Adc Application

[1]Ms.R.Bhuvaneswari,[2]N.Anbu Selvi

Abstract:

In This Paper, A High-Speed Low-Power Two-Stage Dynamic Latched Comparator Is Proposed. In This Proposed Circuit The First Stage Power Consumption Is Lessen By Limiting The Pre- Amplifier's Voltage Swing To Vdd/2 At The Evaluation Phase, Voltage Swing Constraint Provides A Vigorous Drive Which Improves Comparison Speed.. It Is Shown That In The Proposed Dynamic Latched Comparator Have Less Dissipated Power And Time Delay. The Proposed Dynamic Latched Comparator Reduced The Power And Delay Compared To Conventional Cmos Comparators. Finally The Comparator Mentor Graphics Simulation At The 130nm Gives Significant Improvement In The Power And Delay.

Keywords: Two Stage Dynamic Comparator, Window Detector, Low Power Applications.

106. Development And Testing Of Remotely Operated Vehicle For Instruction Of Offshore RenewableDevices

Ms.R.Bhuvaneswari

Abstract:

This Paper Presents Novel Aspects Of A Remotely Operated Vehicle (Rov) Designed To Inspect Offshore Renewable Energy Devices. The Relationship Of Some Design Aspects Of The Rov To Resilient Systems Is Discussed, Focusing On The Navigation System, Control System And Novel Reconfigurable Propulsion System. The Design And Development Of These Aspects Of The Rov Are Presented With Initial Test Results Illustrated. Finally, Conclusions And Future Work Suggestions ArePut Forward.

Keywords: Remotely Operated Vehicle; Observation Class Rov; Inspection Class Rov; Underwater Robotics; Inertial Navigation System (Ins); Offshore Renewable

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai ....
Manikandam, Tric.....

107. Resource Efficient Image Sclaing Processor Using Vlsi Technology

[1]Mrs.P.Santhana Selvi,[2] N.G.Anugeetha
Abstract:

A High-Quality Algorithm Is Proposed For Vlsi Implementation Of An Image Scaling Processor. The Proposed Image Scaling Algorithm Consists Of A Sharpening Spatial Filter, A Clamp Filter, And A Bilinear Interpolation. To Reduce The Blurring And Aliasing Artifacts Produced By The Bilinear Interpolation, The Sharpening Spatial And Clamp Filters Are Added As Pre Filters. To Minimize The Memory Buffers And Computing Resources For The Proposed Image Processor Design, A T-Model And Inversed T-Model Convolution Kernels Are Created For Realizing The Sharpening Spatial And Clamp Filters. Furthermore, Two T-Model Or Inversed T-Model Filters Are Combined Into A Combined Filter Which Requires Only A One-Line Buffer Memory. Moreover, A ReconfigurableCalculation Unit Is Invented For Decreasing The Hardware Cost Of The Combined Filter. Moreover,The Computing Resource And Hardware Cost Of The Bilinear Interpolator Can Be Efficiently Reduced By An Algebraic Manipulation And Hardware Sharing Techniques. The Vlsi Architecture In This Work Can Achieve 280 Mhz With 6.08-K Gate Counts, And Its Core Area Is 30 378 Mm2 Synthesized By A 0.13-Mm Cmos Process. Compared With Previous Low Complexity Techniques, This Work Reduces Gate Counts By More Than 34.4% And Requires Only A One-Line Buffer Memory.

Keywords: Terms Bilinear, Clamp Filter, Image Zooming, Reconfigurable Calculation Unit (Rcu), Sharpens Spatial Filter, Vlsi.

108. Effect Of Alkali Pretreatment On Removal Of Lignin From Areca Nut (Areca Catechu L.) Husk For Second Generation Bio Ethanol Production Through Submerged Fermentation (Smf) Process

Mrs.P.Santhana Selvi
Abstract:

To Meet The Challenges Of Generating Sufficient And Sustainable Energy, A Potentially Viable Alternative Is To Use Cellulosic Biomass For Second-Generation Bio Fuel And Bio Energy Production. In The Present Study, Areca Nut Husk Is Cheap Abundant Lignocelluloses Raw MaterialIn The Agricultural Waste; It Is Available As Alternative Feedstock For Bioethanol Production. The Moisture Content Of The Fresh Raw Material (68.39 ± 0.20 %). Areca Nut Husk Raw Material Were Collected And Dried In The Hot Air Oven At 800 C For 48hours. The Dried Areca Nut Husk Raw Materials Were Subjected By Powdered Sequentially Using Hammer Mill, Ball Mill And Flour Mill ToObtain Fine Sized Particles. The Particles Were Separated By Using A Range Of Graded Sews. Then Sieved The Different Particle Size Such As Sample-A (0.28 ± 0.01 Mm), Sample-B (0.43 ± 0.02 Mm), And Sample-C (0.64 ± 0.01 Mm). The Chemical Analysis Of Areca Nut Husk Raw Material Was Done By Using Pretreatment Methods. In Acid Hydrolysis The More Amount Of Reducing Sugar Was Found In The Sample-A (4.12 ± 0.02 Mg/G), No Reducing Sugar In The Sample-B (0.37 ± 0.01 Mg/G), Protein In The Sample-C (5.95 ± 0.06 Mg/G) And Carbohydrate In The Sample-B (2.82 ± Mg/G) Of Areca Nut Fiber. In Alkaline Hydrolysis The More Amount Of Reducing Sugar Was Found In The Sample-A (1.6 ± 0.10 Mg/G), Non-Reducing Sugar In The Sample-A (1.02 ± 0.03 Mg/G), Protein In The Sample-A (7.40 ± 0.15 Mg/G) And Carbohydrate In The Sample-B (2.43 ± Mg/G) Of Areca Nut Fiber.

Keywords: Arecanut Husk Waste, Pretreatment, Proximate Analysis, Acid Hydrolysis, Alkaline Hydrolysis, Bioethanol.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trich- 2

109. Iterative Joint Detection For Multiple Access Interference Cancellator Using Ps Cdma

[1]Ms.M.Mahalakshmi, [2]P.Sumathi

Abstract:

In This Paper An Implementation Of Iterative Joint Detection For Multiple Access Interference Using Direct-Sequence Code-Division Multiple-Access (Ds-Cdma) Is Presented. Results For Multiple Field Programmable Gate Array (Fpga) Platforms And Multiple Technology Nodes For Synthesized Application Specific Integrated Circuits (Asic) Are Presented. The Joint Detection Is Performed Using A Generalized Version Of Interleave-Division Multiple-Access (Idma) Known As Partition Spreading (Ps) Cdma. Decoding Is Performed Using Iterative Methods From Turbo And Sum-Product Decoding. The Synthesized Asic System Demonstrates A Maximum Aggregate Throughput Of 197mb/S For A Fully Loaded 50-User System, While The Implemented Fpga 50- User System Has A Maximum Aggregate Throughput Of 119mb/S

Keywords: Direct-Sequence Code-Division Multiple-Access, Field Programmable Gate Array, Application Specific Integrated Circuits, Interleave-Division Multiple-Access

110. Fuzzy Logic Controller Based Bldc Motor For Less Steady State Error And Good Dynamic Response

Ms.M.Mahalakshmi

Abstract:

In This Article, An Embedded System Approach For Closed-Loop Speed Control Of Bldc Motor Drive Is Implemented And Its Performance With Proportional Integral Control (Pi) And Fuzzy Controllers Are Investigated. The Pi Controller Is Well Designed And Its Parameters Are Well Tuned By Using Ziegler Nichols Method. The Fuzzy Controller Is Also Designed And Considered For Comparison. The Performance Of The System Is Studied Under Various Operating Conditions, Such As Sudden Change In The Reference Speed And Load Torque. For Validating The Results, Steady-State Error And Rise Time Are Taken In Account For Comparison. It Is Observed That Fuzzy Controller Provide A Superior Speed Response Compared To Pi And Better Speed Tracking Make This To Fit In Adjustable Speed Drives. The Simulation Is Carried Out In Matlab Software And Implemented The Same In Hardware.

Keywords: Bldc Motor; Fuzzy Control; Proportional Integral Control; Steady-State Error

111. Hv Multiplexer And Hv Transceiver For Voltage Monitoring Ic With BatteryManagement System

[1]Ms.R.Nithya, [2]M.Prabu

Abstract:

This Paper Presents A Voltage Monitoring Ic With High-Voltage Multiplexer (Hvmux) And Hv Transceiver For Battery Interconnect Module (Bim) Used In Battery Management Systems (Bmss). The Voltage Monitoring Ic Must Be Able To Accommodate Input Voltage Up To Tens Of Volts, Perhaps Even Hundreds Of Volts, Which Is Difficult To Be Realized Using A Logic-Based Solution. To Realize A Solution On Silicon, The Voltage Monitoring Ic Shall Be Fabricated Using An Advanced Hv Semiconductor Process, Which Usually Is Constrained By The Voltage Drop Limitation Between Gate And Source Of Hv Devices. To Overcome Such A Limitation, An Hv Switch Is Proposed In This Paper, Including An Hv Gate Voltage Driver (Hvgvd) Driving The Hv Mos Without Any Over-Voltage Hazard. In Addition, An Hv Transceiver Is Proposed Using Cmos Transistors Without Any Isolator. An Experimental Prototype Is Fabricated Using A Typical 0.25 μm 1-Poly 3-Metal 60 V Bcd Process. The Measurement Results Reveal That The Error And Off- Isolation Of Hvmux Is Less Than 2.54% And −92 Db@1 Mhz, Respectively. Meanwhile, The Hv Transceiver Can Transmit And Receive Data With A −32 ~ +32 V Common Voltage.

Keywords: Analog High-Voltage Multiplexer (Hvmux), Battery Management System (Bms),High Voltage (Hv), High Voltage Transceiver.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

112. Monitoring And Protection Of Earthing System Using Arduino

Ms.R.Nithya[1]

Abstract:

This System Used To Maintaining And Controlling Earth Resistance And Over Load Current At Earthing System. Earth Faults Are Not Only By Far The Most Frequent Of All Faults, But The Fault Currents May Be Limited In Magnitude By The Neutral Earthing Impedance, Or By The Earth Contact Resistance Which Makes Detection Challenging For Conventional Protection Schemes. Currently, Normal Earth Fault Protection Together With Sensitive Earth Fault Protection Has Been Employed In Both Distribution Networks To Detect And Clear Earth Faults. There Have Been Incidences Where Earth Fault Detection Has Been Extremely Challenging As Fault Values Drop Significantly And The Protective Device Does Not Have Sensitivity To Detect And Isolate The Faulty Equipment. The Earth Resistance Is Maintained By Controlling Moisture Of Earth Using Moisture Sensor. The Main Component Of The Proposed Earthing System Is Intellectual Earthing Kit Which Limits The Leakage Current. If The Fault Current Is Excessive Than The Conventional Earthing Capacity Then Controller Circuit Sense This Excessive Current And Divert This Leakage Current Into Intellectual Earthing Kit. Soil Moisture Sensor Senses The Moisture Of The Soil And Gives Data To The Micro-Controller. If Moisture Decreases Microcontroller Operates Solenoid Valve Through Opt Isolator And Water Supplied To Soil.

Keywords: Arduino Uno, Moisture Sesnsor, Relay.

113. Design Of An Efficient Encoder For Dsrc Application Using Sols Technique

[1]Mr.K.Kumar,[2]G.Keerthana

Abstract:

Dedicated Short-Range Communication (Dsrc) Plays An Important Role In Intelligent Transportation System Applications. Dsrc Standards Usually Adopt Fm0 Code And Manchester Code As A Coding Technique To Enhance Signal Reliability, But The Diversity In Coding Technique Limits The Possibility For Designing A Reused Vlsi Architecture For Both The Encoding Methods. In This Paper Propose A Technique Called Similarity-Oriented Logic Simplification (Sols) Technique To Overcome The Limitation. This Sols Technique Improves The Hardware Utilization Rate From 57.14% To 100% For Both Fm0 And Manchester Encodings. To Achieve Fully Reused Vlsi Architecture Of Fm0/Manchester Codec With Maximum Hardware Utilization Rate (Hur) Half- Cycle Processing Model Can Be Used.

Keywords: Dedicated Short-Range Communication, Fm0 Code, Vlsi, Similarity-Oriented LogicSimplification, Hardware Utilization Rate.

114. Performance Analysis Of Three Phase Induction Motor Fed Mli Using Svm

[1]Mr.K.Kumar

Abstract:

This Paper Presents New Modified Space Vector Pulse Width Modulation Techniques (Phase Disposition-Space Vector Pulse Width Modulation, Alternative Phase Opposition Disposition-Space Vector Pulse Width Modulation And Phase Opposition Disposition-Space Vector Pulse Width Modulation) Are Analyzed For Three-Phase Cascaded Multi-Level Inverter Fed Induction Motor From The Point Of View Of The PhaseVoltages, Line Voltage, Stator Current,Speed,Torque And Total Harmonic Distortion.In The Proposed Modified Technique The Reference Signals Are Generated By Adding Offset Voltage To The Reference Phase Voltages.This Modified Svpwm Technique Does Not Involve Region Indentification,Sector Identification For Switching Vector Determination As AreRequired In The Conventional Multi Level Svpwm Technique,It Is Also Reduces The Computation Time Compared To The Conventional Space Vector Pwm Technique.The Necessary Calculations For Generation Of New Modified Svpwm For The Modulation Strategies Have Presented In Detail. It Is Observed That The Modified Svpwm Modulation Ensures Excellent, Close To Optimized Pulse Distribution Results And Thd Is Compared To For Five-Level, Seven-Level, Nine-Level And Eleven- Level Cascaded H-Bride Multi-Level Inverter Fed To Induction Motor. Theoretical Investigations Were Confirmed By The Digital Simulations Using Matlab/Simulink Software.

Keywords: Apodsvpwm, Cascaded Inverter, Induction Motor, Modified Svpwm, OffsetVoltage

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam Trich

115. Indian Sign Languages Using Flex Sensor

[1]Mr.J.Manokaran, [2]M.Lakshmi,[3]F.Ayesha Sultana

Abstract:

Now Days, It Is Serious Problem For Deaf And Dumb People For Communication. Deaf And Dumb People Face Problem In Communication To Normal Person. So For Communicating To Each Other, Both Have Knowledge About Sign Language. Here, I Made Indian Sign Language's AlphabetsUsing One Hand. For Making This, Flex Sensor Glove Is Used. Using This Alphabet, I Made Word Forming For Example, "Boy", "Hello". For Making This, Each Sign Of Alphabets, The Output Shown In Lcd. And Then For Combining Alphabets Word Display On Lcd.

Keywords: Glove, Flex Sensor, Indian Sign Language's Alphabets, Microcontroller, Adc, AndLcd

116. Performance Evaluation Of Cnn And Color Based Segmentation And Feature ExtractionUsing Svm For Soil Classification

Mr.J.Manokaran

Abstract:

This Study Evaluated Six Segmentation Methods (Clustering, Flood-Fill, Graph-Cut, Colour-Thresholding, Watershed, And Otsu's-Thresholding) For Segmentation Accuracy And Classification Accuracy In Discriminating Fusarium Infected Corn Grains Using Rgb Color Images. The Segmentation Accuracy Was Calculated Using Jaccard Similarity Index And Dice Coefficient In Comparison With The Gold Standard (Manual Segmentation Method). Flood-Fill And Graph-Cut Methods Showed The Highest Segmentation Accuracy Of 77% And 87% For Jaccard And Dice Evaluation Metrics, Respectively. Pre-Trained Convolution Neural Network (Cnn) And Support Vector Machine (Svm) Were Used To Evaluate The Effect Of Segmentation Methods On Classification Accuracy Using Segmented Images And Extracted Features From The Segmented Images, Respectively. The Svm Based Two-Class Model To Discriminate Healthy And Fusarium Infected Corn Grains Yielded The Classification Accuracy Of 84%, 79%, 78%, 74%, 69% And 65% For Graph Cut, Watershed, Clustering, Flood-Fill, Colour-Thresholding, And Otsu's-Thresholding, Respectively. In Pertained Cnn Model, The Classification Accuracies Were 93%, 88%, 87%, 84%, 61% And 59% For Flood-Fill, Graph-Cut, Colourthresholding, Clustering, Watershed, And Otsu'sthresholding, Respectively. Jaccard And Dice Evaluation Metrics Showed The Highest Correlation With The Pertained Cnn Classification Accuracies With R2 Values Of 0.9693 And 0.9727, Respectively. The Correlation With Svm Classification Accuracies Were R2-0.505 For Jacquard And R2-0.5151 For Dice Evaluation Metrics.

Keywords: Colour-Thresholding, Otsu's-Thresholding, Convolution Neural Network,Support Vector Machine

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy

117. Automatic Energy Meter Reading With Gsm Based System

[1]Mr.S.Balakrishnan,[2]S.Chinnasamy,[3]P.Gnanasekar

Abstract:

The Technology Of E-Metering (Electronic Metering) Has Gone Through Rapid Technological Advancements And There Is Increased Demand For A Reliable And Efficient Automatic Meter Reading (Amr) System. This Paper Presents The Design Of A Simple Low Cost Wireless Gsm Energy Meter And Its Associated Web Interface, For Automating Billing And Managing The Collected Data Globally. The Proposed System Replaces Traditional Meter Reading Methods And Enables Remote Access Of Existing Energy Meter By The Energy Provider. Also They Can Monitor The Meter Readings Regularly Without The Person Visiting Each House. A Gsm Based Wireless Communication Module Is Integrated With Electronic Energy Meter Of Each Entity To Have Remote Access Over The Usage Of Electricity. A Pc With A Gsm Receiver At The Other End, Which Contains The Database Acts As The Billing Point. Live Meter Reading From The Gsm Enabled Energy Meter Is Sent Back To This Billing Point Periodically And These Details Are Updated In A Central Database. A New Interactive, User Friendly Graphical User Interface Is Developed Using Microsoft Visual Studio .Net Framework And C#. With Proper Authentication, Users Can Access The Developed Web Page Details From Anywhere In The World. The Complete Monthly Usage And Due Bill Is Messaged Back To The Customer After Processing These Data.

Keywords: Automatic Meter Reading System (Amrs); Gsm; Pic; Short Messaging System (Sms); Visual Studio .Net; C#.

118. Simulation Of Inter Line Dynamic Voltage Restorer System
Mr.S.Balakrishnan[1]
Abstract:

Due To Changes In Load Conditions, There Are Voltage Disturbances Like Voltage Sags. Because Of Such Voltage Disturbances, There Is Lot Of Effect On The Load Voltage, Which May Harm The Sensitive Load. Dynamic Voltage Restorer (Dvr) Is An Advanced & Also Economical Way Which Is Used To Mitigate Voltage Sags, Thereby Protecting Sensitive Loads. Several Dvrs Can Be Connected In Different Feeders To A Common Dc Link. It Is Generally Used In Distribution Systems. Instead Of Using A Single Dvr We Can Use Interline Dynamic Voltage Restorer (Idvr). An Idvr May Consist Of Several Dvr's & They Share A Common Dc Link Between Them. In Idvr, One Dvr Will Compensate For The Voltage Sag & The Other Dvr Will Help To Replenish The Common Dc Link Voltage So As To Maintain The Dc Link Voltage At A Specified Level.

Keywords: Idvr,Dc Link Voltage, Dvr

119. Zigbeee Based Patient Health Monitoring System

[1]Mrs.B.Saraswathi,[2]C.P.Geetha Priya,[3]S.Hemalatha
Abstract:
Statistics Reveal That Every Minute A Human Is Losing His/Her Life Across The Globe. More Close In India , Everyday Many Lives Are Affected By Heart Attacks And More Importantly Because The Patients Did Not Get Timely And Proper Help . There Are Many Emergency Response Services Striving Hard To Save The Lives Of People During Emergencies, Though They Are Successful At Few Times. India Has The Highest Incidence Of Heart Related Diseases In The World And The Number Of Those Affected Is Likely To Double In The Coming Years. If No Initiative Is Taken To Check The Disease, The Most Predictable And Also Preventable Among All Chronic Diseases, India Will Have 62 Million Patients With Heart Disease. So In TheFuture What If Due To Lack Of Urgent Service We Are Not Able To Save The Patient? The Answer To Such A Problem Is That The Patient Needs To Be "Monitored Constantly". Therefore By Developing A System That Can Constantly Measure The Important Parameters Of Patient's Body And Which Can Alert The Closed Ones And The Doctor On Any Time When The Patient's Condition Gets Bad When He Is Not Along With Them, This Can Really Provide Quick
Keywords: Predictable, Striving, Parameters

120. Smart Shopping Trolley Using Iot And Node Mcu

[1]Mrs.B.Saraswathi
Abstract:

In Recent Years, The Utilization Iot Devices In Ever Where Like, Health, Military, Industry, Agriculture, Feet Management Etc., Whenever There Is Need For Atomization, Reduce Power Consumption And Minimize Human Resources With Effective Utilization, The Iot Modules Are Best Solution. In This Paper, Implement Smart Shopping Trolley Using Node Mcu To Nullify The For Customer's Long Queues In Front Of Billing Counter. This Helps The Customer To Save The Time As Well As From Malls Or Supermarket Management Side Pay Down The Number Of Employees.

Keywords: Nodemcu, Rfid, Lcd Display, Auduino Ide, Web Server.

121. Border Security Using Wireless Integrated Network Sensors

[1]Mrs.V.Elakkiya ,[2]V.Dharshan ,[3]R.Loganathan
Abstract:

Wireless Integrated Network Sensors (Wins) Now Provide A New Monitoring And Control Capability For Transportation, Manufacturing, Health Care Environmental Monitoring, And Safety And Security. Wins Combine Sensing, Signal Processing, Decision Capability, And Wireless Networking Capability In A Compact, Low Power System. Wins Systems Combine Micro Sensor Technology With Low Power Sensor Interface, Signal Processing, And Rf Communication Circuits. The Need For Low Cost Presents Engineering Challenges For Implementation Of These Systems In Conventional Digital Cmos Technology. This Paper Describes Micro-Power Data Converter, Digital Signal Processing Systems, And Weak Inversion Cmos Rf Circuits. The Digital Signal Processing System Relies On A Continuously Operating Spectrum Analyser. Finally, The Weak Inversion Cmos Rf Systems Are Designed To Exploit The Properties Of High-Q Inductors To Enable Low Power Operation.

Keywords: Remote Charging, Development, Power Transmission

122.A Buck Integrated Spec Converter With Hybrid Optimized Pi Controller For Ev Charging Application

[1]Mrs.V.Elakkiya
Abstract:

Buck Converter Transforms Constant Dc Voltage Into A Variable Dc Voltage And Gives Out Average Output Voltage Less Than The Input Voltage. Applications Of Buck Converter Starts FromFew Watts Range Such As Consumer Electronics Like Mobile Charger, Laptop Charger To Kilo Watts Range In Electrical Engineering Like Renewable Energy Sources, Electric Vehicles And Dc Micro Grids. Buck Converter Considered For The Study In This Paper Integrates Wind Power Generation ToA Hybrid Dc Micro Grid. When The Wind Generator Output Varies, Input To Buck Converter Also Varies. The Inductance And Capacitance Values Of The Buck Converter Are Varied Under The Condition Of Variable Input Voltage; To Maintain The Average Output Voltage Constant With Reduced Transients Such As Peak Voltage, Percentage Ripple And Settling Time. To Find The Optimal Values Of Inductance And Capacitance Under Varying Input Voltage Condition Genetic Algorithm Is Used. The Proposed Method Is Verified By Simulating Buck Converter And Genetic Algorithm In Matlab/Simulink Environment.

Keywords: Buck Converter, Capacitance, Inductance, Genetic Algorithm

978-81-970087-5-7

123. Detection Of Bbos Attacks Using Traffic Analysis Through Entropy Variation

[1]Mrs.S.Rahamathnisha,[2] S.Nathiya, [3]N.Sukerthy
Abstract:

Distributed Denial Of Service (Ddos) Attacks Is A Critical Threat To The Internet. Due To The Memory Less Features Of The Internet Routing Mechanism Makes Difficult To Trackback The SourceOf The Attacks. In This Paper, I Find Out The Source Of The Attack With The Help Of Entropy Variation In Dynamic By Calculating The Packet Size, Which Shows The Variation Between Normal And Ddos Attack Traffic, Which Is Fundamentally Different From Commonly Used Packet Marking Techniques. In Comparison To The Existing Ddos Trackback Methods, The Proposed One Posses Dynamic Entropy Variations As Per The Clients Behavior.

Keywords: Ddos, Method, Router

124. Anti Collision Mechanism In Vehicle Using Embedded System

[1]Mrs.S.Rahamathnisha
Abstract:

Automated Anti-Collision System By Detecting Obstacles For Automobile Industry Is One The Emerging Technologies Nowadays. An Automated Vehicle Anti-Collision System Is An Automobile Safety System Which Prevents Collision Among Cars And Objects Automatically. In This Paper, We Have Discussed About Implementation Of The Prototype Of Our Designed Microcontroller Based Automated Car Anti-Collision System. Our System Specializes In Detecting Obstacles By Sharp Distance Sensor And Alerts Within Close Distance Of Collision And Hereafter Brakes Automatically ByActuator In Critical Distance Without The Help Of Driving Person. If Somehow Driver Fails Avoiding The Collision, This System Will Automatically Stop The Vehicle As It Monitors The Condition Of The Vehicle Continuously. So It Is A User Friendly And Versatile System Which Can Prevent Road Accidents, Reduce The Rate Of Accidents As Well As Accidental Death Of Human Life. It Can Be Used In Any Kind Of Automobile Vehicle As It's A Cost Effective System.

Keywords: Automobile Anti-Collision; Sharp Distance Sensor; Microcontroller, Actuator

125. Design And Evaluation Of Rectangular Micro Strip Antenna

[1]Mrs.G.Keerthana, [2]V.Deepika, [3]J.K.Jerioth
Abstract:

This Paper Presents, The Design, And The Feeding Techniques Of A Rectangular Microstrip Antenna Operates At 2.45 Ghz Ism Band. There Are Various Feeding Techniques For Patch Antenna. These Techniques Are Classified Into Two Categories, Which Are Contacting And Non-Contacting. In The Contacting Method, The Antenna Can Directly Feed With Rf Power Using The Contacting Element As Coaxial Plane Feed Or A Microstrip Line. Contrarily, Non-Contacting Techniques, The Electromagnetic Field Coupling Is Done To Transfer Power Between The Microstrip Line And The Radiating Patch. The Most Used Non-Contacting Techniques Are Aperture And Proximity Coupled Feed. The Proposed Rectangular Microstrip Antenna Is Designed Based On The Transmission Line Method. And It Is Optimized With The Method Of Moment. A Performance Comparison Between The Different Feeding Techniques Was Made Based On The Reflection Coefficient, Gain And Bandwidth Results

Keywords: Micro Strip Antenna, Antenna Design, Feeding Mechanisms, Cadfeko.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
[...] Thiruchy 620 012

126. Cost Effective Solar Inverter

[1]Mrs.G.Keerthana

Abstract:

Solar Energy The Most Efficient, Eco-Friendly And Abundantly Available Energy Source In The Nature. It Can Be Converted Into Electrical Energy In Cost Effective Manner. In Recent Years, The Interest In Solar Energy Has Risen Due To Surging Oil Prices And Environmental Concern. In Many Remote Or Underdeveloped Areas, Direct Access To An Electric Grid Is Impossible And A Photovoltaic Inverter System Would Make Life Much Simpler And More Convenient. With This In Mind, It Is Aimed To Design, Build, And Test A Solar Panel Inverter. This Inverter System Could Be Used As Backup Power During Outages, Battery Charging, Or For Typical Household Applications. The Main Components Of This Solar System Are Solar Cell, Dc To Dc Boost Converters, And Inverter. Sine Wave Push Pull Inverter Topology Is Used For Inverter. In This Topology Only Two Mosfets Are Used And Isolation Requirement Between Control Circuit And Power Circuit Is Also Less Which Helps To Decrease The Cost Of Solar Inverter

Keywords: Mosfet, Pcs, Abundantly, Photovoltaic, Solar Cell, Topology

127. Reliable Low Power Multiplier Design Using Booth Algorithm In Fixed Width ReplicaRedundancy Block

[1]Mrs.P.Jency Leena,[2]S.Abinaya,[3]A.Preethi Suriya

Abstract:

In This Paper, We Propose A Reliable Low-Power Multiplier Design By Adopting Algorithmic Noise Tolerant (Ant) Architecture With The Fixed-Width Multiplier To Build The Reduced Precision Replica Redundancy Block (Rpr). The Proposed Ant Architecture Can Meet The Demand Of High Precision, Low Power Consumption, And Area Efficiency. We Design The Fixed-Width Rpr With Error Compensation Circuit Via Analyzing Of Probability And Statistics. Using The Partial Product Terms Of Input Correction Vector And Minor Input Correction Vector To Lower The Truncation Errors, The Hardware Complexity Of Error Compensation Circuit Can Be Simplified. In A 12×12 Bit Ant Multiplier, Circuit Area In Our Fixed-Width Rpr Can Be Lowered By 44.55% And Power Consumption In Our Ant Design Can Be Saved By 23% As Compared With The State-Of-Art Ant Design.

Keywords: Algorithmic Noise Tolerant (Ant), Fixed-Width Multiplier, Reduced-Precision Replica (Rpr), Voltage Over Scaling (Vos).

128. Design And Development Of Traffic Control System Based On Density

[1]Mrs.P.Jency Leena

Abstract:

The Project Is Aimed At Designing A Density Based Dynamic Traffic Signal System Where TheTiming Of Signal Will Change Automatically On Sensing The Traffic Density At Any Junction. Traffic Congestion Is A Severe Problem In Most Cities Across The World And Therefore It Is Time To Shift More Manual Mode Or Fixed Timer Mode To An Automated System With Decision Making Capabilities. Present Day Traffic Signaling System Is Fixed Time Based Which May Render Inefficient If One Lane Is Operational Than The Others. To Optimize This Problem We Have Made A Framework For An Intelligent Traffic Control System. Sometimes Higher Traffic Density At One Side Of The Junction Demands Longer Green Time As Compared To Standard Allotted Time We, Therefore Propose Here A Mechanism In Which The Time Period Of Green Light And Red Light Is Assigned On The Basis OfThe Density Of The Traffic Present At That Time. This Is Achieved By Using Pir(Proximity Infrared Sensors). Once The Density Is Calculated, The Glowing Time Of Green Light Is Assigned By The HelpOf The Microcontroller (Arduino). The Sensors Which Are Present On Sides Of The Road Will Detect The Presence Of The Vehicles And Sends The Information To The Microcontroller Where It Will DecideHow Long A Flank Will Be Open Or When To Change Over The Signal Lights. In Subsequent Sections, We Have Elaborated The Procedure Of This Framework.

Keywords: Traffic Signals, Proximity Infrared Sensor, Ardiuno Microcontroller.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

129. Automatic Vehicle Speed Control With Wireless In Vehicle Road Sign Delivery

[1]Dr.R.Rajamohamed,[2]N.Kathiresan,[3]A.Mutharasan

Abstract:

Nowadays Accidents Are Occurring Frequently, Causing Demise Of Many People By Making Modest Mistakes While Driving (In School Zone, Hills Area, And Highways). But Sometimes It May Not Be Possible To View The Signboards Placed By The Highway Department To Alert The Drivers In Such Kind Of Places And There Is A Chance For Accident. The Advancement In The Processor Technology And Microcontrollers Has Opened A New System Designed To Prevent The Accidents Caused Due To Negligence Of Drivers In Seeing Traffic Signals Alongside The Road And Other Anomalies On The Roads. So To Intimate The Driver About The Zones And To Automatically Maintain The Speed Is Accomplished By Means Rf Technology. The Main Objective Is To Design A Electronic Display Controller Meant For Vehicle's Speed Control And Monitors The Zones, Which Runs On An Embedded System And Can Be Custom Designed To Fit Into A Vehicle's Dashboard To Display Information On The Vehicle, The Vehicle's Electronic Display Controller Unit Warns The Driver, To Reduce The Speed According To The Zone, It Waits For Driver's Response And Reduces The Speed Of Vehicle Automatically.

Keywords: RfTechnology, Microcontroller, Speed Reduction.

130. Design Of Smart Steering Wheel For To Avoid Risk Factor Using Driver Monitoring System

[1]Dr.R.Rajamohamed

Abstract

This Article Describes The Design Of A Smart Steering Wheel Intended For Use In Unobtrusive Health And Drowsiness Monitoring. The Aging Population, Cardiovascular Disease, Personalized Medicine, And Driver Fatigue Were Significant Motivations For Developing A Monitoring Platform In Cars Because People Spent Much Time In Cars. The Purpose Was To Create A Unique, Comprehensive Monitoring System For The Driver. The Crucial Parameters In Health Or Drowsiness Monitoring, Such As Heart Rate, Heart Rate Variability, And Blood Oxygenation, Are Measured By An Electrocardiograph And Oximeter Integrated Into The Steering Wheel. In Addition, An Inertial Unit Was Integrated Into The Steering Wheel To Record And Analyze The Movement Patterns Performed ByThe Driver While Driving. The Developed Steering Wheel Was Tested Under Laboratory And Real-Life Conditions. The Measured Signals Were Verified By Commercial Devices To Confirm Data Correctness And Accuracy. The Resulting Signals Show The Applicability Of The Developed Platform In Further Detecting Specific Cardiovascular Diseases (Especially Atrial Fibrillation) And Drowsiness.

Keywords: Steering Wheel, DriverMonitoring; Electrocardiography; Photoplethysmography; Oximetry; Inertial MeasurementUnit
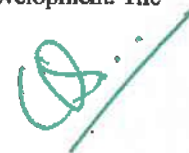
131. A Novel Method For Segmentation Of Masses In Digital Mammogram

[1]Mrs.M.Nandhini, [2]K.Rajalakshmi, [3]S,Rajasri

Abstract:

Researchers Have Adopted Prosperity Index To Forecast Tourism Supply And Demand For A Destination. However, Selection Of Indicators And Cycle Selection Pose Challenge When Researchers Attempt To Include Them In The Forecasting Model. In This Paper, The Composite Index Method Is Used To Construct And Evaluate Tourism Prosperity Index In Macau From 2006 To 2015 And Predicts Its Future Development. The Prediction Results Were Consistent With The Realistic Development Situation.

Keywords: Tourism Industry, Prosperity Index, Macau

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

132. Emission Reduction By Converting Conventional Bicycle To Voice Controlled Solar Electric Bicycle With Location Tracking

[1]Mrs.M.Nandhini

Abstract:

Electrical Assisted Bicycles (E-Bikes) Represent An Emerging Sustainable Mode Of Transport For Future Smart Cities. Several Designs Issues Impact Policy In Several Countries Such As The Uk, Europe And The Usa. As E- Bike Usage Continues To Grow, So Too Will The Need For Further Research, In Order To Provide The Necessary Data To Inform Industrialists What Cycling Features Matters For A Wider, Diverse And Sustainable Adoption Of This Mode Of Transport. This Investigation Discusses Results From A Survey On End-User Preferences For Future E-Bikes That Will Be Developed In The Coming Years. User Preferences Related To Safety And Convenience Were Defined Using Market Reviews And Responses Gathered From 638 Potential Users Mainly From Europe And North America. Data Were Analysed To Rank The Importance Of Desired Functionality To Improve The Uptake Of Cycling Within Urban Environments. In General, The Results Indicate That Safety And Convenience Features Were Equally Valued Across The Whole Sample Size. 'Gradient Climb Assist' And 'Break Lights & Indicators' Were Respectively The Most Preferred Convenience And Safety Feature. This Survey Showed How Respondents Expressed A Desire For A More Intelligent, Secure And Adaptive E-Bikes.

Keywords: Low Carbon Transport Systems, Smart Cities, Intelligent E-Bikes, Safety AndConvenience Features

133. Segmentation Of Mri Brain Images Using K Means Algorithm

[1]Mrs.D.Kokila,[2]I.Monisha,[3]M.Sakthipriya
Abstract:

In The Area Of Image Processing, Image Segmentation Plays A Crucial Role In ManyMedical Imaging Applications By Automating Or Facilitating The Delineation Of Anatomical Structures. Magnetic Resonance Imaging (Mri) Can Provide Volumetric Images Of The Brain With Good Soft Tissue Contrast Segmentation Are Then A Post Processing Operation Which Abstracts Quantitative Description Of Anatomically Relevant Structures. Various Approaches Are Applied For The Segmentation Of The Mri Depending On The Medical Application, Image Modality And Other Factors. Segmentation Of Mri Is Based On Sets Of Features That Can Be Extracted From The Images, For Example, Pixel Intensities. The K-Means Clustering, Which Is An Unsupervised Learning Algorithm, Cluster Each Pixel In Mri Intensity Where In-Homogeneities Can Be Modeled And Gives Us The Segmented Image Of An Mri Having The Same Intensity Regions And Segments All The Three Matters Of The Brain I.E. Grey Matter, White Matter And Dark Matter.

Keywords: Mri, K-Means Clustering, Image Segmentation, White Matter, Grey Matter, CerebroSpinal Fluid

134. Hierarchical Industrial Load Management System

[1]Mrs.D.Kokila
Abstract:

With The Spread Of Distributed Energy Resources, Sensing Infrastructure, And Automation Facilities, Modern Homes Are Becoming "Home Microgrids." This Paper Intends To Support This Trend And Proposes A Two-Stage Hierarchical Energy Management System For Smart Homes By Considering Both Day Ahead And Actual Operation Stages. In The Day-Ahead Stage, An Efficient Scenario Analysis Approach Is Developed To Account For Residential Photovoltaic Solar Power Uncertainty. The Approach 9 Performs Solar Power Scenario Generation And Reduction Based On The Wasserstein Distance Metric And K-Medoids, Respectively. This Is Then Followed By The Use Of A Stochastic Day-Ahead Residential Energy Resource Scheduling Model. In The Actual Operation Stage, A Semi- Scenario Based Rolling Horizon Optimization Mechanism Is Proposed, Based On Which An Actual Operation Model Is Established. Simulations Are Then Conducted To Validate The Effectiveness OfThe Proposed System.

Keywords: Nanogrid, Smart Home, Demand Response, Demand Side Management, Building Automation

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

135. Research On High-Frequency Isolation TypeOf Dual-Pwm Variable Frequency Speed Regulation

Dr.G. Malathy [1] Arul Joy Asha A [2], Arun Sebastin P [3]
[1] Professor, [2,3] Ug Students

[123] indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

Frequency Converters Are Widely Used In Power Grids, Motor Speed Regulation, And Other Fields. When The Voltage Level Is Above Low Voltage And The Workspace Is Limited, Traditional Frequency Converters Mostly Adopt The Power Frequency Transformer To Connect To The Power Grid. But The Structure Has The Problems Of Bigger Volume And Complexity. To Solve These Problems, This Paper Proposes A Three-Stage Topology Structure Of High-Frequency Isolation Type Of Dual-Pwm Variable Frequency Speed Regulation Based On Three-Phase Rectification, Single Active Isolated Dc/Dc Converter, And Three-Phase Inverter, And Analyses Its Power Transmission Characteristics In Detail. And A New Method That Combines High-Frequency Electrical Isolation And Frequency Conversion Is Discussed. Then, The Control Strategies Of The New Method Are Also Described. Lastly, Simulation And Experiment Are Constructed To Verify The New Design Method Is Correct And Feasible, And That The Steady And Dynamic Characteristics Of The Three-Stage High-Frequency Isolated Frequency Converter Are Better.

Keyword: Pulse Width Modulation, Speed Regulation

136. Optimization Design And Dynamic Characteristics Analysis Of Multistage Magnetic Gearbox For Mw-Scale Wind Turbine

Dr.G. Malathy [1] Bharthasarathi M [2], ,Chitra .P [3]
[1] Professor, [2,3] Ug Students

[123] indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

In This Article, The Multistage Magnetic Gearbox For Wind Turbine (Wmgb) Which Contains Two-Stage Magnetic Gears (Mgs) Is Studied. The Mg Is A Coaxial Mg And Consists Of Outer Rotor, Modulator And Inner Rotor. First, The Gear Ratios Of Mgs Are Optimized Based On The Maximum Gravimetric Torque Density Under The Constraint Of Structural Parameters. Second, In View Of The Importance Of The First-Stage Mg (Fsmg), The Multi-Objective Optimization Method Nsga-Ii Based On Back Propagation Neural Network Surrogate Model Is Combined With The Single Parameter Scanning Method To Achieve Higher Torque Performance Of Fsmg. The Simulation Results Show That The Torque Density Increases By 13.28%, The Torque Ripple Of The Modulator And Inner Rotor Decreases To Below 5%, And The Maximum Magnetic Force Exerted On The Modulator Is Reduced By 22.73%, Which Verifies The Effectiveness And Efficiency Of The Proposed Hierarchical Optimization Strategy. Finally, Aiming At The Aerodynamic Load, The Dynamic Characteristics Of Fsmg Are Analyzed Under Different Wind Speed Conditions, Which Verifies The Feasibility Of The Proposed Wmgb Applied In Mw-Scale Wind Power Drive Systems.

Keyword: Wind Turbine, Multistage Gearbox

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

137. Analysis Of A Novel Double-Stator And Dual-Pm Toroidal-Winding Linear Vernier Machine

Dr.G. Malathy [1] Deepika G [2] , Kanimozhi [3]
[1] Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

Aiming At The Problem Of Low Thrust Density And Large Thrust Ripple Of Conventional Permanent Magnet Linear Machine, This Paper Proposes A Novel Structure Of Double-Stator And Dual-Pm Toroidal-Winding Linear Vernier Machine (Lvm) With High Thrust Density And Low Thrust Ripple. The Novelty Of The Proposed Machine Is Adopted Double-Sided Topology, Toroidal-Winding And Permanent Magnets (Pms) Installed Both On The Stator Side And The Mover Split Teeth To Improve Thrust Density. To Emphasize The Specificity Of Proposed Dual-Pm Lvm In Aspect Of Electromagnetic Performance, Three Kinds Of Conventional Lvms With Different Topologies Are Compared With Proposed Machine By Analyzing The Air-Gap Flux Density, Inductance, No-Load Emf, Thrust, Overload Capability And Power Factor Of The Machines. The Average Thrust Is Increased By 11.5% Under Rated Current, And The Thrust Ripple Is Decreased From 22.1 To 2.68% By Optimizing The Key Parameters Of The Proposed Structure. The Harmonics Contribution Of Emf And Thrust Are Discussed By Semi-Analytical Method. The Results Of The Semi-Analytical Method Are In Good Agreement With The Finite Element Method, Which Verifies The Correctness Of The Semi-Analytical Method And Proves That The Proposed Machine Has Good Performance Characteristics.

Keyword: Double Stator, Vernier Machine

138. Energy Management Switch For A Self- Powered Wireless Sensor In MonitoringPower Systems

Dr.G. Malathy [1] Ezhumalai A [2] , Gayathri .K [3]
[1] Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

An Efficient Switching Scheme For Magnetically Self-Powered Wireless Sensor Is Proposed. Under A Stochastic Nature Of Currents In The Power Lines, The Proposed Switch Can Store Excessive Harvested Energy Into A Supercapacitor And Supply Energy For Sensing Operation When A Conductor Current Becomes Extremely Low. The Smart Switching Was Realized By Integrating Autonomous Switching Circuits With Digital Logic Circuits. The Self-Powered Wireless Sensors Enabled Real-Time Monitoring Of Power Lines For An Extended Range Of The Conductor Current And Sustained Sensing Operation Even During Power Outages. Moreover, To Investigate Feasibility Of The Self-Powered Sensor Running On A Commercial Lora Network, Harvested Power Requirement For The Network Was Assessed.

Keyword: Energy Management, Wireless Sensor

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

139. Energy Management Strategy For HybridEnergy Storage System Based On Model Predictive Control

Dr.G. Malathy [1] Gayathri. S [2], Kanimozhi [3]

[1] Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

Electric Vehicle (Ev) Is Developed Because Of Its Environmental Friendliness, Energy-Saving And High Efficiency. For Improving The Performance Of The Energy Storage System Of Ev, This Paper Proposes An Energy Management Strategy (Ems) Based Model Predictive Control (Mpc) For The Battery/Supercapacitor Hybrid Energy Storage System (Hess), Which Takes Stabilizing The Dc Bus Voltage And Improving The Efficiency Of The System As Two Major Optimization Goals. In Addition, An Enumeration Algorithm Is Presented To Solve The Optimization Function. The Experimental Results Show The Performance Of The Proposed Ems Which Is Able ToEnhance The Overall Instantaneous Power And Prevent The Battery From Overloading. Meanwhile, Compared With The Results Of A Single Battery Storage System, The Maximum Amplitude Of The Battery Current In The Hess Is Reduced By 40.81% And Whole System Energy Loss Is Reduced By 24.13% With The Proposed Power Management Strategy.

Keyword: Electric Vehicle, Hybrid Energy System

140. Sensorless Control Of The Switched Reluctance Motor Based On The Sliding-Mode Observer

Dr.G. Malathy [1] Keerthana.S [2], Kumarivalli T [3]
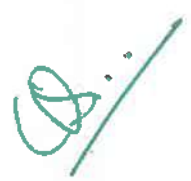
[1] Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

To Upgrade The Application Of Switched Reluctance Motors (Srms) For More Electric Aircraft, This Paper Presents A Method With Sensorless Control Based On The Flux-Linkage Data From The Finite Element Method. First, A Calibration Strategy Is Employed To Obtain The Flux-Linkage Characteristics. Then, A Sliding-Mode Observer Is Used To Realize The Sensorless Control Of The Srm. The Proposed Method Only Requires The Flux-Linkage Of The Srm At Aligned And Unaligned Rotor Positions From The Experiment Which Takes A Low-Measurement Effort To Get The Rotor Position And Has Better Accuracy In Position And Speed Estimation Than The Fem. Experimental Results Verify The Accuracy And Effectiveness Of The Proposed Method.

Keyword: Sensorless Control Of Srm

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

141. Vibration Analysis Of Switched ReluctanceMotor Based On Multi-Objective Genetic Algorithm

Mr.S. Vijay [1] Madhumitha.S [2], Mano.K [3]
[1] Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

The Vibration And Noise Caused By Radial Electromagnetic Force Hinder The Development Of Switched Reluctance Motor (Srm). A Structure With Auxiliary Slots In The Stator Teeth And Rotor Teeth Of Srm Is Proposed In This Paper. The Radial Force Density And Average Torque Are Optimized By Multi-Objective Genetic Algorithm, And The Optimal Structural Parameters Of The Motor Are Determined. The Modal Analysis And Harmonic Response Analysis Of The Stator Are Carried Out By Using Workbench Finite Element Software And Compared With The Conventional Srm. The Results Show That The Radial Force Density Is Reduced By 42.19%, Which Verifies That Opening Auxiliary Slots In Stator Teeth And Rotor Teeth Is Conducive To Reducing The Vibration Of Srm.

Keyword: Analysis Of Srm, Genetic Algorithm

142. Design And Development Of A New Transformerless Multi-Port Dc–Dc Boost Converter

Mr.S. Vijay [1] Mekala.M [2], , Pavithra .S [3]
[1] Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

This Paper Proposes A New Transformerless Multi-Port Bidirectional Dc–Dc Converter. The Proposed Converter Has Many Advantages, Including Energy Source Hybridization, Continuous Input Current, Fewer Components, And Bi-Directional Capability. This Proposed Converter Charging/Discharging Of The Battery And Power Flow Control Can Be Accomplished By Controlling All Of The Sources At The Same Time Or Separately. The Proposed Converter Structure Has Four Switching Devices That Are Independently Controlled By Different Duty Ratios. The Operation Of The Converter Is Divided Into Three Modes, Performance Analysis Of The Converter In All The Three Operating Modes Is Presented In Detail For The Continuous Conduction Mode. Stability Analysis Is Carried Out For The Converter For All The Three Operation Modes And Design Aspects Are Also Clearly Described. The Performance Of The Converter Is Validated Through Simulation And Experimental Results. The Hardware In Loop (Hil) Environment Of The Opal Rt-5700 Simulator Is Used To Obtain The Experimental Results.

Keyword: Dc-Dc Boost Converter

PRINCIPAL
dra Ganesan College of Engineering
iG Valley, Madurai Main Road
Manikandam, Trichy-820 012

143. An Integrated Parameter Identification Method Of Asynchronous Motor CombinedWith Adaptive Load Characteristics

Mr.S. Vijay [1] Praveen Raj R [2] , Rajasekaran Nv [3]
[1] Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

The Existing Asynchronous Motor Parameter Identification Methods Only Identify The Parameters Of The Asynchronous Motor Itself, Ignoring The Identification Of The Parameters Of The Load Carried By The Asynchronous Motor. This Paper Proposes An Integrated Parameter Identification Method Of The Asynchronous Motor That Uses The Improved Pso (Particle Swarm Optimization, Pso) And Considers The Load Adaptive Characteristics. Compared With The Traditional Method, This Method Firstly Combines The Pso Method With Space Disturbance (Sd) To Form An Improved Pso Method, Which Prevents The Pso From Falling Into A Local Optimal State And Enhances The Global Optimization Ability Of The Pso Method. Secondly, According To The Characteristics Of Different Loads, A Load Identification Strategy Is Constructed. This Strategy Can Judge The Type Of Load Carried By The Asynchronous Motor, Which Reduces The Optimization Exploration Space Of The Pso Algorithm And Accelerates The Optimization Speed Of The Pso Algorithm. Finally, According To The Identified Load Types, The Improved Particle Swarm Optimization Algorithm Combined With The Spatial Disturbance Is Used ToRealize The Integrated Identification Of The Asynchronous Motor And The Load Parameters. The Validity Of The Algorithm Is Verified By An Example, And The Factors Affecting The Identification Accuracy Are Analyzed.

Keyword: Particle Swarm Optimization, Adaptive Load Characteristics

144. Loss Prediction Of Vehicle Permanent Magnet Synchronous Motor Based On DeepLearning

Mr.K.Seetharaman[1] Revathi P[2] , Rishon Guru .M [3]
[1] Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

Based On The Deep Learning Bp Neural Network Algorithm, We Establish The Electromagnetic Torque And Loss Prediction Analysis Model Of Permanent Magnet Synchronous Motor To Provide New Design Ideas And Methods For Optimizing Motor Structure Design. In This Paper, Four-Rotor Structure Parameters Which Are Rib, Air Gap, Magnet Thickness And Magnet Width, Motor Electromagnetic Torque, And Motor Losses Of The "V" Type Interior Permanent Magnet Synchronous Motor Are Selected As The Research Object. The Bp Neural Network Structure Prediction Model With 2 Visible Layers And 2 Hidden Layers Was Built By 256 Groups Of Sample Data Calculated By Maxwell Transient Electromagnetic Simulation. 226 Out Of 256 Randomly Selected Data Samples Were Used To Train The Prediction Model, And 30 Groups Were Used ToTest The Accuracy And Generalization Ability Of The Prediction Model. And The Prediction Results Data Were Compared With The Deep Learning Prediction Model Through Finite Element Simulation Data.

Keyword: Deep Learning, Pmsm

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-8 1 0 . 2

145. Design And Optimization Of A Magnetic Coupling Structure With High Anti-OffsetFor Wireless Power Transfer

Mr.K.Seetharaman[1] Santhosh .K [2] ,Srikumar Ms [3]
[1] Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

As The Power Transfer Efficiency (Pte) Is Rapidly Reduced Due To The High Offset Between The Transmitter And The Receiver In The Wireless Power Transfer (Wpt) System, A Bidirectional Staggered Solenoid Structure (Bsss) With High Anti-Offset Performance Was Proposed In This Paper. Firstly, The Factors That Affect The Pte Are Analyzed By Establishing A Mathematical Model Of The Magnetic Coupling Structure. Secondly, A Parameter Optimization Method For The Traditional Flat Solenoid Coil (Fsc) Is Proposed, Which Reduces The Volume Of The Magnetic Core Without Reducing The Anti-Offset Ability. Then, The Anti-Offset Performance Of The Optimized Magnetic Coupling Structure Is Analyzed And Compared With The Square, The Circle, And The Dd (Double D) Coils Structure By Three-Dimensional (3-D) Finite Element Analysis (Fea). Finally, The Anti-Offset Performance Of The Structure Is Verified By A S/S Compensated Wpt Prototype. The Pte Is Still High When The Power Transfer Distance (Ptd) Is 164 Mm. When The Offset Distance In X And Y Directions Increases From 0 To 150 Mm, Pte Only Decreases By 2.62% And 3.71%, Respectively.

Keyword: Magnetic Coupling, Wireless Power Transfer

146. A Nine-Level Switched-Capacitor Step-UpInverter With Low Voltage Stress

Mr.K.Seetharaman[1] Sri Logesh Ms [2] , Subha T [3]
[1] Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

This Paper Proposes A Nine-Level Switched-Capacitor Step-Up Inverter (9lsui) Which Can Achieve A Quadruple Voltage Gain With Single Dc Source. Differing From Other Switched- Capacitor Inverters, The Voltage Stress Of Switches Is Effectively Reduced Due To The Elimination Of H-Bridge, And The Peak Inverse Voltage Of All Switches Is Kept Within 2vdc. In Addition, The Proposed Inverter Is Able To Integrate Inductive Load, And The Capacitor Voltage Self-Balancing Can Be Achieved Without Any Auxiliary Circuits. Moreover, The Topology Structure Can Be Flexibly Extended To Raise The Output Levels, And The Peak Inverse Voltage Of Switches Can Remain Constant With The Increase Of Sub-Modules In The Extended Structure. Comprehensive Comparisons Are Performed To Verify The Outstanding Advantages Of The Proposed Inverter. Finally, The Steady-State And Dynamic Performance Of The Proposed Inverter Is Validated Through An Experimental Prototype, And The Experimental Results Are Provided To Prove The Theoretical Analysis.

Keyword: Nine Level Capacitor, Step Up Inverter, Voltage Stress

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

151. Review Of Methods For Reducing CirculatingCurrents In Parallel Connected Modular Inverters

Mr.D. Praveen Sangeeth Kumar[1] Deepika G [2] , ,Rajasekaran Nv [3]

[1]Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

Parallel-Connected Modular Inverters Are Widely Used In High-Power Applications To Increase The Power Capacity Of The System. These Modular Inverters Offer Convenient Maintenance And An Adjustable Power Rating. However, When The Inverters Share A Common Dc Source And Ac Bus, A Circulating Current Is Generated, Which Causes Output Current Distortion And System Power Losses. These Harmonic Components Of Circulating Current Influence The Inverter Life Cycle, And It Can Limit The Power Rating Of The Total Parallel-Connected Inverter. This Study Analyzes The Circulating Current According To Its Causes And Reviews The Reduction Methods. The Reduction Methods For Modular Inverters Are Compared In Terms Of Efficiency, Performance, And Reliability. The Possible Approaches For Circulating Current Reduction Are Categorized Into Three Groups–Hardware, Control, And Modulation. Each Reduction Method Is Discussed According To The Category. Finally, The Performance Of The Methods Is Analyzed, And Their Advantages, Disadvantages, And Prominent Features Are Highlighted.

Keyword: Modular Inverters, Parallel Connected Inverter

152. Decentralized Multiple Control For DcMicrogrid With Hybrid Energy Storage

Mr.D. Praveen Sangeeth Kumar[1] Ezhumalai A [2] ,Revathi P [3]

[1]Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

For A Microgrid With Hybrid Energy Storage System , Unreasonable Power Distribution, Significant Voltage Deviation And State-Of-Charge (Soc) Violation Are Major Issues. Conventionally, They Are Achieved By Introducing Communication Into Centralized Control Or Distributed Control. This Paper Proposes A Decentralized Multiple Control To Enhance The Performance Of The System. A Low-Pass Filter Based On Droop Control Is Applied To Battery Energy Storage System (Bess), And A Low-Pass Difference Filter Based On Proportional-Integral (Pi) Voltage Regulation Is Employed For Supercapacitor (Sc). The Cooperation Between Them Realizes Power Distribution, In Which The Average Power Is Compensated By Bess And The High-Frequency Fluctuation Is Suppressed By Sc. Meanwhile, The Voltage Deviation Is Diminished Through Mode Re-Division. Considering The Soc Imbalance Of Besss And Soc Violation Of Sc, Current Correction And Voltage Compensation Methods Based On Local Information Are Proposed To Optimize The Current Sharing Of Besss And Ensure The Availability Of Sc, Respectively. The Advantage Of Voltage Compensation Is That, The Sc Is Still Available In Process Of Soc Recovery. The Simulation Model Is Established On The Matlab/Simulink Environment And The Feasibility Of Proposed Strategy Is Verified By Simulation Analysis In Different Scenarios.

Keyword: Battery Energy Storage System, Microgrid, Simulink

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

153. Novel Railway Power Feeding System Using Converter For High-Feeding CharacteristicsIn Ac Railway System

Mr.A. Richards Rethinasamy[1] Gayathri .S [2] , Rishon Guru M [3]

Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

An Electric Power Feeding System In An Ac Railway System Is Supplied Via A Three-Phase Power Grid, And It Converts The Supply Into Two Single-Phase Ac Using A Scott Transformer. Generally, The Transmission And Distribution System Is A Three-Phase Balanced Load, Whereas The Ac Railroad Load Is A Large-Capacity Single-Phase Load. The Power Feeding Method Using The Existing Scott Transformer Cannot Compensate For The Low Voltage, Which Is Occurred By The Large Load Current, On The Secondary Side Of The Substation. It Is A Disadvantage Because The Parallel Feeding Method Cannot Be Applied Due To The Occurrence Of A Circulation Current. To Address This Problem, There Is An Urgent Need To Develop Improved Technology For Existing Ac Electric Railway Power Supply Systems. Recently, With The Development Of Igbt Power Switching Devices, There Have Been Many Changes In The Power Conversion Method, And The Development Of A Modular Multi-Level Power Conversion System Has Facilitated Operating The System More Efficiently And Dynamically Than Before. This Study Proposes A Dynamic Railway Substation Power Feeding Method Using A New Modular Multi-Level Converter. It Examines The Feasibility Of The New Power Feeding System Via A Comparative Analysis With The Scott Transformer Power Feeding System, Which Is An Existing Ac Electric Railway Feeding System.

Keyword: Igbt Power Switching, Converters, Ac Railway System

154. Linear Control Gain For Synthetic Inertia OfA Pmsg-Based Wind Turbine Generator

Mr.A. Richards Rethinasamy[1] Keerthana [2] .S,Santhosh K [3]

Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract

This Paper Proposes A Synthetic Inertia Control (Sic) Scheme For A Permanent-Magnet Synchronous Generator-Based Wind Turbine Generator (Wtg). The Proposed Sic Scheme Uses Only The Frequency Deviation Loop Operating In Conjunction With The Maximum Power Point Tracking Loop. To Improve The Frequency Nadir While Preventing Over-Deceleration Of A Wtg, The Proposed Scheme Employs A Variable Control Gain For The Frequency Deviation Loop, Which Varies Linearly With The Rotor Speed. In The High-Rotor-Speed Region, The Gain Is Set To Be HighSo That The Frequency Nadir Can Be Improved. In The Low-Rotor-Speed Region, The Gain Decreases With The Rotor Speed So That Over-Deceleration Can Be Prevented While Improving The Frequency Nadir. To Investigate The Efficacy Of The Proposed Gain, Simulation Case Studies Are Conducted In The Modified Ieee 14-Bus System Under Varying Wind Speeds And Event Sizes. Simulation Results Indicate That The Proposed Scheme Successfully Improves The Frequency Nadir While Preventing Over-Deceleration Of The Rotor Speed By Varying The Control Gain In A Linear Manner With The Rotor Speed.

Keyword: Linear Control Gain, Wind Turbine

147. An Improved Differential Buck Circuit WithPower Decoupling

Mr.S.Ponmathi Rajithkumar[1] Valarmathi C [2] ,Viswanath R [3] [1]
Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

Single-Phase Inverters Have Inherent Double Frequency Problems, Which Are Likely To Cause System Instability. In This Paper, It Does Not Add Additional Switching Devices While Retaining The Four Switching Devices Of The H-Bridge. This Topology Only Needs To Split The Original Filter Capacitor On The Ac Side Into Two Symmetrical Connections And Can Cancel Additional Dc SideSupport Capacitors. For This Topology, The Fundamental Frequency Common-Mode VoltageInjection Is Used To Avoid Additional Low-Frequency Harmonics Derived From The Dc Side. Theoretical Analysis And Experiment Explain The Working Principle Of The Topology. And The Superiority Of This Topology Is Explained In Terms Of Decoupling Accuracy And The Number Of Switches. The Result Proves That This Topology Can Effectively Buffer The Double Frequency Of The System Without Additional Switching Devices.

Keyword: Buck Converter, Low Frequency Harmonics

148. Method Of Identifying Buck Converter LoadWithout Load Current Measurements

Mr.S.Ponmathi Rajithkumar[1] Valarmathi C [2] , Sanjeev Kumar R [3]
[1] Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

This Paper Proposes A Novel Method To Identify The Load Without Measuring The Load Current. The Variation Of Load Current In The Buck Converter Affects The Feedback Performance Of The Converter, Influencing The Maintenance Of Steady Output Voltage. To Ensure The Long-Period And High-Stability Operation Of The Buck Converter. This Paper Investigates The Monitoring Of Load Changes Without Extra Measurement Sensors In The Original Topology. This Method Mainly Utilizes Load Regulation Characteristics In The Buck Converter Load Regulation. When It Is Necessary To Monitor The Load Condition, The "Plug-In" Observer Will Be Connected In Parallel With The Load. Thus The Load Can Be Identified By Measuring The Voltage And Bypass Current Through The External Observer. Compared With Existing Identification Methods For Converter Load, This Method Avoids Measuring The Internal Parameters And Variables Inside The Converter But Only Measures The Output Voltage And Bypass Current On The Output Side. The Identification Values Can Also Be Applied To Determine The Operating Status Of The Converter And Further Predict The Possible Fault And Failure Aroused From The Load. In Conclusion, Simetrix Simulations And Experiments For Three Switching Converter Products Under Different Power Levels Can Validate The Proposed Method.

Keyword: Buck Converter, Simetrix Simulation

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

149. On-Resistance Monitoring Method Using Active Voltage Vectors In Three-Phase Voltage Source Inverters

Mr.S.Ponmathi Rajithkumar[1] Arul Joy Asha A[2] .Pavitra S [3]
[1]Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

On-Resistance Of The Switching Devices Is An Aging Indicator. Through Monitoring On- Resistances, The Lifetime Of The Switching Devices Can Be Checked. This Paper Proposes An Online On-Resistance Monitoring Method Using Active Voltage Vectors In A Three-Phase Voltage Source Inverter. In This Paper, The A And B Values Of Active Voltage Vectors Considering The On- Resistance Are Examined. Based On These Analyses, On-Resistances Are Estimated By Combining The A And B Values Of Active Voltage Vectors According To The Switching State. The Advantage Of This Paper Is That On-Resistances Can Be Monitored During The Operation Of The Inverter And Two Additional Voltage Sensors Are Required To Estimate The Six Switches. Also, The Proposed Technique Can Detect A Moment When An Open Accident Is Imminent By Catching The Relative Rise In The On-Resistances. The Performance Of The Proposed Method Is Verified Through Simulations And Experiments.

Keyword: Voltage Source Inverter, On-Resistance Monitoring

150. Design And Examination Of Electrified Exhaust Brake System Using Direct Current Motor

Mr.D. Praveen Sangeeth Kumar[1] Bharthasarathi [2] , M,Praveen Raj R [3][1]Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

Vehicle Systems For Safety And Driver Convenience Are Being Installed Worldwide. In Particular, In The Case Of A Large Vehicle Accident, Various Safety Devices Are Applied To Avoid Risks To Human Life And Property. Among These Systems, The Most Basic Are Electric Braking Systems, Lane Departure Warning Systems, Lane-Keeping Assistance Systems, And Drowsiness Prevention Devices. In Particular, A Device To Improve The Braking Performance Of Large Vehicles To Prevent Accidents Is Important. Auxiliary Brakes Are Used To Prevent The Frequent Use Of The Main Brake And Share The Braking Force In Large Vehicles. If The Main Brake Is Used Excessively, Braking Power Loss, Such As Vapor Lock, May Occur. Therefore, It Is Essential To Install An Auxiliary Brake For Large Vehicles. There Are Several Auxiliary Brakes; However, Structurally Simple Exhaust Brakes Are The Most Commonly Used. Pneumatic Actuators Are Used To Operate The Existing Exhaust Brakes And Additional Parts Are Used To Create Pressure; Therefore, It Is Necessary To Develop Electric Exhaust Brakes. Electric Exhaust Brakes Can Reduce Weight And Cost By Removing Modules And Additional Parts. In This Study, TheElectrified Exhaust Brake System Was Improved Compared With The Existing Pneumatic Actuator.

Keyword: Brake System Using Dc Motor

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam. Trichy-620 012

155. Deep Learning Based A New Approach For Power Quality Disturbances ClassificationIn Power Transmission System

Mr.A. Richards Rethinasamy[1] Madhumitha.S [2] , Srikumar Ms [3]

[1]Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

Power Quality Is One Of The Most Important Research Eras For The Energy Sector. Suddenly Dropped Voltages Or Suddenly Rising Voltages And Harmonics In Energy Should Be Identified. All Of These Distortions Are Called Power Quality Disturbances (Pqds). Deep Learning Based Convolutional Artificial Neural Networks With An Attention Model Approach Has Been Carried Out. The Main Idea Is To Develop A New Approach To Convolutional Neural Network (Cnn) Based Which Classifies A Particular Power Signal Into Its Respective Power Quality Condition. The Attention Model Approach Is Based On The Idea That The Best Solution Will Be Taken From The Newly Produced Data Pool Obtained By Rescaling The Available Data According To The Total Number Of Pixels Before The Average Data Pool Is Created And Then Deep Cnn Processes Will Continue. In The Attention Model Approach, All Data Is Multiplied By The Number Of Elements ByThe Number Of Epoch Time Sixty-Six Tensors.

Keyword: Deep Learning, Power Quality, Neural Network

156. Reactive Power Control Of D-Statcom In APower Grid With Integration Of The Wind Power

Mr. G. Karthick[1] Mekala.M [2] , Srilogesh C [3]

[1] Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

Power Grid Has Numerous Challenges To Keep The System Stable, Particularly With The Appearance Of Renewable Energy Generation. With The Aim Of Utilizing The Natural Environment And Saving The Operating Costs Of Generation. The Reactive Or Voltage Control In The Distribution System Becomes Essential. Wind Turbines Using Frequency Converters Are Generally Suitable To Control Reactive Power. To Zero Or Potential To Supply Or Consume Reactive Power As Needed, Although This Is Limited By The Size Of The Converter. It Is Therefore Important To Use Compensation Devices To Improve The System To Achieve Optimal Operation Is The Solution To Keep The Power System In A Stable State. We Present In This Paper The Impact Of Dstatcom Of—3mvar To 3mvar, 25 Kv For Enhancing The Voltage Stability In 120-Kv, 60 Hz Distribution Networks With 9-Mw Wind Generation Feeding A Variable Load. The Energetic Response Of D-Statcom Is Followed By A Matlab/Simulink, In Which We Can Clearly Detect An Improvement In The Magnitude Of The Load Voltage, Which Was 0.5pu Without Facts.

Keyword: Reactive Power, Statcom, Wind Power

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

157. A Novel Flux-Switching Permanent MagnetMachine With Dual Sets Of Magnet Arrangements

Mr. G. Karthick[1] Praveen Raj R [2] ,Suba T [3]
[1] Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

Flux-Switching Permanent Magnet Machine Has The Advantages Of High-Power Density And High Efficiency. It Has A Wide Range Of Applications In Aerospace And Automotive Fields. But Due To The Doubly Salient Structure Of The Machine, The Machine Has A Large Cogging Torque. In Order To Effectively Improve The Electromagnetic Performance Of The Machine, A Novel 12/10 Flux-Switching Permanent Magnet Machine Is Proposed In This Paper. Radial Magnetized Permanent Magnets Are Arranged On Both Sides Of The Permanent Magnet (Pm) To Reduce The Magnetic Flux Leakage Of The Stator Yoke And Reduce The Torque Ripple By Stator Teeth Chamfering (Pm Side). Firstly, The Cogging Torque Expression Of The Machine Is Derived By Energy Method And Fourier Decomposition Method. Then The Response Surface Model Between The Key Parameters Of The Machine And The Output Torque Is Constructed Based On The Response Surface Method, And The Optimal Parameter Solution Is Obtained By Response Surface Optimization. Finally, An Optimized Two-Dimensional Finite Element Method Is Established. Compared With The Conventional Model, Proposed Model Can Effectively Reduce The Cogging Torque And Improve The Average Torque.

Keyword: Permanent Magnet, Flux, Cogging Torque

158. Characteristics Of Two-Phase Inverter-FedThree-Phase Induction Motor Drive

Mr. G. Karthick[1] Revathi P[2] , Valarmathi Cc [3]
[1] Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:

In Recent Years, Advances In Power Electronics Have Led To An Increase Of Three-Phase Motor Drive Systems Controlled By Three-Phase Inverters. If Inverters Fail To Operate, There Is The Possibility Of A Shutdown Of The Motor Drives. In Specific Applications Such As Electric Vehicles, Inverter Failure Leads To A Loss Of The Vehicle's Propulsion Ability, Causing Safety Issues Like Traffic Accidents And Other Consequences. In Order To Assure Non-Stop Operation, Emergency Strategies For Inverter Failure Are Necessary. Less Costly Two-Phase Inverters Are More Frequently Used As Emergency Support For Conventional Three-Phase Inverters. Recent Research Into Motor Drives Utilizing Two-Phase Inverters Have Developed Advanced Techniques With Different Control Methods. This Paper Compares Performances Of The Two-Phase Inverter- Fed Three-Phase Induction Motor Drive Using V/F Control And Three Indirect Vector Control Methods Are Performed With The Same Experimental Apparatus.

Keyword: Inverter Fed, Induction Motor, V/F Control

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 0

159. Comparative Analysis Of Unbalanced Three-Phase Grid Current Compensation Methods For The Scott Transformer Based Grid

Ms. G.Soundaraya[1] Santhosh [2] ,K, Sanjeev Kumar [3]
[1] Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract: This Paper Proposes Two Control Algorithms To Solve The Three-Phase Power Unbalance Problem In The Scott Transformer-Based Grid, And Two Algorithms Are Power-Based And Current-Based Compensation Method. The Power-Based Compensation Method Uses The Active/Reactive Power At The Load Side For Control, And The Current-Based Compensation MethodUtilizes The Scott Transformer Secondary Current Directly To Eliminate An Effect Of Active/Reactive Power Loss Through The Power Supply Chain. Performance Comparisons For The Two Compensation Methods Are Carried Out Using A Real-Time Simulator And A 3-Level Back-To-Back Converter Prototype With A 5kva Load. From The Experimental Results, Recorded 34.2% Of Unbalance Rate Of The Three-Phase Grid Current Before Compensation Is Reduced To 2.8% By The Power-Based Compensation Method, And 1.2% By The Current-Based Compensation Method. This Study Provides A New Insight Into Developing The Advanced Algorithms Which Improves The Unbalance Of Three-Phase Grid Current In Electric Railway Transportation System.
Keyword: Grid Current, Scott Transformer, Grid

160. Voltage Sensorless Mppt In A DifferentialPower Processing Photovoltaic System

Ms. G.Soundaraya[1] Sri Logesh Ms [2] , Subha T [3]
[1] Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract:A Differential Power Processing (Dpp)-Based High-Efficiency Photovoltaic System That UsesAn Effective Duty Technique In Place Of Voltage Sensors Is Presented In This Paper. However, There Is A Disadvantage That The Number Of Devices Increases. Therefore, This Paper Proposes The Effective Duty Technique That Can Reduce The Number Of Devices WhileUsing The Dpp Structure. In The Effective Duty Technique, The Voltage Sensor For Maximal Power Point Tracking (Mppt) Is Eliminated, And The Voltage For Implementing The P&O Algorithm Calculated Using Only Measurements From The Current Sensor. A Small-Capacity Photovoltaic System Was Constructed For The Simulation And Experiment. The SimulationResults Confirm That The Effective Duty Technique Has The Same Performance As The Experimental Results Confirm That The Mpp CorrespondingTo Each Irradiance Amount Under Changing Irradiance Conditions Was Tracked Successfully With Almost The Same Performance As Mppt Control Using Voltage And Current Sensors.
Keyword: Sensorless Mppt,Pv System

161. SafetyAnalysis Of Smart Grid LinesAccording To Dc Arc Generation

Ms. G. Soundaraya[1] Valarmathi C [2] Viswanath R T [3]
[1] Assistant Professor, [2,3] Ug Students

[123]indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract: Electric Current Flows Into The Installation And There Is A Risk Of Electric Shock, Which Can Cause Fire, Damage To Solar Power Generation Facilities, Cause Large-Scale Property Damage,And Cause Serious Human And Property Damage. Therefore, Not Only The Performance Of New And Renewable Energy Facilities Applied To Low Voltage Dc (Lvdc) And Smart Grid Lines, But Also Accidents And Fires Caused By Arcing, And Safety Of Facilities Are Emphasized. As A Result, Many Pv Power Companies In The United States, Germany, And Japan Are Focusing On Safety- Focused Solutions To 'Rapid Shutdown' And Innovation Of Inverter Technology To Meet Arc- Fault Detection Requirements. The Safety Of Many Accidents, Failures, And Fires Occurring In Lvdc And Smart Grid Lines Is Currently Important In The Field Of New And Renewable Energy. Finally In The Event Of An Arc Occurrence
Keyword: Smart Grid, Arc Generator

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

162. Revisiting Link Prediction On Heterogeneous Graphs With A Multi-View Perspective

[1]Mrs. Kavitha N, It, Professor
[2]Hariharan S, It, Ug Student

Abstract:

This research revisits link prediction on heterogeneous graphs, adopting a multi-view perspective. Heterogeneous graphs, which contain diverse types of nodes and edges, pose unique challenges for link prediction. The study focuses on leveraging multiple views of the heterogeneous graph to enhance the accuracy of link prediction models.The proposed approach involves representing the heterogeneous graph from different perspectives or views, capturing distinct structural and semantic information. Through the integration of multi-view representations, the research aims to improve the robustness and effectiveness of link prediction algorithms. Evaluations and comparisons are conducted to assess the performance of the multi-view perspective in link prediction on heterogeneous graphs.The outcomes of this research contribute to the advancement of link prediction techniques, particularly in the context of heterogeneous graphs, by adopting a multi-view approach that leverages diverse information sources for enhanced prediction accuracy.

Keywords: Link Prediction, Heterogeneous Graphs, Multi-view Perspective, Graph Mining, Network Analysis, Structural and Semantic Information, Prediction Accuracy.

163. Multimodal Peripheral Alert To Improve Teaching-Learning For Blended Classroom

[1]Mr. Devan D P, It, Associate Professor   [2]Anitha G, It, Ug Student

Abstract:

This research introduces a Multimodal Peripheral Alert system designed to enhance teaching and learning in a blended classroom environment. Blended learning combines traditional face-to-face instruction with online and digital resources. The study focuses on improving the engagement and awareness of both teachers and students through a multimodal alert system that provides peripheral notifications.The proposed system employs various modes of communication, such as visual cues, auditory signals, and haptic feedback, to deliver alerts related to important events, deadlines, or interactions in the blended classroom. Through user studies and evaluations, the research assesses the impact of the Multimodal Peripheral Alert system on user attention, information retention, and overall classroom experience.The outcomes of this research contribute to the design of innovative tools for blended learning environments, providing a multimodal alert system that enhances communication and engagement between teachers and students in a technologically enriched classroom setting.

Keywords: Multimodal Peripheral Alert, Blended Classroom, Teaching-Learning Enhancement,Engagement, Classroom Technology, User Studies, Information Retention,

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

168.Endura : Enhancing Durability Of Multi Level Cell Stt-Ram Based Non Volatile Memory Last Level Caches

[1]Mrs. Padma Devi A, It, Assistant Professor [2]Mukesh Kanna S, It, Ug Student

Abstract:

This Research Introduces Endura, A Technique Aimed At Enhancing The Durability Of Multi- Level Cell (Mlc) Spin-Transfer Torque Random Access Memory (Stt-Ram) Based Non- Volatile Memory (Nvm) In Last Level Caches (Llcs). Mlc Stt-Ram Offers High Storage Density But Faces Challenges Related To Durability, Especially In Write-Intensive Applications Like Llcs. The Study Focuses On Mitigating Endurance Issues By Employing Advanced Techniques In The Management And Utilization Of Mlc Stt-Ram.The Proposed Endura Technique Involves Wear Leveling, Error Correction Mechanisms, And Efficient Data Placement Strategies To Ensure Uniform Usage Of Memory Cells And Reduce The Impact Of Write Cycling On Durability. Through Simulations And Evaluations In Realistic Workload Scenarios, The Research Assesses The Effectiveness Of Endura In Enhancing The Durability And Reliability Of Mlc Stt-Ram In Llcs.The Outcomes Of This Research Contribute To The Optimization Of Nvms In Llcs, Providing A Robust Technique That Improves The Durability Of Mlc Stt-Ram And Extends Its Lifespan In Write-Intensive Applications.

Keywords: Endura, Multi-Level Cell Stt-Ram, Non-Volatile Memory, Last Level Caches, Durability, Wear Leveling, Error Correction, Data Placement Strategies, Write-Intensive Applications.

169.Hardware Trojan Mitigation For Securing On-Chip Networks From Dead Flit Attacks

[1]Mrs. Uthra Devi K, It, Associate Professor
[2]Santhiya K, It, Ug Student

Abstract:

This research addresses the security concern of Dead Flit Attacks in on-chip networks an proposes a Hardware Trojan Mitigation strategy to enhance network security. Dead Flit Attacks involve injecting intentionally delayed or stalled flits into the network, causing performance degradation and potential vulnerabilities. The study focuses on leveraging hardware-level mitigation techniques to prevent and detect Dead Flit Attacks, ensuring the integrity and reliability of on-chip networks.The proposed mitigation strategy involves implementing monitoring mechanisms, error detection circuits, and countermeasures at the hardware level to identify and mitigate the impact of Dead Flit Attacks. Through simulations, fault injection experiments, and performance evaluations, the research assesses the effectiveness of the Hardware Trojan Mitigation approach in securing on- chip networks from the threat of Dead Flit Attacks.The outcomes of this research contribute to the development of robust security measures for on- chip networks, providing a hardware-based solution to mitigate the impact of Dead Flit Attacks and enhance the overall security posture of integrated circuits.

Keywords: Hardware Trojan Mitigation, On-chip Networks, Dead Flit Attacks, Network Security, Fault Injection, Hardware-level Countermeasures, Error Detection Circuits.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

170. Runtime Detection Of Time-Delay Security Attack In System-On-Chip

[1]Ms. Pushpalatha B, It, Assistant Professor

[2] Saranya C, It, Ug Student

Abstract:

This research addresses the runtime detection of time-delay security attacks in System-on-Chip (SoC) architectures. Time-delay attacks can compromise the security of cryptographic implementations by exploiting variations in execution time. The study focuses on developing detection mechanisms to identify such attacks during runtime, enhancing the overall security of SoC systems.The proposed approach involves monitoring the execution time of cryptographic operations and employing anomaly detection techniques to identify deviations indicative of time-delay attacks. Through simulations, experiments, and performance evaluations, the research assesses the effectiveness of the runtime detection mechanism in identifying and mitigating time-The outcomes of this research contribute to the advancement of security measures for SoC architectures, providing a runtime detection solution that enhances the resilience of cryptographic implementations against time-delay attacks.

Keywords: Runtime Detection, Time-Delay Security Attacks, System-on-Chip, Cryptographic Implementations, Anomaly Detection, Security Measures.

171. Wibs: A Modular And Scalable Wireless Infrastructure In A Cycle-Accurate Noc Simulator

[1]Mrs. Kavitha N, It, Professor   [2]Lisha Y, It, Ug Student

Abstract:

This research introduces WiBS, a Modular and Scalable Wireless Infrastructure implemented in a Cycle-Accurate Network-on-Chip (NoC) Simulator. WiBS addresses the need for flexible and realistic wireless communication modules within NoC simulators to evaluate the performance of on-chip wireless networks. The study focuses on modularity and scalability, enabling the integration of WiBS into diverse NoC simulation environments.The proposed WiBS infrastructure includes components for wireless channel modeling, transceiver modeling, and protocol stack integration. Through extensive simulations and evaluations, the research assesses the accuracy, scalability, and flexibility of WiBS in diverse NoC scenarios.The outcomes of this research contribute to the improvement of NoC simulators by providing a modular and scalable wireless infrastructure that enhances the realism and accuracy of on-chip wireless communication simulations.

Keywords: WiBS, Wireless Infrastructure, NoC Simulator, Modular and Scalable, On-Chip Wireless Networks, Cycle-Accurate Simulation, Wireless Channel Modeling, Transceiver Modeling, Protocol Stack Integration.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

172. Cost-Effective Distributed Edge Vehicle Selection For Multi-Tier Video Streaming OverVehicular Network

[1]Mr. Devan D P, It, Associate Professor

[2]Pakkiyalakshmi A, It, Ug Student

Abstract:

This research addresses the cost-effective distributed edge vehicle selection for multi-tier video streaming over a vehicular network. The increasing demand for high-quality video streaming in vehicular environments requires efficient mechanisms for selecting edge vehicles to enhance the

streaming experience. The study focuses on developing a distributed and cost-effective approach for vehicle selection to optimize video delivery in a multi-tier vehicular network.
The proposed method involves considering factors such as network cost, vehicle proximity, and streaming capabilities to select edge vehicles dynamically. Through simulations and performance evaluations, the research assesses the effectiveness of the distributed edge vehicle selection approach in improving video streaming quality while minimizing the overall cost.
The outcomes of this research contribute to the optimization of video streaming in vehicular networks, providing a cost-effective and distributed solution for edge vehicle selection to meet the diverse requirements of multi-tier video streaming applications.

Keywords: Cost-Effective, Distributed Edge Vehicle Selection, Multi-Tier Video Streaming, Vehicular Network, Streaming Quality, Network Cost, Proximity, Streaming Capabilities.

173. Wcn : An Energy Efficient Negotiation Based Localization Algorithm For Large Scale SensorNetwork

[1]Mrs. Saroja Devi S, It, Assistant Professor

[2]Mohamed Riyaj Khan M, It, Ug Student

Abstract:

This research presents WCN, an energy-efficient negotiation-based localization algorithm designed for large-scale sensor networks. Localization is a crucial aspect of sensor network operations, and energy efficiency is paramount for extending the network's lifespan. The study focuses on developing a negotiation-based approach that enables sensors to collaboratively determine their positions while minimizing energy consumption.The proposed WCN algorithm involves sensors engaging in negotiations to exchange information and refine their localization estimates. Through simulations and performance evaluations in large-scale sensor networks, the research assesses the effectiveness of WCN in achieving accurate localization while conserving energy.The outcomes of this research contribute to the optimization of localization techniques in sensor networks, providing an energy-efficient solution that is well-suited for large-scale deployments.

Keywords: WCN, Localization Algorithm, Energy Efficiency, Sensor Network, Negotiation-Based, Large-Scale, Localization Estimates.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

174. Computation Of Optimal Trajectory For Mobile Data Collectors In Iot Networks

[1]Ms. Nancy V, It, Associate Professor   [2]Sankar C, It, Ug Student

Abstract:

This research addresses the computation of optimal trajectories for mobile data collectors in Internet of Things (IoT) networks. Mobile data collectors play a crucial role in efficiently gathering information from distributed IoT devices. The study focuses on developing algorithms and methods to compute optimal trajectories for these collectors, considering factors such as energy efficiency, data collection requirements, and network connectivity.The proposed approach involves formulating optimization problems to determine the trajectories that minimize energy consumption, reduce latency, or maximize data collection efficiency. Through simulations and performance evaluations in diverse IoT scenarios, the research assesses the effectiveness of the computed optimal trajectories in enhancing the overall performance of mobile data collectors in IoT networks.The outcomes of this research contribute to the advancement of data collection strategies in IoT environments, providing algorithms and techniques for computing optimal trajectories that align with specific goals and requirements in diverse IoT applications.

Keywords: Optimal Trajectory, Mobile Data Collectors, IoT Networks, Optimization, Energy Efficiency, Data Collection, Network Connectivity.

175. Load Profile Oriented Balanced Cluster Assignment In 5g Iot Based Sensor Network

[1]Mrs. Padma Devi A, It, Assistant Professor
[2]Thiruppathi S, It, Ug Student

Abstract:

This research introduces a Load Profile-Oriented Balanced Cluster Assignment (LPBCA) strategy tailored for 5G Internet of Things (IoT) sensor networks. Effective cluster assignment is crucial in optimizing the performance of IoT networks, especially in the context of 5G connectivity. The study focuses on developing a load profile-oriented approach for cluster assignment, considering the dynamic nature of loads in IoT applications.The proposed LPBCA algorithm involves assessing the load profiles of sensor nodes and strategically assigning them to clusters to achieve load balancing. Through simulations and performance evaluations in 5G IoT scenarios, the research assesses the effectiveness of LPBCA in enhancing load distribution, energy efficiency, and overall network performance.The outcomes of this research contribute to the optimization of cluster assignment strategies in 5G IoT sensor networks, providing a load profile-oriented approach that adapts to varying workloads and enhances the efficiency of data gathering and communication.

Keywords: Load Profile-Oriented, Balanced Cluster Assignment, 5G IoT, Sensor Network, LoadBalancing, Energy Efficiency, Network Performance.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

176. Text_Minor At Checkthat! 2022: Fake News Article Detection Using Robert

[1]Mrs. Uthra Devi K, It, Associate Professor
[2]Swetha K, It, Ug Student

Abstract:

This research presents Text_Minor, a system developed for the CheckThat! 2022 challenge, focusing on fake news article detection using RoBERTa (Robustly optimized BERT approach) as the underlying model. The CheckThat! challenge aims to evaluate systems for the detection of misinformation in multilingual content. The study focuses on leveraging the powerful language representation capabilities of RoBERTa for effective fake news detection.The Text_Minor system involves fine-tuning RoBERTa on a labeled dataset, incorporating pre- processing techniques, and optimizing the model for the specific task of fake news detection. Through evaluations on the CheckThat! dataset, the research assesses the performance of Text_Minor in terms of precision, recall, and F1 score.The outcomes of this research contribute to the development of effective tools for fake news detection, showcasing the application of state-of-the-art language models like RoBERTa in addressing the challenges posed by misinformation in multilingual content.

Keywords: CheckThat! 2022, Fake News Detection, RoBERTa, Language Models, Misinformation, Text_Minor.

177. Securing On-Chip Interconnect Against Delay Trojan Using Dynamic Adaptive Caging

[1]Ms. Pushpalatha B, It, Assistant Professor [2]Vijay Joseph P, It, Ug Student

Abstract:

This research addresses the security concern of Delay Trojan attacks in on-chip interconnects and proposes a Dynamic Adaptive Caging strategy to enhance network security. Delay Trojans involve introducing intentional delays in interconnects, causing performance degradation and potential vulnerabilities. The study focuses on leveraging a dynamic adaptive caging mechanism to prevent and detect Delay Trojan attacks, ensuring the integrity and reliability of on-chip communication.The proposed strategy involves dynamically adjusting interconnect parameters, implementing monitoring mechanisms, and deploying adaptive caging to identify and mitigate the impact of Delay Trojan attacks. Through simulations, fault injection experiments, and performance evaluations, the research assesses the effectiveness of the Dynamic Adaptive Caging approach insecuring on-chip interconnects from the threat of Delay Trojan attacks.
The outcomes of this research contribute to the development of robust security measures for on-chip communication, providing a dynamic adaptive caging solution that mitigates the impact of Delay Trojan attacks and enhances the overall security posture of integrated circuits.

Keywords: Delay Trojan Attacks, On-chip Interconnects, Dynamic Adaptive Caging, Network Security, Fault Injection, Security Measures, Performance Evaluation.

178. Asner - Annotated Dataset And Baselines For Assamese Named Entity Recognition

[1]Ms. Getsyal A, It, Assistant Professor   [2]Vijayaraj S, It, Ug Student

Abstract:

This research presents AsNER, an annotated dataset, and baselines for Assamese Named Entity Recognition (NER). NER is a fundamental task in natural language processing, and the availability of annotated datasets and baseline models is crucial for advancing research in under-resourced languages like Assamese. The study focuses on creating a valuable resource for the development and evaluation of NER systems in the Assamese language. The AsNER dataset involves manual annotation of named entities in Assamese text, covering various entity types such as persons, locations, organizations, etc. Baseline models are developed using state-of-the-art NER techniques for Assamese. Through evaluations and comparisons, the research assesses the performance of the baseline models on the AsNER dataset. The outcomes of this research contribute to the advancement of NER research in Assamese, providing a benchmark dataset and baseline models that facilitate the development of accurate and effective Named Entity Recognition systems for the Assamese language.

Keywords: AsNER, Named Entity Recognition, Assamese, Annotated Dataset, Baseline Models,Natural Language Processing, Entity Types.

179. Generating Monolingual Dataset For Low Resource Language Bodo From Old Books UsingGoogle Keep

[1]Mrs. Rajeswari S, It, Assistant Professor [2]Tamilselvi M, It, Ug Student

Abstract:

This research presents a methodology for generating a monolingual dataset for the low-resource language Bodo using content extracted from old books and leveraging Google Keep for data curation. Low-resource languages often lack comprehensive datasets for natural language processing tasks, hindering the development of language technologies for these languages. The study focuses on creating a valuable resource for Bodo by extracting and organizing text from.

The methodology involves the digitization of content from old books in the Bodo language, and the curated dataset is stored and organized using Google Keep. Through this process, the research creates a structured and accessible monolingual dataset for Bodo, which can be utilized for various natural language processing tasks. The outcomes of this research contribute to the enrichment of language resources for low- resource languages, demonstrating a practical approach to generate monolingual datasets by leveraging historical content and modern tools like Google Keep.

Keywords: Monolingual Dataset, Low-Resource Language, Bodo, Google Keep, Natural Language Processing, Language Resources, Data Curation.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

180. Dares: Deflection Aware Rerouting Between Subnetworks In Bufferless On-Chip Networks

[1]Mrs. Padma Devi A, It, Assistant Professor [2]Sudhahar S , It, Ug Student

Abstract:

This research introduces DAReS, a Deflection Aware Rerouting strategy for mitigating congestion in bufferless on-chip networks. Bufferless networks offer low-latency communication but are susceptible to congestion, potentially leading to deflections and performance degradation. The study focuses on developing a rerouting mechanism that is aware of deflection occurrences and aims to alleviate congestion in on-chip networks.The DAReS strategy involves monitoring network conditions, detecting potential congestion points, and dynamically rerouting traffic to avoid deflections. Through simulations and performance evaluations, the research assesses the effectiveness of DAReS in mitigating congestion, reducing deflections, and enhancing the overall performance of bufferless on-chip networks.The outcomes of this research contribute to the optimization of communication strategies in bufferless on-chip networks, providing a deflection-aware rerouting mechanism that improves the reliability and efficiency of on-chip communication.
Keywords: DAReS, Deflection Aware Rerouting, Bufferless On-Chip Networks, Congestion Mitigation, On-Chip Communication, Performance Optimization.

181. Securing On-Chip Interconnect Against Delay Trojan Using Dynamic Adaptive Caging

[1]Mrs. Uthra Devi K, It, Associate Professor [2]Gopi U, It, Ug Student

Abstract:

This research addresses the security concern of Delay Trojan attacks in on-chip interconnects and proposes a Dynamic Adaptive Caging strategy to enhance network security. Delay Trojans involve introducing intentional delays in interconnects, causing performance degradation and potential vulnerabilities. The study focuses on leveraging a dynamic adaptive caging mechanism to prevent and detect Delay Trojan attacks, ensuring the integrity and reliability of on-chip communication.The proposed strategy involves dynamically adjusting interconnect parameters, implementing monitoring mechanisms, and deploying adaptive caging to identify and mitigate the impact of Delay Trojan attacks. Through simulations, fault injection experiments, and performance evaluations, the research assesses the effectiveness of the Dynamic Adaptive Caging approach in securing on-chip interconnects from the threat of Delay Trojan attacks.The outcomes of this research contribute to the development of robust security measures for on- chip communication, providing a dynamic adaptive caging solution that mitigates the impact of Delay Trojan attacks and enhances the overall security posture of integrated circuits.

Keywords: Delay Trojan Attacks, On-chip Interconnects, Dynamic Adaptive Caging, Network Security, Fault Injection, Security Measures, Performance Evaluation.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road

182. Deeq: Data-Driven End-To-End Equivalence Checking Of High-Level Synthesis

[1]Ms. Pushpalatha B, It, Assistant Professor [2]Deepa T, It, Ug Student

Abstract:

This research presents DEEQ, a data-driven approach for end-to-end equivalence checking of high-level synthesis in digital design. High-level synthesis (HLS) is a crucial step in the design flow for transforming high-level code into hardware descriptions. Ensuring the equivalence of the synthesized hardware with the original specification is vital. The study focuses on leveraging a data-driven methodology to enhance the efficiency and accuracy of end-to-end equivalence checking in HLS.The DEEQ approach involves capturing and utilizing data patterns from high-level code and the corresponding synthesized hardware to build a comprehensive equivalence checking framework. Through extensive experiments and evaluations, the research assesses the performance of DEEQ in terms of accuracy, speed, and scalability in comparison to traditional equivalence checking methods.

The outcomes of this research contribute to the advancement of equivalence checking techniques in high-level synthesis, providing a data-driven approach that improves the effectiveness and reliability of validating the equivalence between high-level code and synthesized hardware.
Keywords: DEEQ, Equivalence Checking, High-Level Synthesis, Digital Design, Data-driven Approach, Hardware Description, Validation, Accuracy, Speed, Scalability.

183. Hydra: A Near Hybrid Memory Accelerator For Cnn Inference

[1]Mrs. Kavitha N, It, Professor   [2]Irudhayaraj A, It, Ug Student

Abstract:

This research introduces Hydra, a near-hybrid memory accelerator designed for Convolutional Neural Network (CNN) inference. Accelerating CNN inference is essential for real-time applications, and memory plays a crucial role in determining the overall performance. The study focuses on developing Hydra as a memory-centric accelerator that combines aspects of both on-chip and off-chip memory to optimize CNN inference.The Hydra architecture involves a carefully designed memory hierarchy that efficiently manages data movement between on-chip and off-chip memory. Through simulations and performance evaluations using CNN workloads, the research assesses the effectiveness of Hydra in terms of latency, throughput, and energy efficiency compared to conventional memory architectures.The outcomes of this research contribute to the optimization of memory-centric accelerators for CNN inference, providing Hydra as a near-hybrid solution that balances on-chip and off-chip memory resources to enhance the overall efficiency of neural network processing.

Keywords: Hydra, Memory Accelerator, CNN Inference, Near-hybrid Memory, Memory Hierarchy, On-chip Memory, Off-chip Memory, Latency, Throughput, Energy Efficiency.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

184. Modeling And Analysis Of Confluence Attack By Hardware Trojan In Noc

[1]Mr. Devan D P, It, Associate Professor   [2]Janani S, It, Ug Student

Abstract:

This research focuses on the modeling and analysis of the Confluence Attack facilitated by a Hardware Trojan (HT) in Network-on-Chip (NoC) architectures. Confluence attacks involve malicious entities exploiting the confluence point in NoCs to compromise communication and inject false information. The study aims to model and analyze the impact of such attacks, specifically facilitated by Hardware Trojans, on the reliability and security of NoC-based systems.

The research involves developing a comprehensive model to simulate the Confluence Attack and its effects on NoC communication. Through simulations and analyses, the study assesses the potential consequences, including data integrity breaches and compromised system reliability, caused by Hardware Trojan-based Confluence Attacks.The outcomes of this research contribute to the understanding of security vulnerabilities in NoC architectures and provide insights into the potential threats posed by Confluence Attacks facilitated by Hardware Trojans.

Keywords: Confluence Attack, Hardware Trojan, NoC, Modeling, Analysis, Network-on-Chip, Security, Reliability, Communication.

185.A Deadlock-Free And Adaptive Prime Perspective Turn Model For 3d-Mesh Based Networkon-Chips

[1]Mrs. Kavitha N, It, Professor   [2]Dharshini K, It, Ug Student

Abstract:

This research introduces a deadlock-free and adaptive Prime Perspective Turn (PPT) model for 3D-mesh-based Network-on-Chips (NoCs). Deadlocks in NoCs can significantly impact communication performance and system reliability. The study focuses on developing a deadlock-free turn model that adapts to the characteristics of 3D-mesh topologies to enhance communication efficiency.The proposed PPT model involves adaptively selecting turn directions based on the network's condition, avoiding potential deadlocks and improving the overall adaptability of the NoC.Through simulations and performance evaluations, the research assesses the effectiveness of the deadlock-free and adaptive PPT model in terms of minimizing deadlocks and enhancing communication performance in 3D-mesh-based NoCs.The outcomes of this research contribute to the optimization of turn models in 3D-mesh-based NoCs, providing a deadlock-free and adaptive solution that improves the reliability and efficiency of on-chip communication.

Keywords: Deadlock-free, Adaptive, Prime Perspective Turn Model, 3D-mesh, Network-on-Chip, Communication Efficiency, NoC Topology, Performance Optimization.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

186. Fully Dynamic Algorithm For Steiner Tree Using Dynamic Distance Oracle

[1]Mr. Devan D P, It, Associate Professor [2]Janarthanan, It, Ug Student

Abstract:

This research presents a Fully Dynamic Algorithm for Steiner Tree construction utilizing a Dynamic Distance Oracle. Steiner Tree problems involve finding the most efficient network connecting a subset of essential vertices in a graph. The study focuses on developing an algorithm that dynamically adapts to changes in the underlying graph, updating the Steiner Tree efficiently using a Dynamic Distance Oracle. The proposed algorithm involves maintaining a dynamic distance oracle that continuously updates distance information, enabling real-time adjustments to the Steiner Tree as the graph evolves. Through simulations and experimental evaluations, the research assesses the efficiency and adaptability of the Fully Dynamic Algorithm for Steiner Tree construction. The outcomes of this research contribute to the advancement of dynamic algorithms for combinatorial optimization problems, providing a novel approach for Steiner Tree construction that seamlessly adapts to changes in the underlying graph.

Keywords: Fully Dynamic Algorithm, Steiner Tree, Dynamic Distance Oracle, Combinatorial Optimization, Graph Algorithms, Network Construction, Adaptability.

187. Popular Matching In A 3-Uniform 3-Partite Hypergraph

[1]Mrs. Saroja Devi S, It, Assistant Professor [2]Harish R, It, Ug Student

Abstract:

This research addresses the problem of finding a popular matching in a 3-uniform 3-partite hypergraph. Matching problems in hypergraphs play a crucial role in various applications, and determining a popular matching is particularly relevant in scenarios where preferences among hyperedges need to be considered. The study focuses on developing algorithms and approaches to identify a popular matching in the context of 3-uniform 3-partite hypergraphs.

The proposed algorithms involve exploring preferences among hyperedges and determining a matching that is popular based on the defined criteria. Through theoretical analyses and experimental evaluations, the research assesses the effectiveness and computational complexity of the algorithms for finding a popular matching in 3-uniform 3-partite hypergraphs.

The outcomes of this research contribute to the advancement of matching algorithms in hypergraph theory, providing solutions tailored for 3-uniform 3-partite hypergraphs that consider popularity criteria in the matching process.

Keywords: Popular Matching, 3-Uniform 3-Partite Hypergraph, Matching Algorithms, Hypergraph Theory, Computational Complexity, Preference-based Matching.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

188. Topology Aware Cluster Configuration For Minimizing Communication Delay In EdgeComputing

[1]Ms. Nancy V, It, Associate Professor   [2]Sudhahar S, It, Ug Student

Abstract:

This research introduces a Topology-Aware Cluster Configuration strategy designed to minimize communication delay in edge computing environments. Edge computing relies on the efficient configuration of clusters to process and analyze data close to the data sources. The study focuses on developing a topology-aware approach to cluster configuration that optimizes communication patterns and reduces overall latency in edge computing systems.The proposed strategy involves considering the network topology, proximity of edge devices, and data traffic patterns to dynamically configure clusters. Through simulations and performance evaluations in edge computing scenarios, the research assesses the effectiveness of the Topology-Aware Cluster Configuration approach in minimizing communication delay and improving the overall efficiency of edge computing systems.The outcomes of this research contribute to the optimization of cluster configurations in edge computing environments, providing a topology-aware solution that enhances the responsiveness and performance of data processing at the edge.

Keywords: Topology-Aware Cluster Configuration, Edge Computing, Communication Delay, Cluster Optimization, Network Topology, Data Traffic Patterns, Performance Evaluation.

189.A Blockchain-Based Approach For Optimal Energy Dispatch And Fault Reporting In P2pMicrogrid

[1]Ms. Getsyal A, It, Assistant Professor [2]Thiruppathi S, It, Ug Student

Abstract:

This research presents a Blockchain-based approach for optimal energy dispatch and fault reporting in Peer-to-Peer (P2P) Microgrids. Microgrids offer decentralized energy solutions, and optimizing energy dispatch is crucial for efficiency. The study focuses on leveraging Blockchain technology to enhance the energy dispatch process and improve fault reporting mechanisms in P2P Microgrid environments. The proposed approach involves using a Blockchain ledger to record and validate energy transactions, ensuring transparency and security. Smart contracts are employed to automate

The outcomes of this research contribute to the advancement of energy management solutions in Microgrids, providing a secure, transparent, and efficient approach facilitated by Blockchain technology.

Keywords: Blockchain, Energy Dispatch, Fault Reporting, P2P Microgrid, Smart Contracts, Decentralized Energy, Optimization.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

190. Online Network Attack Detection Using Statistical Features

[1]Mrs. Rajeswari S, It, Assistant Professor [2]Robinson Isaiah E, It, Ug Student

Abstract:

This research proposes an Online Network Attack Detection system using statistical features to identify and mitigate malicious activities in real-time. Network security is a critical concern, and detecting attacks promptly is vital for preventing potential damage. The study focuses on developing a system that leverages statistical features extracted from network traffic to detect anomalies and potential attacks as they occur.The proposed system involves continuous monitoring of network traffic, extracting statistical features, and employing machine learning models for real-time attack detection. Through simulations and experiments on diverse attack scenarios, the research evaluates the accuracy and efficiency of the Online Network Attack Detection system.The outcomes of this research contribute to the enhancement of network security, providing a proactive and real-time approach to detect and mitigate online attacks using statistical features and machine learning.

Keywords: Online Network Attack Detection, Statistical Features, Network Security, Anomaly Detection, Machine Learning, Real-time Detection.

191. Tree-Based Group Diffie-Hellman For Subgroup Communication In M2m Networks

[1]Mrs. Padma Devi A, It, Assistant Professor [2]Swetha K, It, Ug Student
Abstract:

This research introduces a Tree-Based Group Diffie-Hellman (TBGDH) scheme tailored for subgroup communication in Machine-to-Machine (M2M) networks. Secure and efficient group communication is crucial in M2M networks, where devices collaborate to achieve common goals. The study focuses on developing a tree-based approach within the Group Diffie-Hellman framework to facilitate secure subgroup communication.The outcomes of this research contribute to the advancement of secure group communication protocols in M2M networks, providing a Tree-Based Group Diffie-Hellman scheme that enhances subgroup communication efficiency while maintaining robust security.

Keywords: Tree-Based Group Diffie-Hellman, Subgroup Communication, M2M Networks, Group Key Management, Security, Communication Overhead, Scalability.

PRINCIPAL
i· dra Ganesan College of Engineering
iG Valley, Madurai Main Road
Manikandam, Trichy-620 012

192. Energy Efficient Approximate Macs

[1]Mrs. Uthra Devi K, It, Associate Professor [2]Tamilselvi M, It, Ug Student

Abstract:

This research proposes an approach for achieving energy-efficient approximate Multiply-Accumulate (MAC) operations, which are fundamental in various signal processing and machine learning applications. Approximate computing techniques aim to trade off precision for energy efficiency, making them suitable for power-constrained environments. The study focuses on developing strategies to approximate MAC operations while minimizing energy consumption.

The proposed approach involves leveraging approximation techniques such as reduced precision arithmetic and algorithmic simplifications to achieve energy-efficient MAC operations. Through simulations and experimental evaluations, the research assesses the trade-offs between energy efficiency and computation accuracy in various application scenarios. The outcomes of this research contribute to the development of energy-efficient computing solutions, providing approaches for approximating MAC operations that can be applied in power-constrained environments without significantly compromising application performance.

Keywords: Energy Efficiency, Approximate Computing, Multiply-Accumulate, MAC Operations, Reduced Precision Arithmetic, Algorithmic Simplifications, Power-Constrained Environments.

193. Daiss: Design Of An Attacker Identification Scheme In Coap Request/Response Spoofing

[1]Ms. Pushpalatha B, It, Assistant Professor [2]Saranya C, It, Ug Student

Abstract:

This research presents DAISS, a novel Attacker Identification Scheme designed to mitigate CoAP (Constrained Application Protocol) Request/Response Spoofing attacks. CoAP is a lightweight communication protocol for constrained devices in the Internet of Things (IoT). Spoofing attacks on CoAP can compromise the integrity and security of IoT applications. The study focuses on developing DAISS as a mechanism to identify and mitigate attackers engaging in Request/Response Spoofing in CoAP environments.

The proposed DAISS involves incorporating cryptographic mechanisms and behavior analysis to detect and identify attackers attempting to manipulate CoAP communications. Through simulations and experimental evaluations, the research assesses the effectiveness of DAISS in identifying attackers and maintaining the integrity of CoAP communication.

The outcomes of this research contribute to the security enhancement of CoAP-based IoT applications, providing a robust Attacker Identification Scheme that addresses the challenges posed by Request/Response Spoofing attacks.

Keywords: DAISS, Attacker Identification Scheme, CoAP, IoT Security, Request/Response Spoofing, Cryptographic Mechanisms, Behavior Analysis.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

194. Analysis On How Executive Search Firms Find The Right Candidates For Leadership Roles

[1]Dr.ThiagarajanProfessor [2]Aarthi V Iimba
[3]Anitha V Ii Mba
Department Of Management Studies Indra Ganesan College Of EngineeringTrichy

Abstract
Recent Years Have Been Characterized By The Increasing Encroachment Into Policy And Academic Debates Of Discourses Describing Knowledge And Weightless Economies And An Associated 'War For Talent'. In This Paper We Argue That These Current Discourses And Their Description Of 'Talent' And The Challenge Of Finding It Fail To Do Full Justice To The Complexities Of Contemporary Elite Labour Markets. We Argue That The Rise Of Executive Search Firms, Headhunters, As Labour Market Intermediaries And Their Tactics For Defining And Managing Contemporary Elite Labour Recruitment Practices Is Too Often Ignored. We Show That Executive Search Firms Control Elite Labour Recruitment Processes Through Two Forms Of Power-Relation: One In The Labour Management Process Where Relations Between Clients And Executive Search Firms AreStructured By Power Resources Constructed Over Time; And One In The Labour Market Itself Where Definitions Of Talent Are Promulgated By Search Firms, Thus Determining Who Does And Does Not Classify As A Talented Individual And Who Is Admitted To The Networks That Provide Access To Elite Executive Positions. Building On Insights From Interviews With Headhunters In Europe We Reveal The Strategies Producing These Positions Of Power And Suggest These Have Led To A Geographically Inscribed, Hierarchical And Exclusive 'New Boys Network' In Elite Labour Markets, Something Which Supersedes The 'Old Boys' Network' Associated With Elite Labour Recruitment In The Past. This Leads Us To Suggest That More Attention Needs To Be Paid To How The Geographies Of Elite Labour Are Affected By Both Discourses That Construct Power Relations And The Role Of Geography As A Resource That Is Empowering But Also Disempowering

195. Study On Employee Engagement Strategies In Information Technology Companies

[1]Prasanna SAssistant Professor
[2]Deepika P.L Ii Mba
[3]Gowsaly.Ki Mba
Department Of Management Studies Indra Ganesan College Of EngineeringTrichy

Abstract

Organizations Today Realize That The Level Of Job Satisfaction Of An Employee Merely Reflects The Superficial Relationship Between The Employee And The Employer. An Engaged Employee Is One Intellectually And Emotionally Bound With The Organization, Which Feels Passionate About Its Goals And Is Committed TowardsIts Values. This Employee Goes The Extra Mile Beyond The Basic Job Requirements. This Article Deals With Two Constructs Relevant To Employees" Organizational Behavior Namely Employee Engagement And Organizational Citizenship Behavior Which Influences The Organization's Performance. The Aim Of The Research Presented In This Paper Is To Investigate Which Among The Drivers Of Employee Engagement Has The Highest Influence On Employee Engagement. 235 Employees Were Surveyed And A Reliable And Standardized Instrument Was Adopted. The Findings Indicated Moderate Level Of Engagement And Ocb Experienced By Employees And Significant Relationship Was Found Between Engagement And Ocb. CurrentCareer Intention, Job Satisfaction, Pay & Benefits, Management, Equal Opportunities, And Organization Citizenship Behavior Had A Significant Influence On Employee Engagement. The Detail Findings And Implications Are Discussed In The Paper. Keywords- Employee Engagement, Organizational Citizenship Behaviour, Information Technology, Job Satisfaction, Organizational Commitment.

196. Study On How Digital Boom Has Changed The Business' Perspective About Marketing

[1]Nivetha K Assistant Professor [2]Arul Prasath V Ii Mba
[3]Vimal Kumar J Ii Mba
Department Of Management Studies Indra Ganesan College Of EngineeringTrichy

Abstract

The Rapidly Emerging Digital Economy Is Challenging The Relevance Of Existing Marketing Practices. And A Radical Redesign Of The Marketing Curriculum Consistent With The Emerging Student And Business Needs Of The 21st Century Is Required. To Remain Relevant To Our Students And To The Ultimate Consumers Of Our Output, Businesses, The Marketing Curriculum Must Evolve With Both The Changing Technological Environment And The Way Marketing Is Perceived By Its Own Academic Architects. After An Overview Of Recent Marketing Trends, This Article Describes The Need For A Fundamental Change In The Teaching Of Marketing In Today's Environment, Performs A Curriculum Audit Of Existing Digital Marketing Initiatives, And Then Details A New Curriculum Reflective Of Marketing In A Digital Age And An Approach To Implement It. Finally, The New Major Is Discussed In The Context Of Specific Challenges Associated With The New Age Of Marketing. The Approach Developed Here Provides Other Universities A Target To Serve As One Measure Of Progress Toward A Curriculum More In Tune With The Emerging Digital Environment.

197. The Impact Of Ifrs Adoption On Financial Reporting Quality.

[1]Karthikeyan B Assistant Professor [2]Perumal Ii Mba
[3]Arun K I Mba
Department Of Management Studies Indra Ganesan College Of EngineeringTrichy

Abstract

The Adoption Of International Financial Reporting Standards (Ifrs) Has Significantly Reshaped The Global Financial Reporting Landscape. This Article Examines The Impact Of Ifrs Adoption On Financial Reporting Quality, Exploring Both Potential Benefits And Challenges. Drawing Upon Relevant Social Science Theories And Empirical Evidence, The Article Analyzes The Effects Of Ifrs On Comparability, Transparency, And Decision-Usefulness Of Financial Statements. It Further Discusses The Challenges Associated With Implementation, Such As Cost Implications, Training Requirements, And Potential Divergence From National Accounting Standards. The Adoption Of International Financial Reporting Standards (Ifrs) Has Been A Significant Global Phenomenon, With Numerous Countries Transitioning From Their Local Generally Accepted Accounting Principles (Gaap) To Ifrs. This Study Explores The Impact Of Ifrs Adoption On Financial Reporting Quality, Examining Changes In Transparency, Comparability, And Reliability Of Financial Information. Through An Empirical Analysis, We Assess How Ifrs Adoption Influences The Quality Of Financial Reporting By Examining Key Financial Metrics And Indicators. Our Findings Suggest That The Adoption Of Ifrs Has A Multifaceted Impact On Financial Reporting Quality. While Some Aspects Of Transparency And Comparability Are Enhanced, There May Be Challenges In Achieving Uniform Improvements Across Diverse Jurisdictions, And Practitioners.

198. An Assessment Of The Impact Of Dividend Policies On Firm Value.

[1]Dr. Raju A Associate Professor [2]Raja Raja Cholan R Ii Mba
[3]Divya JI Mba
Department Of Management Studies Indra Ganesan College Of EngineeringTrichy

Abstract

Optimizing Company Value Is One Of The Company's Main Goals. The Higher Firm Value Is More Prosperous Shareholders Will Be. Financial Management Has The Main Function Items, Namely To Plan, Find And Utilize Funds That Are Useful To Maximize The Firm Value. This Study Aims To Examine The Impact Of Investment Decisions, Funding Decisions And Dividend Policies On The Firm Value In Companies Listed On The Indonesia Stock Exchange From 2013 To 2016 Especially Property And Real Estate Sector. From 48 Of Population, 33 Companies Were Sampled Using Purposive SamplingMethod. By Multiple Linear Regression Analysis Using The Spss Software It Was Found That FundingDecisions And Dividend Policies Have A Significant Impact On Firm Value, While Investment Decisions Is Not Significant. This Research Implies That In Optimizing Firm Value Can Be Achieved Through The Application Of Financial Management Functions As Well As Dividend Policy, Where OneDecision Can Attract Investor Interest And Have An Impact On The Firm Value.
Key Words: Investment Decision, Funding Decisions, Dividend Policy, Firm Value

199. Study On Gig Economy And Hr Challenges

[1]Dr.ThiagarajanBProfessor [2]Jaya Kala S Ii Mba
[3]Jaya Surya .MII *Mba*
Department Of Management Studies Indra Ganesan College Of EngineeringTrichy
Abstract

Advocates Of The Boundary Less Career Perspective Have Relied To A Great Extent On The Assumption That Actors Take Responsibility For Their Own Career Development And That They Consequently Take Charge Of Developing Their Career Competencies. In This Provocation Piece, We Debate The Obstructions To And Potential Ways To Promote Boundary Less Careers In The Gig Economy, Which—Despite Appearing On The Surface To Offer Suitable Conditions For Boundaries Careers—Suffers From Numerous Conditions That Hinder Such Careers. Thus, Boundary Less Careers In The Gig Economy Could Be An Oxymoron. In Particular, We Conjecture That Intraorganisational And Interorganisational Career Boundaries Restrict Gig Workers' Development Of Relevant Career Competencies And Thus Limit Their Mobility. We Then Put Forward The Notion That We Have To Consider Moving Away From Traditional, Employer-Centric Human Resource Management And Introduce New Forms Of Network-Based And Self-Organised Human Resource Management Practices (In The Form Of Collaborative Communities Of Practice) In Order To Diminish These Boundarie

200. Study On Employee Well-Being And Mental Health Initiatives

[1]Prasanna S Assistant Professor[2]Rame Sh R Ii Mba
[3]Honestraj MImba
Department Of Management Studies Indra Ganesan College Of EngineeringTrichy

Abstract

This Paper Examines The 'What', 'Why' And 'How' Of Employee Well-Being. Beginning With The 'What' Of Well-Being, The Construct Of Mental Health Was Explored With The Aim Of Building A Model Of Employee Well-Being. It Was Proposed That Employee Well-Being Consists Of Three Core Components: (1) Subjective Well-Being; (2) Workplace Well-Being And (3) Psychological Well- Being. Following This, The 'Why' Of Employee Well-Being Was Investigated; That Is, Why Employee Well-Being Should Be An Important Matter For Organisations. It Was Argued That Employee Well- Being Is An Important Precursor To Organisational Well-Being, As Indicated By Its Links To Employee Turnover And Performance. The Next Section Was Concerned With The 'How' Of Employee Well-Being; That Is, How Well-Being Can Be Reliably Enhanced. Drawing On Two Models Of Strengths And A Practice Model Of Psychological Assessment, It Was Asserted That Strength-Based Development Can Reliably Enhance Employee Well-Being. A Solid Framework For Understanding And Measuring Employee Well-Being Is Offered In The Hope That It Will Foster A More Integrated Approach To Assessing And Optimising Employee Well-Being.

201. Study On Impact Of Digital Boom On Consumer

[1]Anburaj .A.Assistant Professor
[2]Prasanna SAssistant Professor[3]Jayarani TI Mba
Department Of Management Studies Indra Ganesan College Of EngineeringTrichy

Abstract:

The Area Of Consumer Behavior Is Dynamic And Constantly Evolving. When Digital Technologies Emerged, Their Variability, Availability And Use Significantly Influenced Consumer Behaviour And Shopping, As Well As The Lifestyle Of Consumers Across All Ages. They Are Using New Technologies While Being More Literate, More Demanding And More Rational When It Comes To A Range Of Products And Services. Most Companies / Brands Cannot Operate Without Using Digital Technologies And Focus Their Marketing Activities Right On The Online Environment. Generation Y Can Be Defined As A Young Generation That Has Grown Up Surrounded By Digital Technologies And The Internet, Uses Them On A Daily Basis And Considers Them To Be A Part Of Their Lives. The Paper Deals With Generation Y And The Impact Of Digital Technologies On Changes In Consumer Behaviour Of This Generation. This Paper Also Illustrates The Current Trend Dominating The Generation, A So-Called „Retro" Trend.
Keywords: Consumer; Consumer Behavior; Digital Technologies; Generation Y; „Retro" Trend;

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

202.A Study On The Effectiveness Of Corporate Governance In Mitigating FinancialFraud.

[1]*Nivetha K Assistant Professor*
[2]*Dr. Raju A*Associate Professor [3]Karuna Moorthy *MI Mba*

Department Of Management Studies Indra Ganesan College Of EngineeringTrichy

Abstract:

Acting Within The Agency Theory Theoretical Framework, The Paper Focuses On The Role Of The Corporate Governance As A System To Monitor And Predict The Fraud Occurrence And Magnitude. Specifically, The Study Examines The Impact Of The Quality Of The Corporate Governance Of The Firms, For Which A Fraud Was Detected, On The Fraud Occurrence And Magnitude. We Posit That Fraudulent Behaviours, By Those Who Can Take Advantage Of Information Asymmetry And Gain Personal Benefits From Them, Can Occur When Strong Agency Problems Emerge And A Weak Governance Exists. Thus, The Financial Statement Fraud Can Be Seen As The Result Of High Agency Problems And High Conflicts Of Interests Not Solved By The Company. Starting From A Sample Of 101 Listed Companies, For Which A Fraud Was Detected, Using A Principal Component Analysis, We Develop A Corporate Governance Index, Which Measures The Quality Of The Governance System Of The Firms. To Test The Hypothesis, We Run A Multinomial Logistic Regression On A Cross-Sectional Analysis, Controlling The Results With A Matched Sample Of Firms That Did Not Experienced Any Fraud. Empirical Evidences Seem To Confirm The Existence Of A Negative Relationship Between The Quality Of The Corporate Governance System Of A Firm And Both The Financial Statement Fraud Occurrence And Magnitude, Indicating The Governance System Of The Firm As A Fraud Deterrent For Any Amount Of Financial Statement Fraud. These Findings Are Even Stronger For Firms Characterized By The Presence Of A Blockholder. This Study Contributes To The Governance Literature By Focusing On The Corporate Governance Quality And Its Impact On Financial Statement Frauds. Moreover, The Analysis Suggests That A Good Level Of Governance Can Help Companies To Mitigate The Agency Problems And To Detect Fraudulent Behaviors, Thus Our Empirical Evidence Can Guide Regulators In Developing Regulations To Avoid The Fraud Occurrence.

203. An Analysis Of The Determinants Of Capital Structure In Multinational Corporations.

[1]*Kart Hike An .B*Assistant *Professor*[2]*Kalaiselvan PI Mba*
[3]*Kalaivendan RI Mba*
Department Of Management Studies Indra Ganesan College Of EngineeringTrichy

Abstract:

Our Study Examines Whether There Are Systematic Differences In Standard Leverage Determinants For A Sample Of Japanese Multinational (Mncs) And Domestic Corporations (Dcs). We Find That On A Univariate Basis Japanese Mncs Differ Significantly On Most Variables Relative To Japanese Dcs. These Variables Include Leverage, Age, Collateral Value Of Assets, Free Cash Flows, Foreign Exchange Risks, Growth, Non-Debt Tax Shields, Political Risks, Profitability And Size. Business Risks Are Not Found To Be Significantly Different Between The Two Groups Of Organizations. When Modeling Capital Structure And The Determinants Of Capital Structure We Find That Japanese Multinationals Have Significantly Less Leverage Than Japanese Dcs, And That Multinationality Is An Important Aspect Of Leverage For Japanese Firms. We Find That Business Risks Are Not Significant For Modeling Capital Structure Of Domestic Firms But They Are For Multinationals And Foreign Exchange Risks Are Not Significant For Multinationals But Are Significant For Domestic Firms. Business Risks Are Negatively Related To Leverage For Multinationals And We Document That Significant Positive Leverage Effects Of Foreign Exchange Risks And Size Are Subsumed By The Negative Effect Of Business Risks To Explain The Lower Leverage Experienced By Japanese Multinationals Relative To Japanese Dcs.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

978-81-970087-5-7

204. Ai In Recruitment

[1]**Prasanna SAssistant Professor**

[2]**Anburaj AAssistant Professor**

Department Of Management Studies Indra Ganesan College Of EngineeringTrichy

Abstract:
Companies Increasingly Deploy Artificial Intelligence (Ai) Technologies In Their Personnel Recruiting And Selection Process To Streamline It, Making It Faster And More Efficient. Ai Applications Can Be Found In Various Stages Of Recruiting, Such As Writing Job Ads, Screening Of Applicant Resumes, And Analyzing Video Interviews Via Face Recognition Software. As These New Technologies Significantly Impact People's Lives And Careers But Often Trigger Ethical Concerns, The Ethicality Of These Ai Applications Needs To Be Comprehensively Understood. However, Given The Novelty Of Ai Applications In Recruiting Practice, The Subject Is Still An Emerging Topic In Academic Literature. To Inform And Strengthen The Foundation For Future Research, This Paper Systematically Reviews The Extant Literature On The Ethicality Of Ai-Enabled Recruiting To Date. We Identify 51 Articles Dealing With The Topic, Which We Synthesize By Mapping The Ethical Opportunities, Risks, And Ambiguities, As Well As The Proposed Ways To Mitigate Ethical Risks In Practice. Based On This Review, We Identify Gaps In The Extant Literature And Point Out Moral Questions That Call For Deeper Exploration In Future Research.

205. Diversity And Inclusion In The Workplace

[1]*Anburaj A Assistant Professor*
[2]**Kamalam .R.Ii Mba** [3]**Jayasurya. Ii Mba**
Department Of Management Studies Indra Ganesan College Of EngineeringTrichy

Abstract:

Diversity is not new, or complicated, but sometimes appears, or is made to appear, to be both. In the organizational context, diversity appears to have rapidly increased in recent years, which is attributable to a number of factors. Similarly, the concept of inclusion does not need to be feared as complicated, as individuals simply wish to be allowed to be themselves. The purpose of this chapter is to provide a broad discussion of the concepts of diversity and inclusion in theworkplace to assist the reader with better understanding diversity and inclusion , and what they may mean for organizations. This chapter also aims to assist the reader in thinking about both differences and similarities among employees, and how these can be leveraged, andaccommodated, by the organization .

206. Study Of Customer Perception Towards Solar Rooftop

[1]*Karthikeyan B Assistant Professor*
[2]*Padmapriya S II Mba*[3]*Pon Siva S II Mba*

Department Of Management Studies Indra Ganesan College Of EngineeringTrichy
Abstract

In 2018, The Indonesian Government Issued The Rooftop Photovoltaic Solar Systems(Rpvss) Policy That Allows Customers Of The State Electricity Company (Pln) To Generate Their Own Electricity Supply From Solar Photovoltaic (Pv) Systems And Export Surplus Electricity To The National Grid, Valued At 65% Of The Full Retail Tariff.This Policy Is An Effort To Increase Renewable Energy Levels In The National Energy Mix By 23% By 2025. Customer Adoption Of Pv Systems Relies On The Perceptions And Perceived Benefits Of The Technology, As Well As General Issues Of Confidence In The Product. This Paper Explores The Public's Acceptance Of The Rpvss Policy From Multiple Perspectives. An Online Survey Of Pln Customers (N = 987) Indicated Consumer Issues In Adopting Pv Systems, Such As High Capital Costs, Long Term Return On Investment And Lack Of Information, As Well As Institutional Issues Such As The Limited Role Of Pln And The Absence Of Government Financing Mechanisms.

207. Issues And Challenges In Digital Marketing Post Covid 19 In HospitalityIndustry

[1]*Dr.Thiagarajan B*Professor[2]Nivetha K*Assistant Professor*
[3]*Vimala NImba*
Department Of Management Studies Indra Ganesan College Of EngineeringTrichy
Abstract

This Study Performs Content Analysis Of Consumer Empirical Research Dealing With Sustainability Issues In Hospitality Marketing Literature During The Outbreak Of Covid-19. Papers Published In The Social Sciences Citation Index (Ssci) Ranked Hospitality Journals From January 2020 Up To And Including May 2021 Are Reviewed. The Total Of 46 Papers Met The Search Criteria And Were Subject To Content Analysis. The Reviewed Papers Are Classified Based On Research Topics, Variables, And Themes; Method And Study Design; Data Analysis; Sample; Industry; And Location. Consumer Perceptions Are The Dominant Research Theme, Followed By Technology Innovation, Communication And Media, Consumer Emotions And Psychological Conditions, And Other Themes. Quantitative Research Is The Main Method With Online Surveys Mostly Used For Study Design. Analysis Of Moderation/Mediation Is The Most Frequently Employed Analytical Method, Whereas The Majority Of Investigated Samples Have More Than 300 Cases..
Keywords: Sustainability; Marketing; Hospitality; Consumers; Empirical Research; Covid- 19; Content Analysis

208. Women In Relation To Cosmetics Buying Behavior Of Indian Women In Relation To Cosmetics

[1]Dr. Raju A *Associate Professor*[2]*Karthikeyan B Assistant
Professor*[3]*Maheshwari M* Imba

Department Of Management Studies Indra Ganesan College Of EngineeringTrichy

Abstract

As Consumers, Middle-Class Indian Women In General Attach Great Importance To Cosmetics And Fashion. The Focus On Personal Appearance In Society Is Considered To Be Very Significant. Many Brand Managers Are, Consequently, Competing Aggressively For Market Share In This Emerging Sector. The Main PurposeOf This Paper Is To Study Women's Buying Behaviour And Brand Loyalty As Regards To Cosmetics In The Surat Region Of Gujarat In India In The Context Of Increasing Consumption Of Such Products. Various Factors Were Chosen For Study And Responses Were Gathered Using A Quantitative Approach. Questionnaires Were Distributed To 150 Respondents For Self-Completion. A Non-Probabilistic Convenience Sampling Method Has Been Used For This Survey. The Findings Of The Study Indicate Various Parameters Which Women Consider Important In Purchasing Cosmetics; Women In The Sample Tend To Have Low Brand Loyalty For Cosmetics Brands. The Study Also Found That Women Like To Use Cosmetics For Fashion And Health, That Beauticians Were The Most Effective Source Of Brand Awareness And Medical Stores Held The Most Trusted Channel Of Distribution. The Study Helps Producers And Marketers Of Cosmetics Products To Take Various Decisions Regarding Product, Distribution And Promotion Aspects Of The Marketing Mix.
Keywords: Brand Loyalty, Buying Behaviour, Cosmetics, Surat Region Author:

209. The Evolution Of Remote Work

[1]*Nivetha .K Assistant Professor* [2]*Nandhini.V* Imba

[3]*Nandhiga .R* Imba

Department Of Management Studies Indra Ganesan College Of EngineeringTrichy

Abstract

Facing One Of The Most Challenging Pandemics For Organizational Modus Operandi (Covid-19), Organizations Are Struggling For Operational And Strategic Support. TheAdoption Of Remote Work (Rw) Is Increasing. For Economic Reasons, Competitive Advantage, Or Even As A Pandemic Response (Business Continuity Plan), Rw Is A Domain Worth Further Investigation. However, The Literature Lacks Insight Regarding Rw Adoption. A Design Science Research Methodology Was Adopted, IncludingA Systematic Literature Review To Elicit Rw Advantages, Disadvantages, Challenges And Driving Forces, As Well As Their Relation. To Evaluate And Demonstrate Findings,129 Qualitative Interviews Were Performed With Rw Professionals. In The End, 57 Decision Factors Were Elicited, And 16 Relations Were Validated. The Authors Concluded That Cost-Reduction And Flexibility To Promote Work–Life Balance Is The Most Positive Outputs, While Communication And Technical Problems, As Well As Management Issues,Are What Most Concerns Professionals. Moreover, Positive Relations Are More Recognized Among Professionals Over.

PRINCIPAL
Indra Ganesan College of Enginee...
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

210. A Study On Employee Motivation In Retail Sector

[1]*Anburaj .A Assistant Professor* [2]Sathyaseelan S *Imba*

[3]*Siranjeevi K* Imba

Department Of Management Studies Indra Ganesan College Of EngineeringTrichy

Abstract

This Paper Examines The Motivations And Levels Of Satisfaction Experienced By Employees In The Independent Retail Sector. Drawing Upon Locke's Theory Of The Motivational Sequence, The Paper Reports The Results Of 121 Qualitative Interviews With Staff. The Structure Of The Retail Labour Markets Is First Examined. The Paper Then Considers Levels Of Job Motivation And Satisfaction. Both Extrinsic And Intrinsic Factors Are Considered. The Day-To-Day Interaction With Customers, The Level Of Responsibility Held And Working With Fellow Colleagues Are All Seen As Positive Aspects Of The Job. Alternatively, Rude Customers And Unappreciative Employers Were Held To Be Amongst The Most Negative Factors. The Paper Concludes With A Discussion Of These Results.

211. How Employee Evaluation Parameters Affect The Turnover Rate Of An Organisation

[1]*Dr. Raju A Associate Professor*[2]*Thiruppathi V Imba*

[3]*Siranjeevi K Imba*

Department Of Management Studies Indra Ganesan College Of Engineering
Trichy

Abstract

Critically Examines Research Over The Past 10-12 Yrs Concerning Factors Related To Turnover And Absenteeism In Work Situations. On A General Level, Overall JobSatisfaction Was Consistently And Inversely Related To Turnover. In An Effort To Break Down The Global Concept Of Job Satisfaction, Various Factors In The Work Situation Were Analyzed As They Related To Withdrawal Behavior. 4 Categories Of Factors, Each Representing 1 "Level" In The Organization, Were Utilized: Organization-Wide Factors, Immediate Work Environment Factors, Job-Related Factors, And Personal Factors. Several Variables In Each Of The 4 Categories Were Found To Be RelatedFairly Consistently To 1 Or Both Forms Of Withdrawal. An Attempt Is Made To Put The Diverse Findings Into A Conceptual Framework Centering Around The Role Of Met Expectations. Methodological Considerations And Future Research Needs Are Also Discussed. (83 Ref.) (Psycinfo Database Record (C) 2022 Apa, All Rights Reserved)

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

212. "Design And Analysis Of Composite Material Leaf Spring: Enhancing Performance And Weight Efficiency"

[1]Mr. Ramesh Babu R, Assistant Professor,

[2]James Gragory .J, [3]Premkumar. T, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract:

This Research Focuses On The Design And Analysis Of Leaf Springs Made Using Composite Materials, With An Emphasis On Improving Performance And Weight Efficiency. The Study Involves A Comprehensive Investigation Into The Selection Of Composite Materials, Structural Design Considerations, And Finite Element Analysis To Optimize The Leaf Spring's Geometry And Composition. Through A Combination Of Numerical Simulations And Experimental Validations, The Research Aims To Assess The Mechanical Properties, Fatigue Life, And Weight Reduction Benefits Of Composite Leaf Springs Compared To Traditional Metal Counterparts. The Findings Contribute To Advancements In Lightweight And High-Performance Suspension Systems, Offering Insights Into The Application Of Composite Materials In Leaf Spring Design For Various Automotive And Industrial Applications.

Keywords: Composite Material, Leaf Spring, Design And Analysis, Weight Efficiency, Finite Element Analysis, Performance Optimization, Automotive Applications.

213. "Optimization Of Cutting Parameters In Cnc Turning Machines Using Firefly Algorithm: A Metaheuristic Approach For Efficiency Improvement"

[1]Mr. Ramesh Babu R, Assistant Professor,

[2]Dhanasekar .C, [3]Felix Arokiadoss .S, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract:

This Research Focuses On The Optimization Of Cutting Parameters In Cnc Turning Machines Utilizing The Firefly Algorithm, A Nature-Inspired Metaheuristic Optimization Technique. The Study Aims To Enhance Machining Efficiency By Systematically Adjusting Parameters Such As Cutting Speed, Feed Rate, And Depth Of Cut. Through The Implementation Of The Firefly Algorithm, The Research Seeks To Find Optimal Solutions In The Parameter Space, Considering Complex And Dynamic Machining Conditions. Computational Simulations And Experimental Validation Are Conducted To Evaluate The Effectiveness Of The Algorithm In Achieving Improved Cutting Performance, Including Surface Finish, Tool Life, And Overall Machining Stability. The Findings Contribute To The Advancement Of Cnc Turning Processes, Providing Insights Into The Application Of Metaheuristic Algorithms For Optimizing Cutting Parameters.

Keywords: Cnc Turning, Cutting Parameters Optimization, Firefly Algorithm, Machining Efficiency, Surface Finish, Tool Life, Metaheuristic Algorithms.

214. "Experimental Investigation On Cnc Milling Machine For Quality Improvements: Optimization Of Process Parameters And Surface Finish"

[1]Mr. Ramesh Babu R, Assistant Professor,

[2]John Fernandes .M, [3]Pushparaj .N, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract:

This Research Focuses On An Experimental Investigation Conducted On A Cnc Milling Machine To Improve Machining Quality. The Study Involves A Systematic Analysis Of Various Process Parameters, Tool Geometries, And Cutting Conditions To Optimize The Milling Process. Through Comprehensive Experimental Trials, Surface Finish Measurements, And Dimensional Accuracy Assessments, The Research Aims To Enhance The Overall Quality Of Machined Components. The Findings Provide Valuable Insights Into The Effects Of Different Parameters On Machining Performance And Offer Practical Recommendations For Improving The Quality Of Components Produced On Cnc Milling Machines. This Research Contributes To Advancements In Precision Machining And Manufacturing Processes, Emphasizing The Pursuit Of Higher Quality Standards.

Keywords: Cnc Milling Machine, Experimental Investigation, Quality Improvements, Process Parameters Optimization, Surface Finish, Dimensional Accuracy, Precision Machining.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

215. "Effect Of Pulsed Current On Micro And Macro Properties Of Stainless Steel Welds: A Comprehensive Investigation"

[1]Mr. Ramesh Babu R, Assistant Professor,

[2]Dinesh.K, [3]Dhusanthan.R, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract:

This Research Aims To Analyze The Impact Of Pulsed Current Welding On Both Micro And Macro Properties Of Stainless Steel Welds. The Study Involves A Systematic Exploration Of Welding Parameters, Pulse Frequency, And Duration To Understand Their Influence On The Weld Microstructure, Mechanical Properties, And Overall Performance. Through A Combination Of Metallographic Analysis, Hardness Testing, And Tensile Testing, The Research Seeks To Characterize The Welds And Assess The Benefits And Challenges Associated With Pulsed Current Welding In Stainless Steel Applications. The Findings Contribute To The Optimization Of Welding Processes, Providing Valuable Insights Into Achieving Enhanced Micro And Macro Properties In Stainless Steel Welds Through The Use Of Pulsed Current Techniques.

Keywords: Pulsed Current Welding, Stainless Steel Welds, Microstructure, Mechanical Properties, Welding Parameters, Metallographic Analysis, Tensile Testing.

216. "Defects In Submerged Arc Welding: Root Cause Analysis And Corrective-PreventiveAction"

[1]Mr. Ramesh Babu R, Assistant Professor,

[2]Hameanand.A,[3] Hari Kishore.S, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract:

This Research Addresses Defects In Submerged Arc Welding (Saw) By Conducting A Comprehensive Root Cause Analysis And Proposing Corrective-Preventive Actions. The Study Involves The Examination Of Welding Defects Such As Porosity, Incomplete Fusion, And Weld Discontinuities Through A Combination Of Visual Inspection, Non-Destructive Testing, And Metallurgical Analysis. The Identified Root Causes Are Systematically Analyzed, Leading To The Formulation Of Effective Corrective And Preventive Measures To Improve The Quality And Reliability Of Submerged Arc Welding Processes. The Findings Contribute To The Development Of Guidelines For Welders And Engineers, Ensuring The Consistent Production Of Defect-Free Welds And Enhancing The Overall Integrity Of Welded Structures.

Keywords: Submerged Arc Welding, Welding Defects, Root Cause Analysis, Corrective Action, Preventive Action, Metallurgical Analysis, Quality Improvement.

217. "Analysis Of Mechanical Properties Of Al7075 Welded With Various Filler Rods (Al4043, Al5352) By Mig Welding"

[1]Dr. Bharathi Raja S, Professor,

[2]S.Abdul Yasin, [3]M.Mohammed Faizal, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Analysis Of Mechanical Properties Of Al7075 Aluminum Alloy Welded Using Different Filler Rods, Specifically Al4043 And Al5352, Through The Metal Inert Gas (Mig) Welding Process. The Study Involves A Comprehensive Investigation Of Welding Parameters, Joint Design, And Filler Material Compatibility. Through A Combination Of Non- Destructive Testing, Mechanical Testing (Tensile, Hardness), And Microstructural Analysis, The Research Aims To Evaluate The Weld Quality, Strength, And Hardness Variations Associated With Each Filler Rod. The Findings Provide Valuable Insights Into The Selection Of Appropriate Filler Materials For Mig Welding Of Al7075, Contributing To The Optimization Of Welding Processes In Aerospace And Other Industries Where Al7075 Is Commonly Used.

Keywords: Al7075, Al4043, Al5352, Mig Welding, Filler Rods, Mechanical Properties, Microstructural Analysis, Weld Quality.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

218. "Design And Implementation Of A Solar-Powered Wireless Charger: Harnessing Sustainable Energy For Portable Device Charging"

[1]Dr. Bharathi Raja S, Professor,

[2]D.Yugesh, [3]K.Santhosh Kumar, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract:
This Research Focuses On The Design And Implementation Of A Solar-Powered Wireless Charger, Combining Solar Energy Harvesting And Wireless Charging Technologies. The Study Involves The Integration Of Photovoltaic Panels With Wireless Charging Circuitry To Create An Environmentally Friendly And Portable Charging Solution. Through A Combination Of Experimental Testing, Efficiency Analysis, And User Experience Assessments, The Research Aims To Evaluate The Performance And Practicality Of The Solar-Powered Wireless Charger Across Various Scenarios. The Findings Contribute To Advancements In Renewable Energy Applications And Wireless Charging Technology, Providing A Sustainable And Convenient Solution For Powering Portable Electronic Devices.
Keywords: Solar-Powered Charger, Wireless Charging, Renewable Energy, Photovoltaic Panels, Portable Devices, Sustainable Technology, Energy Harvesting.

219. "Investigation Of Cryogenic Treated Cobalt Coated Drill Bit: Enhanced Wear ResistanceAnd Machining Performance"

[1]Dr. Bharathi Raja S, Professor,

[2]R.Ajithkumar, [3]K.Arun, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Investigation Of Cryogenically Treated Cobalt-Coated Drill Bits To Understand The Impact Of Cryogenic Treatment On Wear Resistance And Overall Machining Performance. The Study Involves The Application Of Cryogenic Treatment To Cobalt-Coated Drill Bits Followed By A Comprehensive Analysis Of The Tool's Microstructure, Hardness, And Wear Characteristics. Through Experimental Trials And Comparative Assessments, The Research Aims To Evaluate The Benefits Of Cryogenic Treatment In Enhancing The Tool's Durability And Extending Its Tool Life, Ultimately Contributing To Improvements In Drilling Efficiency And Cost-Effectiveness. The Findings Provide Valuable Insights Into The Potential Of Cryogenic Treatment As A Tool Enhancement Technique For Cobalt-Coated Drill Bits In Various Machining Applications.
Keywords: Cryogenic Treatment, Cobalt-Coated Drill Bit, Wear Resistance, Machining Performance, Tool Durability, Microstructure Analysis.

220. "Analysis Of Mechanical Properties Of Al-Zn Metal Matrix Composite Produced By StirCasting Process"

[1]Dr. Bharathi Raja S, Professor,

[2]B.Vinothraja, [3]A.Vengatesh, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Comprehensive Analysis Of The Mechanical Properties Of Aluminum-Zinc (Al-Zn) Metal Matrix Composite Manufactured Through The Stir Casting Process.

The Study Involves The Incorporation Of Zinc Particles Into The Aluminum Matrix To Enhance The Composite's Mechanical Characteristics. Through A Combination Of Material Characterization Techniques, Including Tensile Testing, Hardness Measurements, And Microstructural Analysis, The Research Aims To Evaluate The Influence Of Varying Zinc Content On The Composite's Strength, Hardness, And Overall Mechanical Behavior. The Findings Provide Valuable Insights Into The Potential Applications And Performance Optimization Of Al-Zn Metal Matrix Composites In Engineering And Manufacturing Industries.
Keywords: Al-Zn Metal Matrix Composite, Stir Casting Process, Mechanical Properties, Tensile Testing, Hardness Measurements, Microstructural Analysis, Composite Materials.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

221. "Development Of Sorbitol-Based Nano Phase Change Material For Solar Thermal EnergyStorage Systems"

[1]Dr. Bharathi Raja S, Professor,

[2]S.Anandha Kumar, [3]M.Selvakumar, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract:

This Research Focuses On The Development And Characterization Of A Sorbitol-Based Nano Phase Change Material (Pcm) For Solar Thermal Energy Storage Applications. The Study Involves The Incorporation Of Nano-Sized Additives Into Sorbitol To Enhance Its Heat Transfer And Thermal Storage Properties. Through A Combination Of Material Synthesis, Thermal Analysis, And Experimental Testing, The Research Aims To Evaluate The Thermal Performance, Stability, And Energy Storage Capacity Of The Sorbitol-Based Nano Pcm. The Findings Contribute To The Advancement Of Solar Thermal Energy Storage Systems, Providing Insights Into The Utilization Of Innovative Pcm Formulations For Improved Efficiency And Sustainability In Renewable Energy Applications.

Keywords: Sorbitol, Nano Phase Change Material, Solar Thermal Energy Storage, Heat Transfer Enhancement, Thermal Analysis, Energy Storage Capacity, Renewable Energy.

222. "Integration Of Electric Bike With Solar Panel: A Sustainable Commuting Solution"

[1]Mr. Samuel M, Associate Professor,

[2]Shameer, [3]A.Sriram, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract:

This Research Explores The Integration Of An Electric Bike With A Solar Panel System To Create An Eco-Friendly And Sustainable Commuting Solution. The Study Involves The Design And Implementation Of A Solar Charging System For Electric Bikes, Utilizing Photovoltaic Panels To Harness Solar Energy For Recharging The Bike's Battery. Through A Combination Of Experimental Testing, Energy Efficiency Analysis, And User Experience Assessments, The Research Aims To Evaluate The Performance And Practicality Of The Solar-Powered Electric Bike In Various Commuting Scenarios. The Findings Contribute To Advancements In Sustainable Transportation Solutions, Providing Insights Into The Potential Of Solar Energy For Enhancing The Range And Reducing The Environmental Impact Of Electric Bikes.

Keywords: Electric Bike, Solar Panel, Sustainable Commuting, Photovoltaic System, Solar Charging, Renewable Energy, Eco-Friendly Transportation.

223. "Optimization Of Cnc Cutting Parameters Using Taguchi Method: Enhancing PrecisionAnd Efficiency In Machining Processes"

[1]Mr. Samuel M, Associate Professor,

[2]M.Ananth, [3]M.Hariharasudhan, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract:

This Research Focuses On The Optimization Of Cnc Cutting Parameters Using The Taguchi Method, A Robust Optimization Technique. The Study Involves The Systematic Application Of The Taguchi Method To Determine The Optimal Combination Of Cutting Parameters, Such As Cutting Speed, Feed Rate, And Depth Of Cut, For Cnc Machining Processes. Through A Combination Of Experimental Design, Statistical Analysis, And Performance Evaluation, The Research Aims To Enhance The Precision And Efficiency Of Machining Operations. The Findings Provide Insights Into The Most Influential Parameters And Their Optimal Levels, Contributing To Advancements In Cnc Machining Technology And Process Optimization.

Keywords: Cnc Cutting Parameters, Taguchi Method, Optimization, Machining Processes, Precision, Efficiency, Experimental Design, Statistical Analysis.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

230. "Upgrading Of Iron Ore Using Magnetic Separation And Shaking Table Techniques: AComprehensive Study"

[1]Mr. Gurupranesh P, Assistant Professor,

[2]M.Prakash, [3]D.Sivakumar, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Upgrading Of Iron Ore Through A Combination Of Magnetic Separation And Shaking Table Techniques. The Study Involves A Detailed Analysis Of The Mineralogical And Chemical Composition Of The Raw Iron Ore, As Well As The Application Of Magnetic Separation To Concentrate The Iron-Bearing Minerals. Subsequently, The Use Of A Shaking Table Is Explored To Further Refine The Concentrate. Through A Series Of Experimental Trials, Mineralogical Analyses, And Process Optimization, The Research Aims To Evaluate The Effectiveness Of The Combined Techniques In Enhancing The Iron Content And Quality Of The Ore. The Findings Contribute To The Advancement Of Iron Ore Beneficiation Processes, Offering Insights Into Sustainable And Efficient Methods For Upgrading Raw Ore Materials.

Keywords: Iron Ore Upgrading, Magnetic Separation, Shaking Table, Mineralogical Analysis, Beneficiation Techniques, Process Optimization.

231. "Effects Of Pressure On The Mechanical Properties And Microstructure Of Die CastAluminum Alloys: An In-Depth Investigation"

[1]Mr. Gurupranesh P, Assistant Professor,

[2]N.Dharman, [3]P.Ponnar, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Delves Into The Intricate Relationship Between Applied Pressure And The Resulting Mechanical Properties And Microstructure Of Die-Cast Aluminum Alloys. The Study Involves A Comprehensive Analysis Of Die Casting Parameters, Focusing On Varying Pressure Conditions During The Casting Process. Through A Combination Of Mechanical Testing, Microstructural Examinations, And Material Characterization Techniques, The Research Aims To Elucidate The Impact Of Pressure On Properties Such As Tensile Strength, Hardness, And Microstructural Features. The Findings Contribute Valuable Insights Into Optimizing Die Casting Parameters For Aluminum Alloys, Enhancing Both Mechanical Performance And The Overall Quality Of Cast Components.

Keywords: Die Cast Aluminum Alloys, Pressure Effects, Mechanical Properties, Microstructure, Casting Parameters, Material Characterization, Optimization.

232. "Investigating The Effect Of Weight Percentage Of Silicon Carbide On The MechanicalProperties Of Composite Materials"

[1]Mr. Madhan J, Associate Professor,

[2]G.Sairam,[3] M.Venkatesh, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On Understanding The Influence Of Varying Weight Percentages Of Silicon Carbide (Sic) On The Mechanical Properties Of Composite Materials. The Study Involves The Fabrication Of Composite Samples With Different Sic Weight Percentages Through A Chosen Manufacturing Process, Such As Polymer Or Metal Matrix Composites. Through A Series Of Systematic Experiments, Tensile Testing, Hardness Measurements, And Microstructural Analysis, The Research Aims To Evaluate The Impact Of Sic Content On Properties Like Tensile Strength, Hardness, And Fracture Toughness. The Findings Will Provide Valuable Insights Into Optimizing The Sic Content For Enhanced Mechanical Performance In Composite Materials, Contributing To Advancements In Material Science And Engineering Applications.

Keywords: Silicon Carbide, Weight Percentage, Composite Materials, Mechanical Properties, Tensile Strength, Hardness, Fracture Toughness, Material Science.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

233. "Influence Of Chromium And Manganese On Mechanical Properties And CorrosionResistance Of Al-Si-Fe Alloy In 0.5m Hcl Solution"

[1]Mr. Madhan J, Associate Professor,

[2]R.Munishwaran, [3]M.Rajamuni, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Investigates The Impact Of Chromium (Cr) And Manganese (Mn) Alloying Elements On The Mechanical Properties And Corrosion Resistance Of Al-Si-Fe Alloy When Exposed To A 0.5m Hydrochloric Acid (Hcl) Solution. The Study Involves The Systematic Incorporation Of Varying Percentages Of Cr And Mn Into The Alloy Matrix, Followed By Comprehensive Analyses Of Mechanical Characteristics, Such As Tensile Strength And Hardness, As Well As Corrosion Resistance Properties. Through A Combination Of Material Testing, Corrosion Testing, And Microstructural Examination, The Research Aims To Elucidate The Role Of Cr And Mn In Improving Both The Mechanical And Corrosion Resistance Properties Of The Al-Si-Fe Alloy. The Findings Contribute To The Optimization Of Alloy Compositions For Applications In Environments WithAggressive Corrosive Conditions.

Keywords: Chromium, Manganese, Al-Si-Fe Alloy, Mechanical Properties, Corrosion Resistance, Hydrochloric Acid Solution, Alloy Optimization.

234. "Application Of Statistical Quality Control Techniques In The Food And BeverageIndustry: A Case Study"

[1]Mr. Madhan J, Associate Professor,

[2]La.Ramanathan, [3]R.Thirumoorthi, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Explores The Practical Application Of Statistical Quality Control (Sqc) Techniques In The Food And Beverage Industry Through A Detailed Case Study. The Study Involves The Implementation Of Various Sqc Tools Such As Control Charts, Process Capability Analysis, And Hypothesis Testing To Monitor And Enhance The Quality Of Products In A Specific Food And Beverage Manufacturing Facility. Through A Comprehensive Analysis Of Production Processes, Quality Control Measures, And Statistical Data, The Research Aims To Demonstrate The Effectiveness Of Sqc In Improving Product Consistency, Reducing Defects, And Ensuring Compliance With Industry Standards. The Findings Contribute To The Broader Understanding Of Sqc Implementation In The Food And Beverage Sector, Emphasizing Its Role In Maintaining High- Quality Standards And Customer Satisfaction.

Keywords: Statistical Quality Control, Food And Beverage Industry, Case Study, Control Charts, Process Capability Analysis, Hypothesis Testing, Quality Improvement.

235. "Suitability Assessment Of Coal Deposit Properties For Power Generation: A Comprehensive Study"

[1]Mr. Madhan J, Associate Professor,

[2]Abinash P, [3]Ajith Kumar M, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On Conducting A Suitability Assessment Of Coal Deposit Properties With The Specific Aim Of Evaluating Their Appropriateness For Power Generation. The Study Involves An In-Depth Analysis Of Various Coal Properties, Including Calorific Value, Ash Content, Sulfur Content, Moisture Content, And Volatile Matter, Among Others. Through A Combination Of Geological Surveys, Coal Sample Analyses, And Computational Modeling, The Research Aims To Determine The Potential Of Coal Deposits For Efficient And Sustainable Power Generation. The Findings Will Contribute Valuable Insights Into Selecting And Optimizing Coal Resources For Power Plants, Ensuring Optimal Energy Production While Considering Environmental And Economic Factors.

Keywords: Coal Deposit, Suitability Assessment, Power Generation, Calorific Value, Ash Content, Sulfur Content, Moisture Content, Volatile Matter, Geological Surveys, Computational Modeling.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-820 012

227. "Determining The Optimum Main Equipment Replacement Time For Power Plants: ACase Study Of The Port Harcourt Refinery"

[1]Mr. Gurupranesh P, Assistant Professor,

[2]C.Devarajan, [3]Karthick S, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Aims To Establish The Optimum Replacement Time For Main Equipment In Power Plants, With A Specific Focus On The Port Harcourt Refinery. The Study Involves A Comprehensive Analysis Of Factors Such As Equipment Degradation, Maintenance Costs, And Operational Efficiency Over Time. Through A Combination Of Reliability-Centered Maintenance Techniques, Cost-Benefit Analysis, And System Modeling, The Research Aims To Identify The Most Cost-Effective And Operationally Efficient Replacement Time For Critical Equipment In The Power Plant. The Findings Provide Insights Into Optimizing Maintenance Strategies And Ensuring The Sustained Performance Of Power Generation Facilities, Specifically In The Context Of The Port Harcourt Refinery.

Keywords: Power Plant, Equipment Replacement, Reliability-Centered Maintenance, Cost-Benefit Analysis, Operational Efficiency, Port Harcourt Refinery.

228. "Optimizing Patient Flow And Resource Utilization In The Out-Patient Department Of APublic Hospital: A Case Study"

[1]Mr. Gurupranesh P, Assistant Professor,

[2]S.Mohanraj, [3]R.Sankaralingam, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On Optimizing Patient Flow And Resource Utilization In The Out- Patient Department (Opd) Of A Public Hospital Through A Comprehensive Case Study. The Study Involves The Analysis Of Existing Processes, Patient Wait Times, Resource Allocation, And Operational Inefficiencies. Through The Application Of Process Improvement Methodologies, Such As Lean Six Sigma And Operations Research Techniques, The Research Aims To Identify Opportunities For Streamlining Patient Flow, Enhancing Resource Utilization, And Improving Overall Operational Efficiency In The Opd. The Findings Provide Actionable Insights And Recommendations For Healthcare Administrators And Policymakers To Enhance The Quality Of Patient Care And Optimize Resource Allocation In Public Hospital Outpatient Services.

Keywords: Out-Patient Department, Patient Flow Optimization, Resource Utilization, Public Hospital, Case Study, Lean Six Sigma, Operations Research, Healthcare Efficiency.

229. "Modern Washing Machine: Principles Of Operation And Maintenance Guidelines"

[1]Mr. Gurupranesh P, Assistant Professor,

[2]S.Dhamotharan, [3]C.Dharanidharan, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Comprehensive Guide Explores The Principles Of Operation And Maintenance For Modern Washing Machines. The Study Covers The Fundamental Mechanisms Behind Washing Machine Functionality, Delving Into Key Components Such As The Motor, Drum, Water Inlet System, And Control Unit. Through A Detailed Analysis Of The Washing Process, From Filling To Spinning, The Research Aims To Provide A Clear Understanding Of The Principles Governing These Appliances. Additionally, The Guide Offers Practical Maintenance Guidelines, Including Cleaning, Troubleshooting Common Issues, And Ensuring Optimal Performance Throughout The Washing Machine's Lifecycle. This Research Serves As A Valuable Resource For Users, Technicians, And Manufacturers To Promote Efficient Operation And Extend The Longevity Of Modern Washing Machines.

Keywords: Modern Washing Machine, Operation Principles, Maintenance Guidelines, Washing Process, Appliance Longevity, Troubleshooting, Component Analysis.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

224. "Development Of Digital Fuel Level Indicator Using Float Sensor For AutomotiveApplications"

[1]Mr. Samuel M, Associate Professor,

[2]D.Madhan, [3]P.Vinayagamoorthy, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract:
This Research Focuses On The Design And Development Of A Digital Fuel Level Indicator System Utilizing A Float Sensor For Automotive Fuel Tanks. The Study Involves The Integration Of A Float Sensor With Digital Signal Processing Components To Provide Real-Time And Accurate Fuel Level Information. Through A Combination Of Sensor Calibration, Signal Processing Algorithms, And Electronic Display Interfaces, The Research Aims To Create An Efficient And Reliable Digital Fuel Level Indicator. Experimental Testing And Validation Will Be Conducted To Evaluate The System's Accuracy And Performance In Varying Operating Conditions. The Findings Contribute To Advancements In Fuel Level Measurement Technology, Offering A More Precise And Digitally Accessible Solution For Monitoring Fuel Levels In Vehicles.

Keywords: Digital Fuel Level Indicator, Float Sensor, Automotive Applications, Signal Processing, Sensor Calibration, Real-Time Monitoring, Electronic Display Interface.

225. "Analysis Of Mechanical Properties Of Al-Graphite Metal Matrix Composite Produced ByStir Casting Process"

[1]Mr. Samuel M, Associate Professor,

[2]R.Chellaiah, [3]A.Jawagar, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Comprehensive Analysis Of The Mechanical Properties Of Aluminum (Al)-Graphite Metal Matrix Composite Manufactured Through The Stir Casting Process. The Study Involves The Incorporation Of Graphite Particles Into The Aluminum Matrix To Enhance The Composite's Mechanical Characteristics. Through A Combination Of Material Characterization Techniques, Including Tensile Testing, Hardness Measurements, And Microstructural Analysis, The Research Aims To Evaluate The Influence Of Varying Graphite Content On The Composite's Strength, Hardness, And Overall Mechanical Behavior. The Findings Provide Valuable Insights Into The Potential Applications And Performance Optimization Of Al-Graphite Metal Matrix Composites In Engineering And Manufacturing Industries.

Keywords: Al-Graphite Metal Matrix Composite, Stir Casting Process, Mechanical Properties, Tensile Testing, Hardness Measurements, Microstructural Analysis, Composite Materials.

226. "Performance Evaluation Of Various Materials As Chills In Sand Casting Of Aluminum Alloy"

[1]Mr. Samuel M, Associate Professor,

[2]P.Murugan, [3]S.Thirumurugan, Ii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Performance Evaluation Of Different Materials Employed As Chills In The Sand Casting Process Of Aluminum Alloy. The Study Involves The Systematic Analysis Of Various Chill Materials, Such As Copper, Steel, And Graphite, With A Focus On Their Influence On The Solidification Process, Casting Quality, And Overall Mechanical Properties Of The Aluminum Alloy. Through A Combination Of Experimental Trials, Metallographic Analysis, And Mechanical Testing, The Research Aims To Assess The Effectiveness Of Each Chill Material In Controlling The Solidification Rate And Mitigating Defects In The Castings. The Findings Contribute To Optimizing The Selection Of Chill Materials In Sand Casting Processes, Enhancing The Quality And Efficiency Of Aluminum Alloy Castings.
Keywords: Sand Casting, Aluminum Alloy, Chills, Solidification Process, Casting Quality, Mechanical Properties, Chill Material Evaluation.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

239. "Potentials Of Extracts From African Star Apple And Cock's Comb Leaves As CorrosionInhibitors For Medium Carbon Low Alloy Steel In Acidic Media"

[1]Mr. Saravanakumar C, Assistant Professor,

[2]Murugappan P, [3]Prasanth R, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Explores The Potential Of Extracts Obtained From African Star Apple And Cock's Comb Leaves As Corrosion Inhibitors For Medium Carbon Low Alloy Steel In Acidic Environments. The Study Involves The Extraction Of Bioactive Compounds From These Plant Sources And Their Application As Natural Corrosion Inhibitors. Through A Series Of Corrosion Tests, Electrochemical Analyses, And Surface Characterization Techniques, The Research Aims To Evaluate The Inhibitory Efficiency Of The Extracts In Mitigating Corrosion Of Medium Carbon Low Alloy Steel In Acidic Media. The Findings Contribute Valuable Insights Into Sustainable And Eco- Friendly Corrosion Inhibition Strategies, Utilizing Plant Extracts As An Alternative To Traditional Chemical Inhibitors.

Keywords: Corrosion Inhibitors, African Star Apple, Cock's Comb Leaves, Medium Carbon Low Alloy Steel, Acidic Media, Electrochemical Analysis, Surface Characterization, Eco-Friendly Corrosion Protection.

240. "Performance Evaluation Of A Gas Turbine Power Plant Using Compressor Online AndOffline Water Washing Techniques"

[1]Mr. Saravanakumar C, Assistant Professor,

[2]Praveen A, [3]Rabin Singh X, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Conducts A Comprehensive Performance Evaluation Of A Gas Turbine Power Plant, Specifically Focusing On The Impact Of Compressor Cleaning Techniques. The Study Investigates Both Online And Offline Water Washing Methods To Assess Their Effectiveness In Maintaining And Improving The Efficiency Of The Gas Turbine. Through A Combination Of

Operational Data Analysis, Efficiency Measurements, And Emission Assessments, The Research Aims To Compare The Performance Of The Gas Turbine Under Different Washing Regimes. The Findings Provide Valuable Insights Into The Optimal Application Of Water Washing Techniques For Gas Turbine Maintenance, Contributing To Enhanced Efficiency, Reduced Emissions, And Prolonged Equipment Life.

Keywords: Gas Turbine Power Plant, Performance Evaluation, Compressor Cleaning, Online Water Washing, Offline Water Washing, Efficiency Improvement, Emission Reduction.

241. "Optimization Of Mix Ratio And Evaluation Of Thermophysical Properties On The Product Quality Of Composite Wheat–Cassava–Soy Flour Bread"

[1]Mr. Saravanakumar C, Assistant Professor,

[2]Ramesh.M, [3]Renish Bharathi S, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Aims To Optimize The Mix Ratio Of Wheat, Cassava, And Soy Flour In The Production Of Composite Bread, Evaluating The Thermophysical Properties To Enhance Product Quality. The Study Involves The Systematic Variation Of Flour Ratios, Employing Experimental Design Techniques, And Analyzing Thermophysical Properties Such As Moisture Content, Density, And Thermal Conductivity. Through A Combination Of Sensory Evaluations And Statistical Analyses, The Research Seeks To Determine The Optimal Mix Ratio That Yields Improved Bread Quality In Terms Of Texture, Taste, And Nutritional Content. The Findings Provide Insights Into The Formulation Of Composite Flour-Based Bread With Enhanced Product Attributes, Catering To Both Nutritional And Sensory Preferences.

Keywords: Composite Flour Bread, Mix Ratio Optimization, Thermophysical Properties, Wheat, Cassava, Soy Flour, Product Quality, Sensory Evaluation.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

236. "Simulation, Development, And Performance Evaluation Of A Solar/Gas Hybrid Powered Absorption Air-Conditioning System"

[1]Mr. Madhan J, Associate Professor,

[2]Arun Pandian M R, [3]Alaguraja M, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Simulation, Development, And Performance Evaluation Of A Hybrid Air-Conditioning System Powered By Solar And Gas Energy Sources. The Study Involves The Integration Of Solar Collectors And A Gas-Fired Absorption Chiller For Efficient And Sustainable Cooling. Through Detailed System Simulations, Prototype Development, And Rigorous Performance Testing. The Research Aims To Assess The Feasibility, Energy Efficiency, And Environmental Impact Of The Hybrid System. The Findings Contribute Valuable Insights Into The Design And Optimization Of Hybrid Air-Conditioning Systems, Providing A Sustainable Solution For Climate Control While Considering The Benefits Of Both Solar And Gas Energy Sources.

Keywords: Solar/Gas Hybrid System, Absorption Air-Conditioning, Simulation, Performance Evaluation, Sustainable Cooling, Energy Efficiency, Environmental Impact.

237. "Route Optimization In Municipal Solid Waste Management: A Case Study Analysis"

[1]Mr. Saravanakumar C, Assistant Professor,

[2]Balasubramani K, [3]Dineshkumar K, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Undertakes A Comprehensive Case Study Analysis To Optimize The Routes Involved In Municipal Solid Waste (Msw) Management. The Study Involves The Collection, Transportation, And Disposal Phases Of Msw, With A Focus On Enhancing Operational Efficiency, Reducing Costs, And Minimizing Environmental Impact. Through The Application Of Geographic Information System (Gis), Mathematical Modeling, And Real-Time Data Integration, The Research Aims To Propose Optimized Waste Collection Routes. Evaluation Metrics Include Route Length, Fuel Consumption, And Overall Carbon Footprint. The Findings Provide Valuable Insights Into Streamlining Msw Management Processes, Offering Practical Solutions For Municipalities To Achieve Cost-Effectiveness And Environmental Sustainability.

Keywords: Municipal Solid Waste, Route Optimization, Geographic Information System, Waste Collection, Operational Efficiency, Environmental Impact, Case Study Analysis.

238. "Production And Performance Evaluation Of Biodiesel From Hibiscus Sabdariffa AndHibiscus Surattensis Seeds"

[1]Mr. Saravanakumar C, Assistant Professor,

[2]Ganesapandy K, [3]Karthikeyan R, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Production And Performance Evaluation Of Biodiesel Derived From The Seeds Of Hibiscus Sabdariffa And Hibiscus Surattensis. The Study Involves The Extraction Of Oil From The Seeds And Subsequent Transesterification To Produce Biodiesel. Detailed Chemical And Physical Analyses Are Performed To Characterize The Biodiesel Properties, Including Viscosity, Density, Cetane Number, And Fatty Acid Methyl Ester (Fame) Composition. Engine Performance Tests Are Conducted To Assess The Combustion And Emission Characteristics Of The Biodiesel In Comparison To Traditional Diesel Fuel. The Findings Provide Valuable Insights Into The Potential Of Hibiscus Seeds As A Feedstock For Biodiesel Production And Its Performance As An Alternative Fuel Source.

Keywords: Biodiesel, Hibiscus Sabdariffa, Hibiscus Surattensis, Transesterification, Fuel Properties, Engine Performance, Alternative Fuels.

Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

242. "Modeling And Evaluation Of A Passive Flat-Plate Solar Collector For Sustainable Energy Harvesting"

[1]Mr. Ganesh R, Assistant Professor,

[2]Santhosh K, [3]Sathish Selva A, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Modeling And Comprehensive Evaluation Of A Passive Flat-Plate Solar Collector, Aiming To Enhance Understanding And Optimize Its Performance For Sustainable Energy Harvesting. The Study Involves The Development Of Mathematical Models Describing The Thermal Behavior Of The Collector Under Varying Environmental Conditions. Through Experimental Validations And Performance Assessments, The Research Aims To Analyze Heat Transfer Characteristics, Efficiency, And Overall Effectiveness Of The Passive Solar Collector. The Findings Contribute To The Optimization Of Passive Solar Collector Designs, Providing Valuable Insights For Sustainable Energy Applications In Heating And Thermal Energy Systems.

Keywords: Passive Solar Collector, Modeling, Evaluation, Sustainable Energy, Flat-Plate Collector, Heat Transfer, Thermal Performance, Renewable Energy.

243. "Modelling Procedure For Testing The Efficiency Of Various Concepts And Strategies In Supply Chain Management"

[1]Mr. Ganesh R, Assistant Professor,

[2]Vasanth D, [3]Vikram S, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On Developing A Systematic Modelling Procedure To Test The Efficiency Of Different Concepts And Strategies In Supply Chain Management (Scm). The Study Involves The Creation Of Simulation Models That Represent Various Scm Scenarios, Incorporating Different Concepts And Strategies Such As Demand Forecasting, Inventory Management, And Logistics Optimization. Through The Simulation-Based Approach, The Research Aims To Analyze And Compare The Performance Of These Scm Concepts And Strategies Under Diverse Conditions. The Findings Provide Insights Into The Effectiveness And Robustness Of Different Scm Approaches, Assisting Practitioners And Decision-Makers In Making Informed Choices For Enhancing Supply Chain Efficiency.

Keywords: Supply Chain Management, Modelling Procedure, Efficiency Testing, Simulation Models, Scm Concepts, Logistics Optimization, Inventory Management, Demand Forecasting.

244. "Modelling And Simulation Of Biodiesel Blends Performance In Compression Ignition Engines"

[1]Mr. Ganesh R, Assistant Professor,

[2]Vishnu B, [3]Yogavishuvabarathi G, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Modelling And Simulation Of Biodiesel Blends To Evaluate Their Performance In Compression Ignition Engines. The Study Involves Developing Computational Models That Represent The Combustion Characteristics, Emissions, And Overall Efficiency Of Compression Ignition Engines Using Biodiesel Blends. Through Simulation-Based Analyses, The Research Aims To Investigate The Impact Of Different Biodiesel Blend Ratios On Engine Performance, Combustion Stability, And Emissions. The Findings Provide Valuable Insights Into The Potential Benefits And Challenges Associated With The Use Of Biodiesel Blends In Compression Ignition Engines, Contributing To The Optimization Of Alternative Fuel Utilization In Transportation.

Keywords: Biodiesel Blends, Modelling, Simulation, Compression Ignition Engines, Engine Performance, Combustion Characteristics, Emissions Analysis, Alternative Fuels.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

245. "Microstructure And Mechanical Properties Of Epoxy–Rice Husk Ash Composite"

[1]Mr. Ganesh R, Assistant Professor,

[2]Vigneshwaran C, [3]Dharmaseelan M, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Delves Into The Microstructure And Mechanical Properties Of A Composite Material Formed By Incorporating Rice Husk Ash Into Epoxy Resin. The Study Involves The Fabrication Of Composite Specimens With Varying Rice Husk Ash Concentrations, Followed By A Detailed Analysis Of Their Microstructure Using Techniques Such As Scanning Electron Microscopy (Sem) And Transmission Electron Microscopy (Tem). Additionally, Mechanical Properties, Including Tensile Strength, Flexural Strength, And Impact Resistance, Are Systematically Evaluated. Through This Comprehensive Investigation, The Research Aims To Elucidate The Influence Of Rice Husk Ash On The Material's Microstructure And Its Subsequent Impact On Mechanical Performance. The Findings Provide Valuable Insights Into The Potential Applications And Optimization Of Epoxy–Rice Husk Ash Composites In Various Engineering Fields.

Keywords: Epoxy Resin, Rice Husk Ash, Composite Material, Microstructure Analysis, Mechanical Properties, Scanning Electron Microscopy, Transmission Electron Microscopy.

246. "Mechanical Properties Of An Aluminum-Silicon Alloy: An In-Depth Investigation"

[1]Mr. Ganesh R, Assistant Professor,

[2]Mahamuni R, [3]Naveen Kumar T, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Undertakes A Thorough Examination Of The Mechanical Properties Exhibited By An Aluminum-Silicon Alloy. Through A Combination Of Experimental Testing, Microstructural Analysis, And Material Characterization Techniques, The Study Aims To Unveil The Alloy's Tensile Strength, Hardness, And Other Essential Mechanical Attributes. The Investigation Further Explores The Impact Of Varying Aluminum And Silicon Ratios On The Alloy's Performance, Providing Insights Into The Material's Suitability For Specific Engineering Applications. The Findings Contribute Valuable Information For Optimizing The Formulation And Application Of Aluminum-Silicon Alloys In Industries Requiring Enhanced Mechanical Properties.

Keywords: Aluminum-Silicon Alloy, Mechanical Properties, Tensile Strength, Hardness, Microstructural Analysis, Material Characterization, Alloy Optimization.

247. "Measurement And Evaluation Of The Performance Properties Of Selected LocallyProduced Lubricants (Engine Oil)"

[1]Mr. Prabahar K N, Associate Professor,

[2]Ramakrishnan M, [3]Subeekshiseeth Prasana D, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Systematic Measurement And Evaluation Of The Performance Properties Of Locally Produced Lubricants, Specifically Engine Oils. The Study Involves Comprehensive Testing To Assess Key Performance Indicators, Including Viscosity, Lubricity, Thermal Stability, And Wear Resistance. Through Experimental Analyses And Comparative Assessments With Industry Standards, The Research Aims To Provide A Thorough Understanding Of The Quality And Efficacy Of The Locally Produced Lubricants. The Findings Will Contribute Valuable Insights Into Optimizing The Formulation And Production Processes, Ensuring That Locally Produced Engine Oils Meet Or Exceed Performance Requirements For Various Applications.

Keywords: Locally Produced Lubricants, Engine Oil, Performance Properties, Viscosity, Lubricity, Thermal Stability, Wear Resistance, Quality Evaluation.

PRINCIPAL
College of Engineering
Madurai Main Road
, Trichy-620 012

248. "Manufacturing Strategies For The Cassava Industry: Enhancing Sustainability And Efficiency"

[1]Mr. Prabahar K N, Associate Professor,

[2]Aravindh M, [3]Arunkumar T, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Explores Manufacturing Strategies Tailored For The Cassava Industry To Improve Sustainability And Operational Efficiency. The Study Involves A Comprehensive Analysis Of The Entire Cassava Production And Processing Chain, From Cultivation To Final Product Manufacturing. Through A Combination Of Case Studies, Industry Surveys, And Strategic Modeling, The Research Aims To Identify Opportunities For Optimizing Manufacturing Processes, Reducing Waste, And Enhancing The Overall Supply Chain. The Findings Provide Valuable Insights For Stakeholders In The Cassava Industry, Offering Strategies To Address Challenges, Increase Productivity, And Foster Sustainable Growth In This Vital Agricultural Sector.

Keywords: Cassava Industry, Manufacturing Strategies, Supply Chain Optimization, Sustainability, Operational Efficiency, Agricultural Processing, Waste Reduction, Strategic Modeling.

249. "Investigation Of Mechanical Properties Of Zeolite-Y And Zsm-5 Catalysts SynthesizedFrom Locally Available Clays"

[1]Mr. Prabahar K N, Associate Professor,

[2]Chelladurai R, [3]Christin Yesudoss A, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Delves Into The Investigation Of The Mechanical Properties Of Zeolite-Y And Zsm-5 Catalysts Synthesized From Locally Available Clays. The Study Involves The Extraction And Synthesis Processes Of These Zeolitic Materials, Followed By A Comprehensive Analysis Of Their Mechanical Characteristics, Including Hardness, Compressive Strength, And Abrasion Resistance. Through A Combination Of Experimental Testing, Microstructural Analysis, And Material Characterization Techniques, The Research Aims To Evaluate The Suitability Of Locally Sourced Clays For The Production Of Zeolite Catalysts And Assess The Resulting Mechanical Properties. The Findings Contribute Valuable Insights Into The Potential Applications Of Locally Available Resources In The Synthesis Of Catalysts With Desirable Mechanical Attributes.

Keywords: Zeolite-Y, Zsm-5, Catalysts, Locally Available Clays, Mechanical Properties, Compressive Strength, Abrasion Resistance, Material Characterization.

250. "Integration Of Atomizer Into Economizer System For Improved Fuel Efficiency In PetrolEngines"

[1]Mr. Prabahar K N, Associate Professor,

[2]Crown Meshak J, [3]Dineshkumar B, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Explores The Integration Of An Atomizer Into The Economizer System As A Novel Approach To Enhance Fuel Efficiency In Petrol Engines. The Study Involves The Design And Implementation Of An Integrated System That Optimizes Fuel Atomization Within The Economizer, Aiming To Improve Combustion Efficiency And Reduce Fuel Consumption. Through Experimental Testing, Performance Evaluations, And Emission Analyses, The Research Aims To Assess The Impact Of The Integrated Atomizer-Economizer System On Overall Engine Efficiency And Environmental Sustainability. The Findings Contribute Valuable Insights Into Innovative Strategies For Optimizing Fuel Utilization In Petrol Engines, Paving The Way For More Efficient And Environmentally Friendly Automotive Technologies.

Keywords: Atomizer, Economizer System, Petrol Engines, Fuel Efficiency, Combustion Optimization, Emission Reduction, Innovative Engine Technologies.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

251. "Improvement Of Thermal Power Systems Performance Through Energy And ExergyAnalysis"

[1]Mr. Prabahar K N, Associate Professor,

[2]Dinesh Kumar R, [3]Dinesh Kumar V, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On Enhancing The Performance Of Thermal Power Systems Through A Comprehensive Energy And Exergy Analysis. The Study Involves The Systematic Evaluation Of Energy And Exergy Flows Within The Power System, Identifying Areas Of Inefficiency And Opportunities For Improvement. Through A Combination Of Mathematical Modeling, Simulation, And Data Analysis, The Research Aims To Optimize Various Components, Such As Boilers, Turbines, And Heat Exchangers, To Increase Overall System Efficiency. The Findings Contribute Valuable Insights Into The Strategic Enhancement Of Thermal Power Systems, Providing A Foundation For More Sustainable And Resource-Efficient Energy Production.

Keywords: Thermal Power Systems, Energy Analysis, Exergy Analysis, Performance Improvement, Efficiency Optimization, Mathematical Modeling, Heat Exchangers, Sustainable Energy.

252. "Heat And Mass Transfer Analysis Of A Gari Frying Machine"

[1]Dr. Joseph Raviselvan R, Professor,

[2]Faizal Dasthahir S.B, [3]Gopi P, Iii Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Comprehensive Analysis Of Heat And Mass Transfer In A Gari Frying Machine, A Critical Component In The Processing Of Cassava Into Gari, A Staple Food In Many African Countries. The Study Involves The Development Of Mathematical Models And Simulations To Assess The Heat And Mass Transfer Phenomena During The Frying Process. Through Experimental Validations And Computational Analyses, The Research Aims To Understand The Thermal And Moisture Dynamics Within The Frying Machine, Optimizing Its Design And Operational Parameters For Efficient Gari Production. The Findings Contribute Valuable Insights Into Enhancing The Performance Of Gari Frying Machines, Ensuring Consistent Product Quality While Minimizing Energy Consumption.

Keywords: Gari Frying Machine, Heat Transfer Analysis, Mass Transfer Analysis, Cassava Processing, Mathematical Modeling, Simulation, Process Optimization, Food Processing.

253. "Fracture Mechanics Analysis Of Glass Fiber Reinforced Polyester Composites (Gfrp)Under Impact Loading"

[1]Dr. Joseph Raviselvan R, Professor,

[2]Gunaseelan R, [3]Hariharan S, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Fracture Mechanics Behavior Of Glass Fiber Reinforced Polyester Composites (Gfrp) When Subjected To Impact Loading. The Study Involves Experimental Testing And Numerical Simulations To Analyze The Response Of Gfrp Composites Under Varying Impact Conditions. Through A Combination Of Impact Tests, Fracture Toughness Measurements, And Finite Element Analysis, The Research Aims To Characterize The Fracture Behavior, Damage Evolution, And Energy Absorption Capabilities Of Gfrp Composites. The Findings Provide Valuable Insights Into The Impact Resistance And Fracture Mechanisms Of Gfrp, Aiding In The Optimization Of Composite Materials For Applications In Industries Such As Automotive, Aerospace, And Construction.

Keywords: Fracture Mechanics, Glass Fiber Reinforced Polyester Composites, Impact Loading, Fracture Toughness, Finite Element Analysis, Damage Evolution, Composite Materials.

PRINCIPAL
Indra Ganesan College of Engineer
IG Valley, Madurai Main R
Manikandam, Trichy-620

254. "Failure Evaluation Of Engineering Projects: A Case Study Of A Pipeline And ProductMarketing Company"

[1]Dr. Joseph Raviselvan R,

Professor, [2]Jayaranjan As, [3]Joyal S, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Undertakes A Detailed Examination Of Failures In Engineering Projects, Focusing On A Case Study Involving A Pipeline And Product Marketing Company. The Study Involves A Comprehensive Analysis Of The Factors Contributing To Project Failures, Encompassing Aspects Such As Design, Construction, Operation, And Maintenance. Through A Combination Of Forensic Engineering, Root Cause Analysis, And Lessons Learned From The Case Study, The Research Aims To Identify Critical Insights Into Failure Modes, Risk Management, And Strategies For Project Improvement. The Findings Provide Valuable Information For Project Managers, Engineers, And Stakeholders To Enhance The Success And Longevity Of Engineering Projects In Similar Contexts.

Keywords: Failure Evaluation, Engineering Projects, Case Study, Pipeline And Product Marketing Company, Forensic Engineering, Root Cause Analysis, Risk Management, Project Improvement.

255. "Exergetic Efficiency Analysis Of A Passive Solar Air Heater With Phase Change EnergyStorage Material"

[1]Dr. Joseph Raviselvan R, Professor,

[2]Karthick M, [3]Karthik L, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Exergetic Efficiency Analysis Of A Passive Solar Air Heater Integrated With Phase Change Energy Storage Material. The Study Involves The Investigation Of How Phase Change Materials (Pcms) Affect The Exergetic Performance Of A Solar Air Heater System. Through A Combination Of Mathematical Modeling, Experimental Testing, And Exergy Analysis, The Research Aims To Quantify The Impact Of Pcm Incorporation On Energy Storage, Heat Transfer Efficiency, And Overall Exergetic Efficiency Of The Solar Air Heater. The Findings Provide Valuable Insights Into The Potential Enhancements In Thermal Energy Storage And Utilization, Contributing To The Optimization Of Passive Solar Systems For Sustainable Heating Applications.

Keywords: Passive Solar Air Heater, Phase Change Energy Storage, Exergetic Efficiency, Phase Change Materials, Solar Thermal Systems, Energy Storage, Heat Transfer Efficiency, Sustainable Heating.

256. "Evaluation Of The Mechanical Properties Of Polypropylene/Calcium CarbonateNanocomposite Under Various Creep Conditions"

[1]Dr. Joseph Raviselvan R, Professor,

[2]Karthikeyan K, [3]Karupaiya R, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On A Comprehensive Evaluation Of The Mechanical Properties Of Polypropylene/Calcium Carbonate Nanocomposite Under Different Creep Conditions. The Study Involves The Formulation And Fabrication Of Nanocomposite Specimens, Followed By Systematic Creep Testing At Various Stress Levels And Temperatures. Through A Combination Of Mechanical Testing, Microstructural Analysis, And Material Characterization Techniques, The Research Aims To Assess The Nanocomposite's Creep Behavior, Including Creep Deformation, Creep Rupture, And Time-Dependent Mechanical Properties. The Findings Provide Valuable Insights Into The Performance Of Polypropylene/Calcium Carbonate Nanocomposites Under Varying Creep Conditions, Offering Essential Information For Applications In Load-Bearing Structures And Engineering Components.

Keywords: Polypropylene, Calcium Carbonate, Nanocomposite, Mechanical Properties, Creep Conditions, Creep Deformation, Creep Rupture, Time-Dependent Behavior, Material Characterization

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

257. "Evaluation Of Mechanical And Corrosion Properties Of Mild Steel In EnvironmentsInhibited By Parkia Biglobosa Extracts"

[1]Mr. Manickam R, Assistant Professor,

[2]Kathiravan M, [3]Kristen Kennis K, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Conducts A Thorough Evaluation Of The Mechanical And Corrosion Properties Of Mild Steel In Different Environments Inhibited By Extracts From Parkia Biglobosa, Commonly Known As African Locust Bean. The Study Involves The Formulation And Application Of Inhibitors Derived From Parkia Biglobosa To Assess Their Impact On The Mechanical Strength And Corrosion Resistance Of Mild Steel. Through A Combination Of Corrosion Testing, Mechanical Analysis, And Surface Characterization Techniques, The Research Aims To Provide Insights Into The Effectiveness Of Parkia Biglobosa Extracts As Corrosion Inhibitors. The Findings Contribute Valuable Information For Developing Eco-Friendly Corrosion Protection Strategies For Mild SteelIn Various Applications.

Keywords: Parkia Biglobosa Extracts, Mild Steel, Mechanical Properties, Corrosion Resistance, Corrosion Inhibitors, Eco-Friendly Protection, African Locust Bean, Environmentally FriendlyCorrosion Inhibition.

258. "Energy Benchmarking And Carbon Footprint Reduction Opportunities In Cement Manufacturing Processes"

[1]Mr. Manickam R, Assistant Professor,

[2]Kumaran R, [3]Manikandan N, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Critical Analysis Of Energy Consumption Patterns And The Identification Of Carbon Footprint Reduction Opportunities In Cement Manufacturing Processes. The Study Involves Comprehensive Energy Benchmarking, Examining Various Stages Of Cement Production For Efficiency And Sustainability. Through A Combination Of Process Optimization, Alternative Fuel Utilization, And Carbon Capture Strategies, The Research Aims To Propose Effective Measures For Reducing Carbon Emissions And Improving The Overall Environmental Performance Of Cement Manufacturing. The Findings Provide Valuable Insights For The Industry, Policymakers, And Stakeholders To Enhance Sustainability Practices And Contribute To Global Efforts In Combating Climate Change.

Keywords: Energy Benchmarking, Carbon Footprint Reduction, Cement Manufacturing, Sustainability, Process Optimization, Alternative Fuels, Carbon Capture, Environmental Performance.

259. Title: "Effects Of Gas Metal Arc Welding Parameters On The Mechanical And Corrosion Behavior Of Austenitic Stainless Steel In Different Environments"

[1]Mr. Manickam R, Assistant Professor,

[2]Mathiyarasan S, [3]Mohamed Burose A, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Investigates The Influence Of Gas Metal Arc Welding (Gmaw) Parameters On The Mechanical Properties And Corrosion Behavior Of Austenitic Stainless Steel When Exposed To Various Environments. The Study Involves Systematic Variations In Gmaw Parameters Such As Welding Current, Voltage, And Travel Speed To Analyze Their Impact On Weld Quality. Through A Combination Of Mechanical Testing, Corrosion Assessments, And Microstructural Analysis, The Research Aims To Understand The Relationships Between Welding Parameters, Resulting Microstructure, And The Performance Of Stainless Steel Welds In Different Corrosive Environments. The Findings Provide Essential Insights For Optimizing Gmaw Processes To Achieve Superior Mechanical And Corrosion Resistance Properties In Austenitic Stainless Steel.

Keywords: Gas Metal Arc Welding, Austenitic Stainless Steel, Welding Parameters, Mechanical Properties, Corrosion Behavior, Microstructural Analysis, Weld Quality Optimization.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 023

260. Title: "Impact Of Faulty Design And Construction On Building Maintenance: A Case Study Analysis"

[1]Mr. Manickam R, Assistant Professor,

[2]Mohamed Ishaq S, [3]Mohandoss M, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Delves Into The Repercussions Of Faulty Design And Construction On Building Maintenance Through An In-Depth Case Study Analysis. The Study Involves The Examination Of Buildings With Identified Design And Construction Deficiencies To Understand The Subsequent Challenges And Costs Associated With Maintenance. Through A Combination Of Structural Assessments, Performance Evaluations, And Cost Analyses, The Research Aims To Highlight The Direct Correlations Between Faulty Design/Construction And Increased Maintenance Requirements. The Findings Provide Crucial Insights For Architects, Engineers, And Stakeholders To Improve Design And Construction Practices, Ultimately Contributing To The Long-Term Sustainability And Cost-Effectiveness Of Building Maintenance.

Keywords: Faulty Design, Construction Defects, Building Maintenance, Case Study, Structural Assessments, Performance Evaluations, Cost Analysis, Sustainability.

261. " Dynamic Modeling Of Machinery Replacement Problems"

[1]Mr. Manickam R, Assistant Professor,

[2]Muralidharan R, [3]Mutharasu D, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Dynamic Modeling Of Machinery Replacement Problems, Addressing The Complex And Evolving Nature Of Equipment Lifecycle Management. The Study Involves The Development Of Mathematical Models That Account For Various Factors Influencing Machinery Replacement Decisions Over Time. Through Dynamic Modeling, The Research Aims To Consider Factors Such As Technological Advancements, Maintenance Costs, And Operational Efficiency To Optimize Machinery Replacement Strategies. The Findings Provide Valuable Insights Into Dynamic Decision-Making Processes For Machinery Replacement, Assisting Industries In Achieving Cost-Effective And Efficient Equipment Management.

Keywords: Dynamic Modeling, Machinery Replacement, Equipment Lifecycle, Technological Advancements, Maintenance Costs, Operational Efficiency, Decision-Making Processes.

262. "Development Of Environmentally Friendly Biodegradable Cutting Fluid From SoyaBeans"

[1]Mr. Sebastin Joyal J, Assistant Professor,

[2]Muthu Kumar S, [3]Naveen Raj R, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Development Of An Environmentally Friendly And Biodegradable Cutting Fluid Derived From Soya Beans. The Study Involves The Extraction And Formulation Processes To Create A Cutting Fluid That Is Sustainable, Effective, And Environmentally Conscious. Through A Combination Of Experimental Testing, Chemical Analysis, And Performance Evaluations, The Research Aims To Assess The Lubricating And Cooling Capabilities Of The Soya Bean-Based Cutting Fluid. The Findings Provide Valuable Insights Into Sustainable Alternatives For Traditional Cutting Fluids In Machining Processes, Contributing To The Reduction Of EnvironmentalImpact In Metalworking Industries.

Keywords: Environmentally Friendly, Biodegradable, Cutting Fluid, Soya Beans, Sustainable Machining, Lubrication, Cooling, Metalworking.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

263. "Development Of Automobile Disk Brake Pads Using Eco-Friendly Periwinkle Shell And Fan Palm Shell Materials"

[1]Mr. Sebastin Joyal J, Assistant Professor,

[2]Parthiban R, [3]Pradeep N, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Development Of Environmentally Sustainable Automobile Disk Brake Pads By Incorporating Eco-Friendly Materials Such As Periwinkle Shell And Fan Palm Shell. The Study Involves The Extraction And Processing Of These Natural Materials To Create Brake Pad Formulations With Improved Eco-Friendliness. Through A Combination Of Material Characterization, Friction And Wear Testing, And Performance Evaluations, The Research Aims To Assess The Viability Of Periwinkle Shell And Fan Palm Shell As Alternatives To Conventional Brake Pad Materials. The Findings Provide Valuable Insights Into The Potential Of Utilizing Natural,

Renewable Resources In The Automotive Industry, Contributing To The Development Of More Eco-Friendly Braking Solutions.

Keywords: Eco-Friendly Materials, Brake Pads, Periwinkle Shell, Fan Palm Shell, Sustainable Automotive, Friction And Wear Testing, Material Characterization.

264. "Development And Performance Evaluation Of An Agitated Quenching Tank/Bath"

[1]Mr. Sebastin Joyal J, Assistant Professor,

[2]Praveen Kumar J, [3]Praveen Kumar M, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Development And Performance Evaluation Of An Agitated Quenching Tank/Bath For Heat Treatment Processes. The Study Involves The Design And Construction Of A Quenching Tank Equipped With An Agitation System To Enhance The Uniformity And Speed Of Heat Dissipation During The Quenching Process. Through A Combination Of Experimental Testing, Heat Transfer Analysis, And Performance Assessments, The Research Aims To Evaluate The Effectiveness Of The Agitated Quenching Tank In Achieving Desirable Material Properties, Such As Hardness And Microstructure, In Heat-Treated Components. The Findings Provide Valuable Insights Into Optimizing Heat Treatment Processes Through Enhanced Quenching Techniques For Improved Material Performance.

Keywords: Agitated Quenching Tank, Heat Treatment, Performance Evaluation, Heat Dissipation, Material Properties, Hardness, Microstructure, Process Optimization.

265. "Determination Of The State Of Stress Between Adhesively Bonded Single Lap-Joints"

[1]Mr. Sebastin Joyal J, Assistant Professor,

[2]Premkumar R, [3]Ramachandran M, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Determination Of The State Of Stress Within Adhesively Bonded Single Lap-Joints, A Critical Aspect Of Assessing The Performance And Structural Integrity Of Bonded Assemblies. The Study Involves Experimental Testing And Numerical Simulations To Analyze The Stress Distribution Within The Adhesive Layer Of Single Lap-Joints Under Various Loading Conditions. Through A Combination Of Finite Element Analysis, Strain Measurements, And Stress Characterization, The Research Aims To Provide A Comprehensive Understanding Of The Stress State In Adhesively Bonded Joints. The Findings Contribute Valuable Insights Into Optimizing Adhesive Bonding Processes And Ensuring The Reliability Of Bonded Structures In Engineering Applications.

Keywords: Adhesive Bonding, Single Lap-Joints, State Of Stress, Finite Element Analysis, Experimental Testing, Stress Distribution, Structural Integrity, Bonded Assemblies.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

266. "Design, Simulation, Construction, And Performance Evaluation Of A Solar Oven"

[1]Mr. Sebastin Joyal J, Assistant Professor,

[2]Ramakannan A, [3]Revanth S, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Comprehensive Process Of Designing, Simulating, Constructing, And Evaluating The Performance Of A Solar Oven. The Study Involves The Conceptualization Of The Solar Oven Design, Numerical Simulations To Optimize Its Features, Actual Construction Based On The Simulated Design, And Rigorous Performance Evaluations Under Real- World Conditions. Through A Combination Of Experimental Testing, Temperature Monitoring, And Efficiency Assessments, The Research Aims To Provide Insights Into The Effectiveness Of The Solar Oven In Harnessing Solar Energy For Cooking Applications. The Findings Contribute Valuable

Information For Optimizing Solar Oven Designs, Enhancing Energy Efficiency, And Promoting Sustainable Cooking Practices.
Keywords: Solar Oven, Design, Simulation, Construction, Performance Evaluation, Renewable Energy, Sustainable Cooking, Energy Efficiency.

267. "Design, Simulation, Construction, And Performance Comparison Of Mixed-Mode SolarCrop Dryers With And Without Thermal Storage"

[1]Mr. Veera Jagatheeshwaran J S, Assistant Professor,

[2]Sabarinathan P, [3]Saffar Hussain Sb, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Undertakes A Comprehensive Investigation Into The Design, Simulation, Construction, And Performance Comparison Of Mixed-Mode Solar Crop Dryers, With A Specific Focus On Evaluating The Impact Of Thermal Storage. The Study Involves Conceptual Design, Numerical Simulations To Optimize The Dryer Configurations, Physical Construction Based On The Simulated Designs, And Subsequent Performance Comparisons Between Systems With And Without Thermal Storage. Through A Combination Of Experimental Testing, Moisture Content Analysis, And Efficiency Assessments, The Research Aims To Provide Valuable Insights Into The Effectiveness Of Mixed-Mode Solar Crop Dryers And The Role Of Thermal Storage In· Enhancing Drying Efficiency. The Findings Contribute To The Advancement Of Sustainable And Efficient Agricultural Post-Harvest Processing Technologies.
Keywords: Solar Crop Dryers, Mixed-Mode Drying, Thermal Storage, Design, Simulation, Construction, Performance Comparison, Agricultural Post-Harvest Processing.

268. "Design, Development, And Performance Evaluation Of A Multiple Sandcrete BlocksMoulding Machine"

[1]Mr. Veera Jagatheeshwaran J S, Assistant Professor,

[2]Sairaj M, [3]Santhosh M, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Systematic Design, Development, And Performance Evaluation Of A Multiple Sandcrete Blocks Moulding Machine, Aiming To Enhance The Efficiency And Productivity Of The Block Manufacturing Process. The Study Involves Conceptual Design, Engineering Development, And Construction Of A Machine Capable Of Producing Multiple Sandcrete Blocks Simultaneously. Through A Combination Of Experimental Testing, Production Rate Assessments, And Quality Evaluations, The Research Aims To Provide Insights Into The Effectiveness Of The Developed Moulding Machine In Terms Of Speed, Consistency, And Quality Of Sandcrete Block Production. The Findings Contribute To Advancements In The Construction Industry, Offering A More Efficient And Productive Approach To Sandcrete Block Manufacturing.
Keywords: Sandcrete Blocks, Moulding Machine, Design, Development, Performance Evaluation, Construction Industry, Productivity Enhancement, Quality Assessments.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

269. "Design, Construction, And Testing Of An Outward Radial-Flow Reaction Water Turbine"

[1]Mr. Veera Jagatheeshwaran J S, Assistant Professor,
[2]Saravannan R, [3]Selva Kumar S, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Focuses On The Systematic Process Of Designing, Constructing, And Testing An Outward Radial-Flow Reaction Water Turbine. The Study Involves Conceptualizing The Turbine Design, Engineering Construction Based On The Design Specifications, And Rigorous Testing Under Various Operational Conditions. Through A Combination Of Experimental Testing, Efficiency Assessments, And Performance Evaluations, The Research Aims To Provide Insights Into The

Effectiveness Of The Outward Radial-Flow Reaction Turbine In Harnessing Water Energy. The Findings Contribute Valuable Information For Optimizing Water Turbine Designs, Enhancing Energy Conversion Efficiency, And Promoting Sustainable Hydropower Solutions.
Keywords: Radial-Flow Reaction Water Turbine, Design, Construction, Testing, Hydropower, Energy Conversion Efficiency, Sustainable Energy.

270. "Design, Construction, And Testing Of A Zeolite-Water Solar Adsorption Refrigerator"

[1]Mr. Veera Jagatheeshwaran J S, Assistant Professor,
[2]Shyam Sundar R, [3]Solairaj P, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Undertakes A Systematic Approach To The Design, Construction, And Testing Of A Zeolite-Water Solar Adsorption Refrigerator. The Study Involves The Conceptualization Of The Refrigerator Design, Engineering Construction Based On The Design Specifications, And Thorough Testing Under Solar-Driven Operating Conditions. Through A Combination Of Experimental Testing, Cooling Performance Assessments, And Efficiency Evaluations, The Research Aims To Provide Insights Into The Viability And Effectiveness Of The Zeolite-Water Adsorption System In Harnessing Solar Energy For Refrigeration. The Findings Contribute Valuable Information For Optimizing Solar Adsorption Refrigeration Technologies And Promoting Sustainable And Energy-Efficient Cooling Solutions.
Keywords: Zeolite-Water Adsorption Refrigerator, Design, Construction, Testing, Solar Energy, Cooling Performance, Efficiency Evaluations, Sustainable Refrigeration.

271. "Design, Construction, And Testing Of A Charcoal-Fired Crucible Furnace For Melting10kg Of Aluminum"

[1]Mr. Veera Jagatheeshwaran J S, Assistant Professor,
[2]Sudhakar R, [3]Sundaramaran P, Iv Year Student, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Encompasses The Systematic Design, Construction, And Testing Of A Charcoal-Fired Crucible Furnace Tailored For The Melting Of 10kg Of Aluminum. The Study Involves The Conceptualization Of The Furnace Design, Engineering Construction Based On Specified Criteria, And Comprehensive Testing To Evaluate Its Performance Under Operational Conditions. Through A Combination Of Experimental Testing, Temperature Measurements, And Efficiency Assessments, The Research Aims To Provide Insights Into The Effectiveness Of The Charcoal-Fired Crucible Furnace For Aluminum Melting Applications. The Findings Contribute Valuable Information For Optimizing Furnace Designs, Enhancing Energy Efficiency, And Promoting Sustainable Metal Melting Practices.
Keywords: Charcoal-Fired Crucible Furnace, Design, Construction, Testing, Aluminum Melting, Experimental Testing, Temperature Measurements, Energy Efficiency, Sustainable Metal Melting.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

272. Stabilization of Single-axis Gimbal System with Cascade PIDController using Relay Feedback Approach

Dharunkumar R [1], Gunaseelan [2], DR. ANUSUYA M [3]

[3] Assistant Professor, [12] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering,

Abstract

In target tracking applications for pointing and tracking systems, an inertial stabilization subsystem is used for maintaining a tracking sensor always pointing towards a target irrespective of base motion. The stabilization of sensor is achieved by placing the sensor in a gimbal system and forming a control system for allowing the gimbal to follow a rate command by attenuating all the disturbances caused in the gimbal. In this paper, the stabilization of a single axis gimbal is achieved with a cascade proportional-integral-derivative (PID) controller. The equations of motion for the gimbal are obtained from a two-axis gimbal kinematics. The controller parameters have been found by using relay feedback method and the controller performance is simulated in MATLAB/Simulink. Simulation results clearly indicate that the performance of gimbal stabilization system is improved with cascade PID controller than a single PID controller.

Keywords: Stabilization, gimbal, Dc Motor, Cascade Control, Relay, Feedback, Tuning.

273. Numerical analysis of Aerodynamic Gust Response using the Open-Source SU2 Code

Iyyapanmani A [1], Kalanchiya Muniyaraj B [2], DR. ANUSUYA M [3]

[3] Assistant Professor, [12] U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering,

Abstract

CFD has been used extensively in the past to compute gust responses of different flow configurations. Standard University approaches to incorporate a gust model into the governing equations which is based on boundary conditions, known as the far-field boundary condition approach (FBC) or through modifying each computational cell in the domain, known as the field velocity method (FVM). Recently, researchers demonstrated that the FVM approach fails to account for the effect of the body on the gust itself, and derived a new method – split velocity method (SVM). The SVM differs from the FVM through the addition of a source term which has major role to play. Nevertheless, both the SVM and FVM methods are easy to implement in existing CFD codes as it can be proved that the gust velocities appear as moving grid velocities to the governing flow equations on a moving mesh. Currently, the SVM has been tested out in the Open- Source code SU2.SU2 is the Stanford University Unstructured density based flow solver and is more popular for external flow applications such as the one presented in this work. To verify the SVM implementation, results are compared with the inviscid FVM and SVM results of Wales et al. The case used was that of a 1- cosine vertical gust at Mach 0.3 free-stream conditions impacting a NACA 0012 airfoil. The computational domain with 10216 unstructured elements is initialized with a steady flow solution and the gust velocity field starts to progress from the inlet of the computational domain. Having obtained confidence in the computed results, further work involves computing the gust response of the NASA CRM model.

Keywords: SU2, SVM, NACA, FVM, CFD, Gust, SVM, NASA CRM

274. Study on Influence of Operating Wind Turbine on Upstream and Downstream flow using K-epsilon turbulence Model

Manikandan M [1], Mohana Priya S [2], DR. ANUSUYA M [3]

[3]Assistant Professor, [12]U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering,

Abstract

The influence of upstream and downstream flow and its effect due to the operating wind turbine at various wind speeds are important in considering the wind turbine spacing in a turbine park. In this research paper study is made towards what extent the wind turbine with a rotor diameter D, influences the flow in upstream and downstream computationally. The reduction in the maximum power coefficient strongly depends on the distance between the turbines and the operating condition of the upstream turbine. Presently, the standard power curve measurements assumes that the turbine wind condition has negligible influence on the flow at two times the rotor diameter upstream. However, the upstream effect due to the operating wind turbine beyond two times the rotor diameter (2D) leads to the consequences of the power estimate for any given turbine and this leads to the wind farm for total power production. Similarly, the downstream of the operating wind turbine is equally important in terms of the power production of the wind turbine park. Numerical simulations are performed on a wind turbine with a rotor diameter of 80 m and the tower height of 100 m with various blade pitch angles. The NACA – 63-425 aerofoil is selected for the blade profile in this analysis. The result shows that the influence of the pitch angle will not influence much difference in upstream flow and much difference in the downstream flow. However, at the distance more thantwo times (> 2D) of the rotor diameter upstream around 3% change in the velocity is observed when compared tothe free stream velocity. In the downstream, velocity the influence of operating wind turbine extends up to 6.5D fora velocity of 20m\s.

Keywords: Upstream effects, Downstream wake effect, Numerical simulation, Park power performance, pitchangle.

275. Experimental and numerical study to estimate drag effect due tocone fore-body on a Bluff body model

Muthuselvam A [1], Sudhakar R [2], DR. ANUSUYA M [3]

[3]Assistant Professor, [12]U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering,

Abstract

The subject of reduction in drag is an interesting problem with sample range of applications. At high Reynolds numbers the flow stream past a bluff body is portrayed by an extensive wake zone. The shear layers from the sharp corners sustain vortices to the wake. These vortices are shed constantly at downstream. The side faces and back face subjected to low influence, while the front face is subjected to high influence. With this flow stream pattern, pressure drag assumes to be very large for feign bodies with non-roundabout cross-segment and sharp corners with rounded back. The numerical and experimental investigation was carried out for the three-dimensional flow, with Reynolds number based on the hydraulic diameter of base model(d_{h2}) in the range 1.0-1.8 x 10^5,the fore body width $d1/d_{h2}$ and gap ratio g/d_{h2} were varied between 0.25 to 0.625 and 0.25 to 1.75 respectively. The first configuration was studied on the base model alone and its drag coefficient showed only a small variation with Reynolds number; C_{Do} = 1.18 at Re = 1 x 10^5, C_{Do} = 1.33 at Re = 1.4 x 10^5, C_{Do} = 1.38 at Re = 1.8 x 10^5.The second configuration studied was base model with cone shape fore-body. The finite volume solver ANSYS FLUENT is used to obtain the numerical solution of the three-dimensional steady-state, Reynolds averaged Navier–Stokes (RANS) equations. The numerical studies have been carried out by using validated k–ω (SST) turbulence model.For the combination with diameter ratio (d_1/ d_{h2} = 0.625) and gap ratio (g/ d_{h2}=1.0) the drag reduction was achievedabout 60%.

Keywords: Bluff model, Reynolds Number, Shielding effect, Profile drag, Turbulence intensity.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

276. Numerical Study on Structural Health Monitoring for UnmannedAerial Vehicle

Vishwa S [1], Sudhakar R [2], DR. ANUSUYA M [3]

[3]Assistant Professor, [12]U.G Student Department Of Civil Engineering. Indra Ganesan College Of Engineering,

Abstract

Unmanned Aerial Vehicles (UAVs) are one of the important types of aircraft, which are controlled by a remote controller or pre-programmed method. Interest in UAVs for reconnaissance and surveillance has emerged steadily, in which the UAV design methodologies is designed based on trail-and-error production. Nowadays UAV is being proposed for many critical applications including crack detection on the buildings, disaster monitoring, detection of wildfires and animals, border surveillance, etc. therefore the designer must provides an UAV, which have the high lifetime, more secure on-flight and low maintenance cost in order to survive at critical infrastructure maintenance and inspection. Survive at the critical infrastructure may creates the structural failures of an UAV, which leads to reduce the usage of drones in the difficult applications. The main purpose of this paper is to provide asecure UAV for critical infrastructure surveillance by develop a structural health monitoring system, which is able todetect the structural crack on its surface based on image processing technique. The dynamic response of an UAV surface which is made-up of composite material is detected using camera sensor in order to reduce the maintenance cost as well as on-board accidents. Damage is simulated by slightly varying locally the mass of the panel at differentzones of the structure. The proposed damage detection coding utilizes the collected image data with inclusion of different angles and different maneuvering, through various advanced levels of image processing techniques to identify the damage and its location. Number of cameras and its fixing location are depending upon an UAV sizeand its nature of work. In this work totally three cameras are suggested, which are planned to located in UAV tail part, nose part and surveillance location. The reference model of an UAV has been designed by CATIA. Crack detection simulation and image processing methodologies such as crack growth percentage, image orientation test are completed by MATLAB.
Keywords: Cracks, Feature extraction, Health monitoring, Numerical Simulation, Structural damage, UAV

277. Conceptual Design and Computational Investigation of the Secondary inlet of Rotary-wing Aircraft Engine

Abinesh A [1], Anbarasan M [2], DR. ANUSUYA M [3]

[3]Assistant Professor, [12]U.G Student Department Of Mechanical Engineering. Indra Ganesan College Of Engineering,.

Abstract

This paper presents an approach for optimizing the design point inlet mass flow rate and overall pressure ratio of an existing secondary inlet of rotary-wing aircraft engine in order to minimize drag over a medium transport-utility. The objective of this optimization is to improve the effectiveness of a rotary-wing aircraft propulsion system by re-designing the existing secondary inlet shapes i.e., scoop. The design of scoop for drag optimization and engine compartment cooling is analyzed for a rotary-wing aircraft with the help of ComputationalFluid Dynamics (CFD) analysis. Instead of the scoop, the design of the louver is used to reduce the drag and various louver profiles is analyzed. The design of louver also considered for low power consumption. Based on the numerical simulation low drag component is selected as a best air intake in rotary-wing aircraft engine. Acommercial CAD package, CATIA V5 is used to model the scoop and louver with a geometric tolerance. Numericalsimulation of scoop and louver is carried out using ANSYS Workbench 16.2.
Keywords: Drag; Louver; Optimization; Rotary-wing aircraft; Scoop

278. Conceptual Design and Structural Analysis of Composite MicroAerial Vehicle

Arunkumar M [1], Balamurugan R [2], DR. ANUSUYA M [3]

[3]Assistant Professor, [12]U.G Student Department Of Mechanical Engineering. Indra Ganesan College Of Engineering

Abstract

Interest in Micro Aerial Vehicles (MAVs) for reconnaissance and surveillance has emerged steadily, in which the present MAV design methodologies is based on trail-and-error method. This paper gives an idea about conceptual design and physics involved in structural analysis of high performance MAV which can able to operate at any complicated working environment. The term high performance explains the MAV speed and its strength, speed and quick mission process of a MAV to be achieved by its integrated design, which is characterized by the use of two counter-rotating propellers for vertical propulsive and able to execute the hovering mode. Also two propellers are located in the rear part of the MAV for forward force and yawing control. Unlike a conventional aircraft, the interaction between aerodynamic, propulsion and structural forces is not balanced in the MAV design also due to the effect of aerodynamic loads acts in the MAVs may cause to fail at unpredictably high an amount, which creates the MAVs to make structural analysis as important factors in its performance. The airframe and propellers of the MAV are preferred to be of composite materials, which allows for propeller flexibility without sacrificing durability. High lifetime and low probability of failures in terms of structural analysis is to be achieved by implementation of composite materials in MAV. The present work aims at performing a numerical simulation to be used for investigating structural behavior of the MAV, which made-up of Glass Fiber Reinforced Plastic (GFRP) by simulates the displacement and principal stress using Finite Element Method. The design process entailed the overall system design, component selection and placement in CATIA software package. Simulation of Stress and displacement throughout the composite MAV has been analyzed by ANSYS CAE package.

Keywords: Computational simulation, Conceptual analysis, GFRP, Integrated MAV.

279. Mechanical Characterization Studies on Cold Cracking Susceptibility of P92 Steel Weldments

Dhanushraja P [1], Durai Pandi A [2], DR. ANUSUYA M [3]

[3]Assistant Professor, [12]U.G Student Department Of Mechanical Engineering. Indra Ganesan College Of Engineering

Abstract

Creep or Cold flow is the material property in which it flows and ends in permanent deformation under the action of stresses even underneath the yield strength of the material. Creep is more spelled in high temperature applications like Gas turbines, Oil, Gas and Petrochemical industries. The core material used in such red hot applications will near its melting temperatures. So a promising material which battles this condition is mandatory in order to achieve higher efficiencies and reduce emissions of environmentally detrimental gases and to carpet new power generation of Super critical and ultra-super critical (USC) technologies. So, Chrome moly is the idyllic select of metal suggested to be incorporated in such technologies. Among the recent emerged ferritic martensitic steels, T/P92 has creep strength 30% higher than the currently used modified 9%Cr T/P91 steel and has been specified as one of the major alloys for the construction of USC plant. So for effective utilization of these chrome moly steels, both metallurgical and in service behavior should be investigated. This work investigates the base metal characterization of P92 steels experimentally by mechanical testing and micro-structural examination. The fracture surfaces of P 92 were also characterized by Scanning Electron Microscopy.

Keywords Creep, ultra-super critical, ferritic martensitic steels, Scanning Electron Microscopy.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

280. Development of Eco-Friendly Emission Control Unit Using TiO₂Coated Catalytic Converter

Ganana sekar S [1], Hariharan A [2], DR. ANUSUYA M [3]

[3]Assistant Professor, [1,2]U.G Student Department Of Mechanical Engineering. Indra Ganesan College Of Engineering

Abstract

Greenhouse gas emissions from transportation primarily come from burning fossil fuel in cars, bikes, buses, trucks, ships, and planes. When a liter of gasoline is burned, about 2.3 kg of CO_2 is released, For IC engine two- wheelers, fuel cycle CO_2 emissions are projected to rise from 6.68 to 111.63 million metric tons in 2021. In order to minimize CO_2 from two wheelers, this work deals with development of a prototype which is constructed and tested to measure CO_2 absorption compared with theoretical predictions. Titanium dioxide coated layer is used in a conventional catalytic converter which demonstrates the Photo Catalytic Effect of Titanium dioxide for reducing CO_2.

Keywords: CO_2, Catalytic Converter, Green House gases, Titanium dioxide (TiO_2), Photo Catalytic Effect

281. Design and Analysis of Suspension System for a three wheelerelectric vehicle

Harish Kumar P [1], Kanishkavardhini S [2], MRS.K.RAMYA [3]

[3]Assistant Professor, [1,2]U.G Student Department Of Mechanical Engineering. Indra Ganesan College Of Engineering,

Abstract

A suspension system is a part of an automobile that gives ride comfort or a cushioning effect to the driver by taking up all the sprung/unsprung masses that are acting on it due to the vehicle load.The load is applied in the form of compression such that the spring undergoes deflection and then the shocks are being absorbed and dissipated in the form of heat .This paper deals with the design and analysis of a suspension system for an electrical three wheeled vehicle and the spring designs are subjected to different loading conditions, altered material propertiesand geometrical changes for better performance. The models are designed and analyzed using ANSYS 16.2 by keeping an objective of cost and weight reduction.

Keywords: Suspension system, electric vehicle, three wheeler, FEA

282. Modeling and Simulation of power converters for Polymer Electrolyte Membrane Fuel Cell

Karthik Raj M [1], Kishor kumar D [2], MRS.K.RAMYA [3]

[3]Assistant Professor, [1,2]U.G Student Department Of Mechanical Engineering. Indra Ganesan College Of Engineering

Abstract

Development of mathematical model and control becomes the primary function of a transportation system. This system includes Polymer Electrolyte Membrane (PEM) Fuel Cell, Li-ion battery, DC- DC converters and load. Two power sources namely 50 kW fuel cell stack and the battery are employed in this system. The fuel cell acts as the prime source of power and is meant for charging the battery also. The battery is used during start-up and other peak load conditions.battery pack. The fuel cell, battery, converters and load are modeled and simulated using Matlab - Simulink environment. Investigations on the power distribution between the battery and the fuel cell is made. The performance of each component is analyzed.

Keywords: PEM fuel cell, dc-dc converter, lithium-ion battery pack, hybrid power system

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main
Manikandam, Trichy-620 012

283. Design and Analysis of LCV Chassis (Tata 407)

Loganathan C [1], Manikandan S [2], MRS.K.RAMYA [3]
[3]Assistant Professor, [12]U.G Student Department Of Mechanical Engineering. Indra Ganesan College Of Engineering

Abstract

LCV (Light Commercial Vehicle) is a commercial goods and passenger transport vehicle which is designed ruggedly and built with fuel efficient engine. The Chassis Frame serves as a member for supporting different components of the vehicle and its payload. It should be rigid enough to withstand the dynamic load conditions such as shock, twist, vibration and other stresses. In this paper a detailed study has been conducted on the design optimization of the chassis frame of TATA 407 with C, double C, I and Box type cross sections. A different material S-glass is also included for the analysis. It was found that S-glass has better mechanical characteristics and low weight to strength ratio than structural steel. The analysis results proved the above mentioned fact on the basis of maximum shear, equivalent elastic strain, equivalent stress and total deformation, particularly for the box section frame design than the other cross section designs. The overall chassis frame weight has got reduced upto 31% without compromising the functionality.

Keywords: **TATA 407 Frame, C Cross Section, I Cross Section, Box Cross Section, CATIA V5, ANSYS**

284. Study of Self Compacting Concrete with Partial Replacement ofSand by Quarry Dust

Mohamed Ashif A [1], Sanjay Kumar M [2], MRS.K.RAMYA [3]
[3]Assistant Professor, [12]U.G Student Department Of Mechanical Engineering. Indra Ganesan College Of Engineering

Abstract

Self-compacting concrete is a fluid mixture suitable for placing in structures with congested reinforcement without vibration. Self-compacting concrete development must ensure a good balance between deformability and stability. Also, compatibility is affected by the characteristics of materials and the mix proportions; it becomes necessary to evolve a procedure for mix design of SCC. Self-compacting concrete, also referred to as self- consolidating concrete, is able to flow and consolidate under its own weight and is de-aerated almost completely while flowing in the formwork. It is cohesive enough to fill the spaces of almost any size and shape without segregation or bleeding. This makes SCC particularly useful wherever placing is difficult, such as in heavily- reinforced concrete members or in complicated work forms. All SCC mixtures exhibited greater values in both splitting tensile and compressive strength after being tested, compared to normal concrete. The splitting tensile strength increased by approximately 30%, whilst the compressive strength was around 60% greater. In addition, the SCC tensile strengths after 7 days were almost as high as those obtained after 28 days for normal concrete. This was possible due to the use of mineral and chemical admixtures, which usually improve the bonding between aggregate and cement paste, thus increasing the strength of concrete. The paper presents a study of hardened properties of self- compacting concrete such as compressive strength at 7 days and 28 days. Split tensile strength at 7 days and 28 days. Flexural strength at 7, 28, 56 and 90 days. Also studied about the structural behavior of self-compacting concrete with casting and testing reinforced concrete beam. Deflection test carried out and results are discussed in this report.

Keywords: Self Compacting Concrete, Quarry dust, Self-Consolidating Concrete, Super plasticizers, Viscosity-Modifying Agents, Normally Vibrated Concrete, ASTM, Glass Powder, Fly ash, EFNARC

PRINCIPAL
Indra Ganesan College of Engineer
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

285. Experimental Study on Flexural Response of Engineered Cementitious Composite (ECC) Strengthened Reinforced ConcreteBeams

Saranya Sree T R [1], Saravanan M [2], MRS.K.RAMYA [3]

[3]Assistant Professor, [12]U.G Student Department Of Mechanical Engineering. Indra Ganesan College Of Engineering

Abstract

Engineered Cementitious Composite (ECC) is an ultra-ductile cement-based material reinforced with fibers. It is characterized by high tensile ductility and tight crack width control. ECC is emerging in broad applications to enhance the loading capacity and the durability of structures. However, ECC also faces a limitation on dimensional stability and on economical and sustainable issues. The micromechanics concepts, which support thedevelopment of ECC, are also briefly presented.

Results of the beam test indicate that brittle failures as shear failure and bond splitting failure observed in the RC beams can be prevented by using PVA-ECC in place of the concrete. As a result, the beams with PVA-ECC indicate excellent ductile manner. The result is a moderately low fiber volume fraction (<2%) composite which shows extensive strain-hardening.

Keywords: Engineered Cementitious Composite (ECC), PVA-ECC, Poly Carboxylic Ether, Pozzocrete dirk 60,ITZ(Interfacial transition zone), Fly Ash, Plastic Hinge, Self-consolidation, Pozzolana.

286. A Study on Seismic responses of Reinforced Concrete (RC) buildings with Lateral Force Resisting Systems

Sathishkumar V [1], Sheik Ameer M [2], MRS.K.RAMYA [3]

[3]Assistant Professor, [12]U.G Student Department Of Mechanical Engineering. Indra Ganesan College Of Engineering

Abstract

Today, tall buildings are a worldwide architectural phenomenon and it is a major challenge to study the impact and performance of tall structures under wind and seismic loading. In the present work, Time History Analysis and response spectrum analysis are carried out for a G+19 multistory Reinforced Concrete (RC) framed building taken from Panchal and Marathe (2011)1 ,with minor changes made in the building. This RC frame along with three types of lateral force resisting systems such as brick infill and shear walls in two different types of placements are considered for the analysis. The influence of the lateral force resisting systems in the reduction of peak responses such as absolute accelerations, displacements and drifts of the bare frame under four types of Time History Earth Quakes (THEQ) are found out using the SAP2000 software. based on responses of the building. The Linear Time History Analysis (LTHA) of the frames subjected to four types of THEQ such as El Centro (EC), Kobe (KO), Northridge (NR) and S_Monica (SM) are carried out. The responses shows that provision of both models of shear wall considered for the buildings in the present work reduces the seismic responses effectively and responses are within the allowable limits prescribed in IS1893 (Part 1) :2002. The effective arrangement of lateral load resisting systems is found out for the RC building also by the response spectrum analysis of all the three types of models with brick infill and shear wall provisions. The peak value of inter storey drifts are reduced by 66.67 % with the provision of lateral force resisting systems in the bare frame.

Keywords: absolute acceleration, brick infill, drifts, seismic responses, shear wall, time history analysis.

287. Seismic Response of Multistoreyed Steel Frame with Viscous Fluid –Scissor Jack Dampers

Thamaraiselvan K [1], Velmurugan M [2], MRS.K.RAMYA [3]

[3]Assistant Professor, [12]U.G Student Department Of Mechanical Engineering. Indra Ganesan College Of Engineering

Abstract

A 20-Storey benchmark steel moment resisting frame (Y. Ohtori et al., 2004) is taken for the study of seismic response reduction of the frame by providing viscous fluid dampers for scissor-jack mechanisms. The model linear time history analysis of the frame subjected to four types of time history earthquake loads with scissor-jack dampers is carried out using SAP2000 software. The four Time Histories considered for the frame analysis are N-S component of El Centro, N-S component of Kobe, N-S component of Northridge and S-E component of S_Monica. The Scissor-jack dampers are distributed along the height of the frame to reduce the seismic response of thebuilding. Among the four time history analysis, the peak responses such as absolute acceleration, displacements, drifts, damper displacements, and damper forces for the six different models of the frame with scissor-jack dampers are found out. The average response reduction values between the bare frame and the six models are presented in this paper. The optimum and cost effective placement of damper in the bare frame is arrived by comparing the peak average response reduction values of the models. The peak average response reduction values of the optimum model for absolute acceleration, displacements and drifts are 71.3, 46.9 and 53.1 respectively.

Keywords: absolute acceleration, drifts, peak responses, scissor-jack dampers.

288. Implementing challenges of Extended Producer Responsibility

Vigneswaran K [1], Velmurugan M [2], MRS.K.RAMYA [3]

[3]Assistant Professor, [12]U.G Student Department Of Mechanical Engineering. Indra Ganesan College Of Engineering

Abstract

The electrical wastes generally known as e-waste gets deposited once the life time of the electrical goods gets overed. E-waste prone to numerous health hazards even to death, if not disposed properly.For safe disposal of electronic goods wastes, a policy tool known as Extended Producer Responsibility (EPR) have been introduced by e- waste management and handling rules. Hence a study on disposal of e-waste have been undertaken on sectors which consumes bulk of electronic goods. Questionnaire survey, personal interview and group discussion was conducted with different stakeholders of electronic goods and their responses were recorded. Finally collections of discussions and suggestions have been reported.

Keywords: e-waste, EPR, questionnaire survey, personal interview, group discussion

289. Durability gaining in an old structure using Retrofitting Techniques

Vijaya kumar G [1], Yuvaraja A [2], MRS.K.RAMYA [3]

[3]Assistant Professor, [12]U.G Student Department Of Mechanical Engineering. Indra Ganesan College Of Engineering

Abstract

Retrofitting' of a structure mainly deals with the addition of updated technology in an old structure to improve the strength and durability of the structure. This study deals with the adoption of new retrofitting techniques, methodologies and ideas to improve the life time of the old buildings in an efficient way. Fiber wrappingis the technique discussed in this study. By adopting this we can overcome external cracks in concrete and masonry structures. e-glass fiber or carbon fiber is used for this technique. Epoxy chemical is used for strong setting of fibers into the structure. In this study compression strengths are identified for both ordinary concrete cubes and also fiber wrapped concrete cubes and identified the percentage of strength improvement.

Keywords: Retrofitting, Fiber Wrapping, Epoxy

Supporting Documents to be submitted to IQAC

Document Submission Date: 06.03.2024

Letter of correspondence / email with resource person	Yes
Invitation	Yes
Agenda	Yes
Participants List	Yes
Resource person's details	Yes
Photos with caption handed over	Yes
Certificate copy	NO
Foot note entry	Yes
Feedback summary	NO
Event Report	Yes
Any other details / Remarks	--

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

Indra Ganesan

COLLEGE OF ENGINEERING

Madurai Main Road (NH 456) Manikandam,Trichirappalli-620 012
(Approved by AICTE & Affliated to Anna University,Chennai)

DEPARTMENT OF MECHANICAL ENGINEERING

Mechanical Engineering Students' Teachers' Association

Certificate of Appreciation

This is to Certify that Mr./Ms.

of **KANNAN. P**

FINAL YEAR MECHANICAL ENGINEERING has

Participated in the Value Added Course Program in " 3D Interaction Design in Virtual Reality"

Conducted by Department of Mechanical Engineering, Indra Ganesan College Of Engineering,

Trichy 12 from **01.12.2016** to **07.12.2016** in during academic year **2016 - 2017**

Convenor

HOD Mech

Principal

CIRCULAR

Date : **08.05.2023**

Our college Cultural Committee in association with IQAC of IGCE is going to celebrate "**Mother's Day**" on **11th May 2023** . In this regard, the following competition will be conducted as per the schedule given below to celebrate the event.

S.No	Date	Competitions	Time	Venue
1.	11.05.2023	Dancing Competition	(10.00am-11.00am)	Engineering Block Auditorium

Interested students can register their names to the coordinators Mr. S.Sivaraman AP/S&H, Mrs. Mr.Roy AP/Eng on or before 11.05.2023

Cultural Committee Co-ordinator   Principal

Cc:

- Principal Office
- All students of UG and PG Classes
- All Faculty Members
- IQAC Co-ordinator
- Office file
- Notice Board

27. Title : Cross-Lingual Sentiment Analysis: Challenges AndSolutions

1. Dr.P.Subharajam,Assistant Professor, Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Gowtham C (Ii Yr), Student/ Cse ,,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract:

"Cross-Lingual Sentiment Analysis: Challenges And Solutions" Investigates The Complexities And Solutions Surrounding Sentiment AnalysisAcross Multiple Languages. This Paper Delves Into The Obstacles Posed By Linguistic Variations, Cultural Nuances, And Data Scarcity In Analyzing Sentiments Across Different Languages. It Explores Various Techniques And Methodologies Aimed At Overcoming These Challenges, Including Transfer Learning,Bilingual Embeddings, And Parallel Corpora Utilization. The Study Highlights TheImportance Of Adapting Sentiment Analysis Models To Diverse Linguistic Contexts And Presents Potential Solutions To Foster More Accurate And Robust Cross-Lingual Sentiment Analysis Systems.

Keywords:

Clsa Multilingual Sentiment Sentiment Transfer Cross-Lingual Nlp Sentiment Mapping Language Adaptation Multilingual Analysis Sentiment Alignment Clsa Challenges Cross- Lingual Solutions

28. Title : Context-Aware Neural Machine Translation ForMultimodal Conversational Interfaces

1. Dr.P.Subharajam,Assistant Professor, Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Indhumathi S (Ii Yr), Student/ Cse,,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract:

"Context-Aware Neural Machine Translation for Multimodal Conversational Interfaces" Explores The Integration Of Context Awareness Into Neural Machine Translation Systems For Enhanced Performance In Multimodal Conversational Interfaces. This Paper Investigates The Challenges Of Interpreting And Incorporating Various Contextual Cues—Such As Visual, Textual, And Conversational Context—Into Translation Models. It Focuses On DevelopingNeural Network Architectures Capable Of Dynamically Adapting To Context Shifts During Conversations. The Study Aims To Improve The Accuracy And Naturalness Of Translations Within Multimodal Conversational Settings By Leveraging Contextual Information Effectively Within Neural Machine Translation Frameworks.

Keywords:

Camt Contextual Nmt Multimodal Translation Conversational Mt Neural Translation Context-Aware Nlp Multimodal Interfaces Conversational Translation Contextual Understanding Nmt For Multimodal Conversations

29. Title : Biometric Recognition Systems: Advancements InFace And Iris Recognition

1. Dr.K. Pandiyarajan,Assistant Professor, Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Ishwarya P (Ii Yr), Student/ Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract:

"Biometric Recognition Systems: Advancements In Face And Iris Recognition" Surveys The Recent Developments And Advancements In Face And Iris Recognition Technologies Within Biometric Systems. This Paper Explores The Evolution Of Algorithms, Methodologies, And Deep Learning Techniques Used To Enhance The Accuracy, Reliability, And Security Of Face And Iris Recognition Systems. It Delves Into The Challenges Faced InThese Biometric Modalities, Including Illumination Variations, Occlusions, And Dataset Biases, While Highlighting The State-Of-The-Art Solutions And Innovations. The Study Showcases The Progress Made In These Areas, Emphasizing Their Growing Significance In Security, Authentication, And Identification Applications.

Keywords:

Biometric Recognition Face & Iris Recognition Biometric Systems Advancements In Biometrics Facial Recognition Tech Iris Scanning Biometric Security Recognition Innovation Facial & Iris Id Biometric Authentication

30. Title : Anomaly Detection In Surveillance Videos:Leveraging Machine Learning Techniques

1. Dr.K. Pandiyarajan,Assistant Professor, Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Kalaiyarasan V (Ii Yr), Student/ Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract:

"Anomaly Detection In Surveillance Videos: Leveraging Machine Learning Techniques" Investigates The Application Of Machine Learning Methods For Identifying Anomalies In Surveillance Videos. This Paper Explores Various Algorithms, Including Deep Learning Models And Anomaly Detection Techniques, Aimed At Detecting Irregular Or Suspicious Behavior Within Video Streams. It Addresses The Challenges Of Distinguishing Anomalies From Regular Activities, Considering Factors Like Environmental Changes, Occlusions, And Diverse Types Of Anomalies. The Study Highlights The Effectiveness And Limitations Of Machine Learning In Surveillance Contexts, Emphasizing Its Potential To Enhance Security And Monitoring Systems By Automatically Flagging Unusual Events In Video Feeds.

Keywords:

Surveillance Anomaly Detection Video Anomaly Detection Ml For Video Surveillance Anomaly Detection Systems Surveillance Ml Models Abnormal Event Detection VideoAnalytics Machine Vision For Anomalies Anomaly Detection Algorithms Video-Based Anomaly Detection

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

31. Title : Image Forgery Detection And Authentication UsingDigital Forensics

1. Dr.K. Pandiyarajan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Keerthika K (Ii Yr), Student/ Cse,,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract:

"Image Forgery Detection And Authentication Using Digital Forensics" Explores The Realm Of Digital Forensics For Detecting And Authenticating Image Forgeries. This Paper Delves Into Various Techniques And Methodologies Employed To Identify Manipulated Or Tampered Images, Addressing Issues Such As Copy-Move, Splicing, And Manipulation Detection. It Investigates The Application Of Advanced Algorithms And Analysis Tools In Uncovering Inconsistencies Or Alterations Within Images. Additionally, The Study Examines Authentication Methodologies, Emphasizing The Importance Of Robust And Reliable Image Authentication Mechanisms In Ensuring The Integrity And Credibility Of Digital Imagery.

Keywords:

Forgery Detection Image Authentication Digital Forensics Image Integrity Forensic Analysis Tamper Detection Image Manipulation Forgery Forensics Authenticity Verification Forensic Imaging

32. Title : Sarcasm Detection In Social Media Text: A DeepLearning Approach"

1. Dr.K. Pandiyarajan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Keerthika V (Ii Yr), Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Sarcasm Detection In Social Media Text: A Deep Learning Approach" Focuses On Utilizing Deep Learning Techniques To Identify Sarcasm Within Social Media Text. This Paper Explores The Challenges Of Discerning Sarcastic Intent In Informal, Context-Dependent Online Communication. It Delves Into The Development And Training Of Deep Neural Network Models Specifically Designed To Capture Nuanced Linguistic Cues And Contextual Information Indicative Of Sarcasm. The Study Aims To Enhance The Accuracy Of Sarcasm Detection In Social Media Text, Showcasing The Potential Of Deep Learning Approaches In Understanding And Interpreting Complex Linguistic Nuances For Improved Natural Language Processing Tasks.

Keywords:

Sarcasm Detection Social Media Nlp Deep Sarcasm Analysis Textual Irony Detection Dl For Sarcasm Nlp Sarcasm Detection Social Media Sentiment Irony Recognition Deep Learning Nlp Sarcasm Identification

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

33. Title : Explainable Nlp Models: Interpretable Outputs ForEnhanced User Trust

1. Dr.K. Pandiyarajan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Krishi Gowtham R (Ii Yr), Student/ Cse,,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Explainable Nlp Models: Interpretable Outputs For Enhanced User Trust" Investigates Methods To Render Natural Language Processing (Nlp) Models More Transparent And Interpretable. This Paper Delves Into Techniques Aimed At Providing Insights Into How Nlp Models Arrive At Their Decisions, Allowing Users To Understand The Reasoning Behind Model Outputs. By Employing Attention Mechanisms, Feature Visualization, And Other Interpretability Tools, This Study Aims To Enhance User Trust By Making Nlp Models More Transparent And Understandable. It Highlights The Significance Of Explainable Ai In Nlp Applications, Bridging The Gap Between Complex Models And User Comprehension For Improved Trust And Acceptance.

Keywords:

Explainable Nlp Interpretable Models Trustworthy Ai Transparent Nlp User-Friendly Ai Explainability In Nlp Interpretability In Ai Trustworthy Outputs Nlp Transparency Model Interpretation

34. Title : Fusion Of Multimodal Imaging For Improved Diagnosis In Healthcare

1. Mrs.D.Indra Devi,Assistant Professor, Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Logadipa Sp (Ii Yr), Student/ Cse,Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Fusion Of Multimodal Imaging For Improved Diagnosis In Healthcare" Explores The Integration Of Various Imaging Modalities To Enhance Diagnostic Accuracy In Healthcare. This Paper Investigates The Fusion Of Data From Different Imaging Sources, Such As Mri, Ct Scans, Pet Scans, And Others, To Create A Comprehensive And Detailed Representation Of Medical Conditions. It Delves Into Techniques Like Image Registration, Feature Fusion, And Deep Learning Approaches Aimed At Leveraging The Strengths Of Each Modality For More Accurate And Comprehensive Diagnoses. The Study Emphasizes The Potential Impact Of Multimodal Imaging Fusion In Enabling Better-Informed Medical Decisions And Improving Patient Outcomes.

Keywords:

Multimodal Imaging Fusion Healthcare Diagnosis Imaging Integration Medical Fusion Techniques Integrated Diagnosis Multimodal Healthcare Imaging Fusion In Health Diagnostic Fusion Models Healthcare Imaging Fusion Medical Diagnostic Integration

35. Title : Efficient Image Compression Algorithms For Transmission In Resource-Constrained Environments

1. Mrs.D.Indra Devi, Assistant Professor, Cse, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.
2. Mohamed Nowsath M (Ii Yr), Student/ Cse,, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

Abstract :

"Efficient Image Compression Algorithms For Transmission In Resource-Constrained Environments" Examines Novel Approaches In Image Compression Tailored For Constrained Environments. This Paper Explores Lightweight And Adaptive Compression Techniques Designed To Minimize Data Size Without Compromising Image Quality. It Delves Into Strategies Such As Predictive Coding, Transform Coding, And Deep Learning-Based Compression Methods, Emphasizing Their Effectiveness In Reducing Image Data While Preserving Crucial Details. The Study Underscores The Significance Of These Algorithms In Facilitating Image Transmission Over Bandwidth-Limited Or Resource-Constrained Networks, Enabling Faster Transfers And Efficient Utilization Of Limited Resources.

Keywords:

Image Compression Resource-Constrained Transmission Efficient Encoding Low- Bandwidth Compression Transmission Optimization Compression Algorithms Resource-Constrained Imaging Efficient Transmission Techniques Lightweight Image Compression Bandwidth-Conscious Algorithms

36. Title : Object Detection And Recognition In Aerial Imagery: Applications In Remote Sensing

1. Mrs.D.Indra Devi, Assistant Professor, Cse, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

2. Moorthi C (Ii Yr), Student/ Cse, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

Abstract :

"Object Detection And Recognition In Aerial Imagery: Applications In Remote Sensing" Explores Advanced Techniques For Detecting And Recognizing Objects Within Aerial Imagery

For Remote Sensing Applications. This Paper Investigates State-Of-The-Art Algorithms, Including Deep Learning-Based Approaches And Computer Vision Methodologies, Tailored To Identify And Categorize Objects In Aerial Images. It Delves Into Challenges Such As Scale Variations, Occlusions, And Diverse Environmental Conditions. The Study Highlights The Significance Of Accurate Object Detection And Recognition In Remote Sensing For Applications Like Urban Planning, Agriculture, Disaster Management, And Environmental Monitoring, Emphasizing The Potential Impact Of These Technologies In Various Domains.

Keywords:

Aerial Object Detection Remote Sensing Recognition Aerial Image Analysis Object Identification Aerial Recognition Tech Remote Sensing Applications Aerial Object Localization Imaging Analytics Aerial Object Tracking Remote Sensing Solutions

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

37. Title : Transformative Trends In Pre-Trained Language Models: A Comprehensive Survey"

1. Mrs.D.Indra Devi,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Nancy C (Ii Yr), Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Transformative Trends In Pre-Trained Language Models: A Comprehensive Survey" Provides An In-Depth Analysis Of The Evolution And Advancements In Pre-Trained Language Models. This Survey Paper Explores The Trajectory Of These Models, From Their Inception To Current State-Of-The-Art Architectures. It Investigates Key Trends, Innovations, And Transformative Breakthroughs, Including Model Scaling, Architectures Like Transformers, Self-Supervised Learning, And Downstream Task Adaptation. By Synthesizing The Progress And Challenges, This Survey Aims To Offer A Comprehensive Overview Of The Landscape, Showcasing The Transformative Impact Of Pre-Trained Language Models On Natural Language Understanding And Various Ai Applications.

Keywords:

Pre-Trained Language Models Trending Language Models Nlp Advancements Language Model Survey Pre-Trained Models Overview Comprehensive Nlp Trends Model Evolution State-Of-The-Art Nlp Surveying Language Models Transformative Nlp Trends

38. Title : Emotion Analysis In Textual Data: Towards Human-Centric Ai Systems

1. Mrs.D.Indra Devi,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Praveen K (Ii Yr), Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Emotion Analysis In Textual Data: Towards Human-Centric Ai Systems" Investigates The Integration Of Emotion Analysis Into Textual Data Processing, Aiming To Create Ai Systems That Better Understand Human Emotions. This Paper Explores Methodologies, Including Natural Language Processing And Sentiment Analysis, To Discern Emotional Content Within Text. It Delves Into The Challenges Of Interpreting Nuanced Emotions, Cultural Variations, And Context Dependencies. The Study Emphasizes The Importance Of Incorporating Emotional Intelligence Into Ai Systems, Envisioning More Empathetic And Human-Centered Applications Across Diverse Domains, From Customer Service To Mental Health Support.

Keywords:

Emotion Analysis Textual Emotion Recognition Sentiment Detection Human-Centric Ai Emotional Text Analysis Ai And Human Emotions Text Emotion Modeling Emotion-Aware Ai Sentiment Analysis Human-Centered Nlp

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

39. Title : Named Entity Recognition In Biomedical Text:Applications In Health Informatics"

1. Mr.S.Vimalathithan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Ranjana S (Ii Yr), Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Named Entity Recognition In Biomedical Text: Applications In Health Informatics" Investigates The Application Of Named Entity Recognition (Ner) Techniques In Extracting Crucial Entities From Biomedical Text. This Paper Explores Advanced Algorithms And Models Designed To Identify And Categorize Entities Like Genes, Proteins, Diseases, And Drugs Within Medical Literature. It Delves Into The Challenges Of Domain-Specific Terminology, Abbreviations, And Context Complexities. The Study Emphasizes The Significance Of Accurate Ner In Health Informatics, Enabling Knowledge Extraction, Information Retrieval, And Aiding In Various Biomedical Research Applications For Improved Healthcare Outcomes.

Keywords:

Biomedical Ner Health Informatics Nlp Named Entity Extraction Biomedical Text Analysis Entity Recognition In Health Medical Nlp Applications Biomedical Information Extraction Health Entity Recognition Ner In Health Informatics Biomedical Entity Detection

40. Title : Event Extraction From News Articles: Towards Real-Time Information Retrieval

1. Mr.S.Vimalathithan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Ravinya K (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Event Extraction From News Articles: Towards Real-Time Information Retrieval" Investigates Techniques For Extracting Events From News Articles, Aiming To Facilitate Real- Time Information Retrieval. This Paper Explores Natural Language Processing Methodologies And Machine Learning Models Specialized In Identifying And Categorizing Events Within Textual News Content. It Delves Into Challenges Such As Diverse Event Representations, Ambiguous Language, And Temporal Aspects. The Study Underscores The Importance Of Event Extraction For Rapid Information Access And Analysis, Envisioning Applications In News Summarization, Trend Detection, And Timely Decision-Making Processes.

Keywords:

News Event Extraction Real-Time Information Retrieval Event Detection In News Article Event Extraction News Analysis Real-Time Event Retrieval News Event Identification Information Extraction Event-Based Information Retrieval News Event Recognition

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

41. Title : Neural Language Models For Code Generation: Bridging The Gap Between Natural Language And Programming Languages

1. Mr.S.Vimalathithan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Sakthivel M (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Neural Language Models For Code Generation: Bridging The Gap Between Natural Language And Programming Languages" Explores The Integration Of Neural Language Models To Generate Code, Aiming To Bridge The Divide Between Natural Language And Programming Languages. This Paper Investigates Techniques Leveraging Deep Learning Architectures ToInterpret And Generate Code From Human-Readable Descriptions. It Delves Into Challenges SuchAs Syntax Understanding, Code Structure, And Context Preservation. The Study Highlights The Potential Of These Models To Facilitate Programming For Non-Experts, Aid In Code Completion, And Automate Software Development Processes By Effectively Translating Natural Language Intents Into Functional Code.

Keywords:

Neural Code Generation Natural Language Programming Code Synthesis Models Programming Language Translation Nl To Programming Bridge Neural Programming Interfaces Code Generation Networks Language-To-Code Translation Nlp For Programming Bridging Language Gap

42. Title : Association Rule Mining In Big Data: Scalability AndPerformance Optimization"

1. Mr.S.Vimalathithan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.
2. Saranya P (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Association Rule Mining In Big Data: Scalability And Performance Optimization" Delves Into The Challenges And Strategies Associated With Mining Association Rules In Large-Scale Datasets. This Paper Investigates Techniques Aimed At Optimizing The Scalability And Performance Of Association Rule Mining Algorithms In Handling Massive Volumes Of Data. It Explores Parallel Processing, Distributed Computing, And Algorithmic Enhancements To Improve Efficiency And Handle The Computational Complexities Inherent In Big Data Environments. The Study Emphasizes The Significance Of Scalable Association Rule Mining In Extracting Meaningful Patterns And Insights From Extensive Datasets For Various Applications In Industries Like Retail, Healthcare, And Market Analysis.

Keywords:

Association Rule Mining Big Data Analytics Scalable Rule Mining Performance Optimization Data Mining Efficiency Rule-Based Analytics Large-Scale Association Rules Scalability In Mining Big Data Rule Extraction Performance-Optimized Mining

45.Title : Sentiment Analysis In Social Media: Harnessing ThePower Of Deep Neural Networks

1. Mr.C.Jegadeesan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Vigneshwaran V (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Sentiment Analysis In Social Media: Harnessing The Power Of Deep Neural Networks" Investigates The Utilization Of Deep Neural Networks For Sentiment Analysis In Social Media Content. This Paper Delves Into The Complexities Of Analyzing Sentiment In Informal And Diverse Social Media Text. It Explores Advanced Neural Network Architectures Tailored To Capture Nuanced Emotional Nuances, Addressing Challenges Like Sarcasm, Slang, And Context- Dependent Expressions. The Study Highlights The Potency Of Deep Learning In Discerning Sentiment Within Social Media Data, Offering Insights Into User Opinions And Emotions Across Various Online Platforms.

Keywords:

Social Media Sentiment Deep Sentiment Analysis Neural Network Sentiment Emotion Mining Social Sentiment Analysis Nlp In Social Media Deep Learning For Sentiment Sentiment Prediction Neural Sentiment Models Social Media Emotion Analysis

46.Title : Cross-Lingual Named Entity Recognition: A Comparative Study Of Multilingual Nlp Models

1. Mr.C.Jegadeesan,Assistant Professor, Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

2. Vijayalakshmi B (Ii Yr),Student/ Cse, Indra Ganesan College Of Engineering,Manikandam,Trichy-12.

Abstract :

"Cross-Lingual Named Entity Recognition: A Comparative Study Of Multilingual Nlp Models" Explores Multilingual Natural Language Processing Models For Cross-Lingual Named Entity Recognition (Ner). This Paper Investigates And Compares The Performance Of Various Multilingual Nlp Architectures In Recognizing Named Entities Across Different Languages. It Examines The Capabilities Of Models Like Multilingual Bert, Xlm-Roberta, And Others In Handling Diverse Linguistic Patterns, Entity Types, And Data Sparsity Issues. The Study Aims To Identify Effective Approaches For Cross-Lingual Ner, Offering Insights Into How These Models Adapt To Different Languages And Showcasing Their Potential In Enabling Efficient Information Extraction Across Multilingual Text Corpora.

Keywords:

Cross-Lingual Ner Multilingual Nlp Models Named Entity Identification Comparative Nlp Study Cross-Language Ner Multilingual Entity Recognition Nlp Model Comparison Named Entity Translation Cross-Lingual Entity Analysis Multilingual Entity Detection

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

43. Title : Predictive Modeling For Customer Churn Analysis: A Comparative Study Of Machine Learning Algorithms

1. Mr.S.Vimalathithan, Assistant Professor, Cse, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

2. Suvalakshmi P (Ii Yr), Student/ Cse, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

Abstract :

"Predictive Modeling For Customer Churn Analysis: A Comparative Study Of Machine Learning Algorithms" Examines Various Machine Learning Techniques For Predicting Customer Churn In Businesses. This Paper Investigates And Compares The Performance Of Different Algorithms In Accurately Forecasting Customer Attrition. It Explores The Effectiveness Of Models Such As Logistic Regression, Decision Trees, Random Forests, And Neural Networks In Capturing Patterns Indicative Of Customer Churn. The Study Aims To Identify The Most Efficient Algorithm For Predicting Churn, Providing Insights That Can Empower Businesses To Proactively Manage Customer Retention Strategies And Enhance Overall Customer Satisfaction And Loyalty.

Keywords:

Customer Churn Prediction Predictive Modeling Churn Analysis Machine Learning Comparison Customer Retention Analysis Churn Prediction Models Comparative Ml Study Predictive Analytics Customer Behavior Modeling Ml Algorithm Comparison

44. Title : Semantic Role Labeling: Deep Learning ApproachesFor Accurate Verb Argument Structure Identification"

1. Mr.C.Jegadeesan, Assistant Professor, Cse, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

2. Sweatha B (Ii Yr), Student/ Cse, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

Abstract :

"Semantic Role Labeling: Deep Learning Approaches For Accurate Verb Argument Structure Identification" Explores The Application Of Advanced Deep Learning Techniques In Semantic Role Labeling (Srl) For Precise Identification Of Verb Argument Structures. This Paper Investigates Neural Network Architectures Specifically Designed To Dissect And Classify The Roles Of Various Elements Within Sentences, Focusing On Verb-Associated Arguments. It Delves Into Challenges Such As Syntactic Complexity, Semantic Ambiguities, And Context Dependencies. The Study Emphasizes The Effectiveness Of Deep Learning In Enhancing The Accuracy Of Verb Argument Structure Identification Within The Broader Field Of Natural Language Understanding, Enabling More Nuanced And Precise Analysis Of Textual Data.

Keywords:

Srl Verb Argument Identification Deep Learning For Srl Semantic Parsing Verb Role Labeling Accurate Argument Structure Nlp And Srl Deep Srl Models Verb Argument Recognition Neural Srl

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

166. Achieving Hard Reliability In Rpl For Mission-Critical Iot Applications

[1]Ms. Getsyal A, It, Assistant Professor   [2]Gopal P, It, Ug Student

Abstract:

This research focuses on achieving hard reliability in the Routing Protocol for Low-Power and Lossy Networks (RPL) to meet the stringent requirements of mission-critical Internet of Things (IoT) applications. Mission-critical IoT scenarios demand high reliability and deterministic communication, and RPL is a commonly used protocol in low-power and lossy networks. The study proposes enhancements and modifications to RPL to ensure hard reliability in the face of challenging conditions. The proposed approach involves incorporating mechanisms for fault tolerance, path redundancy, and prioritized packet forwarding. Through simulations and evaluations in mission-critical IoT scenarios, the research assesses the effectiveness of the enhanced RPL in achieving hard reliability, meeting deadlines, and ensuring deterministic communication.

The outcomes of this research contribute to the optimization of RPL for mission-critical IoT applications, providing a reliable and robust routing protocol that meets the specific requirements of real-time and highly reliable communication in challenging environments.

Keywords: Hard Reliability, RPL, Mission-Critical IoT Applications, Fault Tolerance, Deterministic Communication, Low-Power and Lossy Networks, Routing Protocol Optimization.

167. A Novel Energy Efficient Load Balanced Cluster Assignment Algorithm For Iot Based SensorNetwork

[1]Mrs. Rajeswari S, It, Assistant Professor

[2]Karthick A, It, Ug Student

Abstract:

This research introduces a novel energy-efficient Load Balanced Cluster Assignment (LBCA) algorithm designed for Internet of Things (IoT) based sensor networks. Energy efficiency is

The proposed LBCA algorithm involves dynamically assigning sensing tasks to clusters based on energy levels, ensuring a balanced distribution of the workload. Through simulations and performance evaluations in IoT scenarios, the research assesses the effectiveness of the LBCA algorithm in achieving load balancing, minimizing energy consumption, and extending the overall network lifetime. The outcomes of this research contribute to the development of energy-efficient algorithms for IoT-based sensor networks, providing a novel approach to load balancing that enhances the sustainability and performance of sensor deployments.

Keywords: Load Balanced Cluster Assignment, IoT, Sensor Network, Energy Efficiency, Load Balancing, Network Lifetime, Dynamic Task Assignment, Sustainability.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

164. Detecting Incongruent News Articles Using Multi-Head Attention Dual Summarization

[1]Mrs. Saroja Devi S, It, Assistant Professor
[2]Lokeshwaran V, It, Ug Student

Abstract:

This research presents a methodology for detecting incongruent news articles using multi-head attention dual summarization. Incongruent news articles, which convey conflicting information on the same topic, can mislead readers and compromise the credibility of news sources. The study focuses on leveraging multi-head attention mechanisms and dual summarization techniques to identify inconsistencies and incongruities in news articles.The proposed approach involves generating multiple summaries for a given article using multi- head attention, and then comparing these summaries to identify discrepancies. Through extensiveevaluations and analysis of incongruent news articles, the research assesses the effectiveness of the multi-head attention dual summarization in detecting inconsistencies and enhancing the accuracy of incongruence detection.The outcomes of this research contribute to the development of tools for news verification and credibility assessment, providing a method for identifying incongruent information in news articles through advanced summarization techniques.

Keywords: Incongruent News Articles, Multi-head Attention, Dual Summarization, News Verification, Credibility Assessment, Information Inconsistency, Text Analysis.

165. Hardware Trojan Mitigation For Securing On-Chip Networks From Dead Flit Attacks

[1]Ms. Nancy V, It, Associate Professor   [2]Merciya Mary A, It, Ug Student

Abstract:

This research addresses the security concern of Dead Flit Attacks in on-chip networks and proposes a Hardware Trojan Mitigation strategy to enhance network security. Dead Flit Attacks involve injecting intentionally delayed or stalled flits into the network, causing performance degradation and potential vulnerabilities. The study focuses on leveraging hardware-level mitigation techniques to prevent and detect Dead Flit Attacks, ensuring the integrity and reliability of on-chip networks.The proposed mitigation strategy involves implementing monitoring mechanisms, error detection circuits, and countermeasures at the hardware level to identify and mitigate the impact of Dead Flit Attacks. Through simulations, fault injection experiments, and performance evaluations, the

Keywords: Hardware Trojan Mitigation, On-chip Networks, Dead Flit Attacks, Network Security, Fault Injection, Hardware-level Countermeasures, Error Detection Circuits.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

290. Contamination of Soil by Tannery Waste Effluent

Anitarani S [1], Banu Priya G [2], MS. KALAIVANI T [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

Most of the industrial effluents are disposed into land contains a variety of combination of chemicals that may bring in considerable changes in the geotechnical properties of soils. The tannery effluent is one such effluent characterized by high BOD and COD, high dissolved solids, high or low pH, presence of heavy metals, calcium salts, chlorides, sulfides, fat, liquor and organic dyes. This paper presents the laboratory results to study the effect of tannery effluent on the index and engineering properties of cohesive soil upon contamination. A series of laboratory tests have been carried out to evaluate the index and engineering properties of tannery contaminated clay soils. The virgin characteristic of clay soils is highly swelling clay of CH classification with differential free swell of 66 %. Virgin clay soils have artificially contaminated with varying percentage of tannery effluent collected from Pallavaram in Chennai and tested to evaluate various properties of soils. The results had shown an increase in Atterberg's limits as well as the shear strength with varying percentage of tannery effluent. The nature of the pore fluid has also found to significantly affect the index properties and shear strength.

Keywords: tannery effluent, clayey soil, swelling, shrinkage and shear strength.

291. Experimental Investigation on Flexural Behavior of GeopolymerConcrete

Bharathidhasan C [1], Jancy J [2], MS. KALAIVANI T [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

Inorganic polymer concrete (geopolymer) is a rising class of cementitious material in which bond is supplanted by flyash, one of the bottomless modern results on earth. Eight trial mixes are prepared for M30 grade concrete with 100% replacement of cement with ASTM class F flyash. In this project, NaOH of 12M and 14M are used as the alkali activator solutions in four different percentages viz., 0.4%, 0.45, 0.50% and 0.55% of flyash. Natural river sand and coarse aggregates of 20 mm maximum size are used for all the geopolymer concrete specimens. The optimum percentage of alkali activator solutions is arrived by conducting the tests for compressive strength, split tensile strength and flexural strength on the geopolymer concrete specimens. From the experimental results, it is observed that there is no significant variation in strength properties of geopolymer concrete mixes when compared to that of the normal concrete. Geopolymer concrete with 0.4% of alkaline solution of 14M is found to bethe optimum mix proportion and its compressive strength is improved by 7% than that of conventional concrete specimen. The experimental investigation on the flexural behavior of geopolymer concrete beams are carried out by conducting two point load tests on three beams of size 1000mm × 100mm × 200mm. From the flexural tests, it is observed that there is no significant variation in the flexural behavior of geopolymer and conventional concrete. Therefore geopolymer concrete can be used in the place of conventional concrete with cement and thus provides the solution for both the disposal problem of fly-ash from the thermal industries and pollution threat for the environment due to Carbon-di-oxide emission during the cement production.

Keywords: flyash, geopolymer, alkali activator solution

Indra Ganesan College of Engineer
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

292. An Experimental Study on Behavior of Modified Bitumen usingRecycled Plant

Jeevasen N [1], Kamaraj S [2], MS. KALAIVANI T [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

Plastic roads would be a boom for India's hot and extremely humid climate, where temperatures frequently cross 50°C and torrential rains create heavy damage, leaving most of the roads with big potholes. Since the road network is used so extensively in our country, we need a road network which is durable, strong, reliable, niggle Free, environment friendly & cost effective. Roads either have Flexible pavement or rigid pavement. The recent increase in traffic of commercial vehicles with notable variations in the temperature inevitably requires an alternative and improved pavement of high quality which shall also deliver good strength and better economy. To construct & maintain such a dense network of roads, we need heavy amount of raw materials which involves huge capital and time. The considerable use of packaged drinking water in the present days and the pollution threat imposed on the environment due to used non- degradable Polyethylene terephthalate [PET] bottles is very high. This demands the use of these waste PET bottles for some beneficial purposes. The present investigation was carried out to propose the use of shredded waste plastic bottles (PET) for the modification of bitumen binder with particular focus on the development of an effective pavement material that utilizes the plastic waste while catering to the needs of varying climatic conditions prevailing in India and also the heavy loads on pavements. This paper in detail presents the study on the methodology of using waste plastic bottles (PET) in modifying bituminous binders and the various tests performed on 60/70 grade bitumen. A detailed analysis of the engineering properties such as Penetration test, Ductility test, Viscosity test, Softening point test and Specific Gravity test are conducted on both conventional and modified bitumen samples for various percentages of replacements such as 0, 10, 20 and 30% respectively. This PET modified bitumen showed improved quality with % of optimum replacement falling between 10 to 20%.
Keywords: Recycled Plastic roads, Modified bitumen, Flexible Pavements.

293. A Novel Approach to Treat Sago Industrial Wastewater UsingAnaerobic Hybrid Reactor (AHR)

Karthick C [1], Karthick C [2], MS. KALAIVANI T [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

Anaerobic Hybrid Reactor (AHR) is one of the modern day high rate reactors which combine the benefitsof suspended and attached growth biological process in a single reactor to treat domestic and industrial wastewater. In the present study, experimental investigations were carried out to treat the sago industrial wastewater using a lab scale Anaerobic Hybrid Reactor (AHR) of 4 liters capacity with 42 numbers (60% of reactor volume) of polypropylene inert media fill inside the reactor. The reactor was started with a low Organic Loading Rate (OLR) of 1 g of COD / L.d with Hydraulic Retention Time (HRT) of 10 days and operated for 160 days with sago industrial wastewater as substrate. At the end of the experimental study, it was found that the AHR treating the sago industrial wastewater had reached the OLR of 11.84 g COD/L. d with HRT of 0.65 days with the threshold COD removal efficiency of 80%. The data generated from the above study were used in the two popular mathematical models namely Grau second order and Modified Stover-Kincannon to predict the effluent substrate concentration from the reactor and found that these two mathematical models could be conveniently used for the design of large scaleAHRs treating sago industrial wastewater.
Keywords: Anaerobic Hybrid Reactor (AHR), Sago Industrial Wastewater, Organic Loading Rate (OLR) HydraulicRetention Time (HRT), Inert Media

294. Application of Nano Technology in Self Compacting Concrete-AReview

Keerthana R [1], Kishore R [2], MS. KALAIVANI T [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

Self compacting concrete- a special concrete with an extra ordinary property of compacting itself, reduces the possibility of human error. With this, the combination of Nano technology gives a marvelous growth in the construction field .Though the use of SCC, reduces the cost of manual compaction ,the use of SCC along with Nano particles helps in finishing the construction work faster by acquiring strength faster .This present study is about the influence of Nano technology on the properties of self compacting concrete .By adding Nano materials like Nano silica, Nano Fe_2O_3,nano TiO_2, Nano Al_2O_3 ,etc., to SCC, the rate of hydration, permeability ,Durability,Compressive strength, Split tensile strength, Flexural strength is increased with increase in concentration of Nano materials. The outcome of this paper is to enhance the usage of nano particles in concrete to predict the properties ofconcrete.

Keywords: Self compacting concrete, Nano silica, Nano technology, Flexural strength, Durability, Compressive strength

295. Use of Polyethylene Terephthalate in Concrete-A Brief Review

Kishore Kumar M [1], Mancy E [2], MS. KALAIVANI T [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

Concrete, one of the major pollutants in the construction field to be made green is the need of the hour. Though concrete is largely used, its lifetime has become a huge concern due to the cracks produced in it as a result of shrinkage. The addition of fibers into the concrete has been found to improve several of its major properties like tensile strength, cracking resistance, impact, wear and tear, ductility etc as concrete is very much weak in tension which readily undergoes cracking. To resolve these problems and to make the concrete eco-friendly, waste plastic fibers can be employed in concrete in the name of Plastic Fiber Reinforced Concrete (PFRC). As far now, papers have been surveyed on concrete reinforced with plastic fibers such as polyethylene, polypropylene, polyvinylchloride,polyethylene terephthalate(PET). Regarding the domestic consumption of plastics these many years, PET stands first and therefore the use of concrete reinforced with recycled PET fibers as a construction material can be suggested.In future, we are going to propose and investigate the effect of the addition of various percentages of PET strips in the form of mesh in the plastic concrete.

Keywords: Waste plastic bottles, PET fibers, ductility, polyethylene terephthalate (PET), Polyvinylchloride, PlasticFiber Reinforced Concrete (PFRC)

PRINCIPAL
Indra Ganesan College of
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

296. Integrated Panchayat Response System Using Open Source GIS

Pradhap J [1], Prasannaa.J [2], MS. KALAIVANI T [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

The spatial technology makes considerable impact in planning related activities and decision making. Spatial information on various resources in the Panchayat level is very critical for effective planning and action of any scheme. The wide range of capabilities like overlay analysis, suitability criteria ranking, spatial and non spatial queries made GIS, an inevitable technology in any planning activity to arrive at any conclusions. The system is developed for a Panchayat village named Devipattanam covering an area of 16 sq km. Firstly the resources of the village are mapped as the following categories Land, Water, Vegetation and Infrastructure. The Layers created are maintained in a Postgre SQL database to enable spatial and non spatial queries. A customized GUI is developed using QGIS software to aid the village officers to use the system for any planning purpose at village level.GUI contains various estimation tools to plan and implement the schemes like NREGA.

Keywords: Village Panchayat, Postgre SQL, QGIS, GUI.

297. A study on properties of concrete with ceramicwaste replaced for fine aggregate

Preethika M [1], Premalatha M [2], MS. KALAIVANI T [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

The continuous reduction of natural resources and the environmental hazards posed by the disposal of Construction and Demolition (C&D) waste has reached alarming proportion such that the use of C&D waste in concrete manufacture is a necessity than a desire.Hence the fine aggregate can be replaced fully or partially by materials like M-sand, quarry dust, saw dust, rice husk ash, ceramic waste etc in concrete.Ceramic waste may be used as an alternative for natural sand. The aim of this project is to determine the strength characteristics of recycled aggregates for application in concrete, with ceramic aggregates as an alternative material to fine aggregate in concrete. A total of three batches of concrete mixes of grade M20 were designed using various percentages (0%, 25%, 50% and 75%) of ceramic waste replaced for fine aggregates. From the results it is concluded that utilization of ceramic waste in concrete is more effective in strength as well as economic aspects.

Keywords: Compressive strength, Flexural strength, Marble waste, Mix design, Split tensile strength.

298. A Green Supply Chain Agility Index for E- Commerce Business: An Indian Perspective Using Interpretive Structural Modeling

Shri Harini Priya B [1], Snega M [2], MS. KALAIVANI T [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

India one of the fastest developing countries among BRICS nations with over a trillion US dollar market in Electronic Commerce (EC) for the next ten years makes the companies to have tremendous flexibility in their supplychain along with the concentration in environment is unavoidable. Therefore there should be an index to quantify the flexibility of Green Supply Chain (GSC) that is necessary for each and every EC organization to set a guideline and also to find their improvement in their GSC over a period of time. Green supply chain agility index (GSCAI) is the measure of the agility level of the GSC of an EC business which is framed based upon the drivers of GSC. Thisresearch article provides a systematic framework for assessing the drivers towards the adoption of GSC practices and developing a method to calculate GSCAI in any EC business.

Keywords: Electronic Commerce, Green Supply Chain Agility Index, Interpretive Structural Modelling, GraphTheoretical Approach, India.

299. Experimental investigation of an indirect type nano coated flat plate solar collector for drying purpose

Sobi Amirtha N [1], Sunil Kumar B [2], MS. KALAIVANI T [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

Solar energy is a freely available renewable energy resource in nature. Solar drying technology emerges as one of the vital processes in agricultural and industrial applications for drying of cereals, pulses,spices,bricks in refractory's and milk powder in dairy industry. Drying reduces the moisture content in the product which can be perishable for a long period of time. This research includes the design and fabrication of an indirect mode solar dryer with forced convection and its performance test on drying product(Groundnut).The solar absorber plate is made up of aluminium plate coated with graphene nano particles sizing of 50 nm,so that the heat transfer rate of the plate can be increased. The performance test of the dryer is conducted for 0.04% volume concentration of graphene nano coating at constant air flow rate.

Keywords: Solar energy, Moisture content, Indirect mode, Graphene nano Coating, Forced Convection, Drying time,groundnuts.

300. Experimental study on the wear characteristics of heat treatedaluminium hybrid composites

Susila N [1], Yoga Priya R [2], MRS. SUGASHINI T [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

The present experimental investigation was aimed to study the wear characteristics of an aluminium hybrid composite subjected to heat treatment. The matrix material selected for this study was Al6061. The reinforcement materials used are silicon carbide (SiC) and graphite particulates. The composites specimens have been prepared using stir casting method with 10 wt% of SiC and 2, 4 wt% of graphite particles. The prepared composite specimens and unreinforced alloy have been subjected to a temperature of 530°C for one hour. It is then followed by water quenching. Then artificial ageing to the quenched samples are done with different ageing durations like 4, 6, 8 hr ata temperature of 175°C. Rockwell hardness measurements were made using 'B' scale. Wear tests were carried outon the heat treated as cast 6061 alloy and its composites using pin-on-disc machine. Microstructure of the wear surface of heat treated composite specimens was taken using Scanning Electron Microscope (SEM) to study the wear mechanism. From this experimental study, it is concluded that heat treatment had a significant effect on hardness and wear property of both the unreinforced alloy its composites.

Keywords: Aluminium Metal Matrix Composites (AMCs), Heat treatment, Stir casting, Wear.

301. Hybrid Solar Desalination and Water Heating System: A Review

Abinesh T [1], Alex Immanvel S [2], MRS. SUGASHINI T [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

The hybrid character of a solar desalination system consisting of a "Green House"- type conventional solar still coupled with a solar collector field and hot water storage tank was reviewed. The solar desalination systems are energy intensive, which consume high grade energy like gas, electricity, oil and fossil fuels. A review of these processes lead to carbon footprints, which causes depletion of ozone layer as well as health hazards on mankind. It is also lead to global warming which is the burning topic and becomes threat to life sustainability. The potential of harnessing solar energy is most efficient and effective for heat to heat conversion. This hybrid system shows significantly higher distilled water output compared with that of an uncoupled still, and moreover it has theadvantage of supplying hot water from its storage tank. Effective hybrid system is performed concerning reductionof produced distilled water caused by storage tank hot water draw-off of different volumes at the end of the day. The pursuit of hybrid systems is an important research topic as it allows for further development of solar desalination technologies while providing an immediate solution that increases the use of solar power.

Keywords: Solar still; Hybrid desalination system; Harnessing, solar energy; Hot water.

302. An Application of Interpretive Structural Modeling to Assess Agility Index

Balamurugan A [1], Divya B [2], MRS. SUGASHINI T [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

In the volatile manufacturing era instability and unpredictability of markets create negative impacts in the business environment. The need to respond to ever changing environments has been addressed in recent years by the concept of agility. Agility is defined as the capability to survive in a competitive environment of continuous and unpredictable changes by reacting quickly and effectively to changing market. Over the years, manufacturing organizations could not cultivate all the necessary resources to compete and remain successful and have atlast realized that agility is their last hope for survival. The principal problem may be due to the lack of proper focus on analyzing the enablers needed to improve agility and assessing Agility Index. This attempt is to overcome such issues and create effective supply chains by developing Interpretive Structural Models (ISM) based on interrelationships between factors and understanding driver dependence power using the Structural Self Interaction Matrix (SSIM) and Graph Theoretic Approach (GTA). Identification of levels of impact of supply chain enablersand classification of supply chain enablers in order to surface the driver enablers will aid modern supply chain managers in conditions of chaos. The collective results of ISM have finally been comprehended into a quantitative model using permanent functions which has effectively been deployed for assessment of Agility Index which is a coveted expanse in the domain of supply chain agility.

Keywords: Agility Index, Interpretive Structural Model, Structural Self Interaction Matrix, Graph TheoreticApproach.

303. CFD Assisted Design and Analysis of 10 Kw Double Throat TwoStage Air Supply Approach Downdraft Gasifier

Gayathri M [1], Karthik D [2], MRS. SUGASHINI T [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

The conventional experimental analysis of downdraft double throat gasifier for biomass with respect to different working conditions is more challenging, time consuming and expensive. A computational fluid dynamics (CFD) model to study the performance of a gasifier is required to improve the design of the gasifier. The main objective of this CFD is focused on analysis of combustion and reduction chamber for different equivalence ratioin single stage and two stage air supply approach in 10 kW_e double throat two stage downdraft gasifier using prosopis juliflora wood and the airflow behaviors with respect to biomass flowrate, temperature profile and chemical reaction process through the Gasifier and producer gas and other mass concentration of combustion and gasification products has been analyzed by CFD method using FLUENT software.The same CFD model has been used for simulation for two stage air supply ratio of 40 % AR used in gasifier with equivalence ratio varies from 0.2,0.3,0.35,040 also similar methodology used for single and two stage air supply ratio of 80 % with equivalence ratio of 0.30. For all the cases, the moisture content of the fuel has been kept at 5%.

Keywords: Downdraft Gasifier, Double throat, gasification, producer gas, equivalence ratio, CFD, Prosopis Juliflorawood .

304. Experimental Investigation of Inorganic PCM Based Solar ThermalStorage Device Enhanced With Heat Pipe

Latchiya K [1], Manikandan K [2], MRS. SUGASHINI T [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering, Trichy.

Abstract

The scarcity of fossil fuels, electricity and increase in demand are the driving forces behind the continuous research for an alternative power source. The most untapped resources of energy are the solar energy and the excess heat from the industries has an evident potential to reduce the demand for energy and the CO_2 mitigation. This workpresents an innovative setup for the recovery and utilization of untapped resources and to investigate how salt hydrates Phase Change Materials (PCMs) play a crucial role in the storage of thermal energy. A square copper container apparatus is designed to obtain storage medium for PCMs. The salt hydrates used in this study are $CaCl2.6H2O$ and $MnSO4.H2O$. Heat Pipe technology is incorporated to enhance the thermal recovery and transfer heat to the PCMs storage medium and it is experimentally investigated at various heat input ranges from 50 to 300W. The heat from the PCMs is utilized through a copper pipe is circulated in-between Heat Pipe condenser region and storage container. In the first case $CaCl2.6H2O$ is taken as a PCM and charging/ discharging process at various inputs were studied. At 200, 250 and 300 W heat input, the heat pipe transferred the heat effectively that decreased the charging time of thermal storage device. In the copper pipe area inside the storage medium, coolant (water) is passed at a different mass flow rate and identified the temperature rate for PCMs and water. The effect of coolant's mass flow rate on PCMs and coolant outlet temperature at 250 and 300 W heat inputs are investigated. In the secondcase, the Eutectic PCMs ($CaCl2.6H2O$ and $MnSO4.H2O$) are taken in the ratio 85:15 respectively. The experiment is repeated under the same procedure for the eutectic composition and compared with the first case. The result reveals that Eutectic PCM had a long discharging time that can store heat for a long time and act as a better thermal storage device.
Keywords: PCM, salt hydrates, Thermal storage device, heat pipe.

305. Effect Of Preheating Temperatures on Impact Properties of Chromoly Alloy Steel 4130 Weld Using Gas Metal Arc Welding

Mohandoss S [1], Naveen R [2], MRS. SUGASHINI T [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

The influence of the preheating temperature on impact properties was studied in this work. The base plate made of chromoly alloy steel 4130 was welded by using gas metal arc welding process. The electrode used is ER70s-D2. single 'V' butt joint configuration is used in this study. The base metal chromoly was preheated at different temperatures such as 150°C, 200°C and 250°C. The effect of preheating temperatures on the impact properties is studied. Impact test was conducted in different working temperatures. Pendulum type impact machine was used to evaluate the toughness. From this investigation it was found out that the toughness varies based on preheating temperature. The microstructure of the welded metal for different temperature of preheating has been analyzed. The microstructure reveals that ferrite and pearlite boundaries influence the impact properties. It is evidentthat the preheating temperature has strong correlation with the toughness of weldments.
Keywords: Chromoly, Preheating, Microstructure, Impact strength, Alloy steel

PRINCIPAL
Indra Ganesan College of Engineering
Valley, Madurai Main Road
Manikandam, Trichy-620 012

306. Development of an Intelligent System for Optimization of BlankingDie Design Parameters Selection

Sachunathan S [1], Sanduru K [2], MRS. SUGASHINI T [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

Selection of optimum parameters for blanking die design is an important activity in stamping industries. Developing a Knowledge Based system is proposed that can elicit recommendations in selecting optimum die design parameters. Conventional die design method involves numerous considerations, calculations, tables and mainly depends on the ability of taking decision by process planners and die designers. This arrangement facilitates interfacing of die design with drafting and can be loaded in a PC. The proposed system is developed using rule based system approach of AI. It utilizes interfacing of AutoCAD and Auto LISP for automation of selection of blanking die design parameters. The system comprises four modules. Recommended Dimensional Tolerances for sheet-metal blanks produced with short-run tooling, recommended dimensional tolerances for sheet-metal blanks produced with blanking dies, recommended tolerances for fine-blanked parts, recommended trimming allowances are the four parameters considered in this system. The modules were developed based on information from manufacturing standards, industrial catalogues, brochures and best of industrial practices. Hence for the given input condition, the system generates an optimum parametric output on the screen during its execution. The system is flexible and can be upgraded depending upon both specific shop floor requirements and development of new technology solutions. The application of the proposed system is demonstrated through a sample run of four modules for a real time industrial component.
Keywords: Artificial Intelligence, Recommended Dimensional Tolerances, short-run tooling, blanking dies, fine-blanked parts, trimming allowances.

307. Design and optimization in production of Air Receivers

Santhiya A [1], Shanmugam S [2], MRS. SUGASHINI T [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

The competitive environment in engineering drags to optimize the material and processing cost of air receivers. TRIZ (Theory to resolve inventive problems), a Russian concept and Design for manufacturing principles have been utilized for the arrival of solution. So far these concepts were used individually and are rare to find the synergistic approach. This paper proposes to integrate the benefits of TRIZ with DFM under a single roof in such a way that TRIZ gives the innovative solutions while DFM applies its design and manufacturing rules to narrow down in finding the exact solution. A case study has been taken in a fabrication sector for the design of dished ends of an air receiver and the existing elliptical type has been replaced with hemispherical type. As a result of this implementation the material and processing cost was significantly reduced. The present work gives an outline about the flexibility of the application of TRIZ with DFM for optimizing the design and process requirements.
Keywords: TRIZ, DFM, Optimization, Air receiver

308. Development of Aluminium Matrix Nano Composite through Polymeric Method

Sneka T [1], Sophiya K [2], MRS. SUGASHINI T [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Multiwalled Carbon nano tubes have emerged as promising reinforcement for metallic matrix for their exiting strength, stiffness as well as conductivity property. In this present work, Aluminium composites were produced by combining pure Aluminium powder and Multiwalled carbon nano tubes through Mechanical milling and polymeric method. Compaction was performed by using Hydraulic Press Equipment. Controlled Sintering Process can be used to strength of composites throughout the structure. Mechanical properties of aluminium composites at various proportions of reinforcements were investigated. Microstructure analysis was carried out to identify the in-situ formed particles present in the composites.

Keywords: Metal Matrix composites, Multiwalled carbon nano tubes, Sintering, Compaction

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road

309. Predicting the tensile strength of friction stir welded dissimilaraluminum alloy using ANN

Soundharya U [1], Vanila G [2], MRS. SUGASHINI T [3]

[3] Assistant Professor, [12] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

An Artificial Neural Network (ANN) model was developed to predict the tensile strength of the dissimilar aluminum weld using Friction Stir Welding (FSW) process parameters. The aluminum plates selected for the weld study are AA2014T651 and AA6063T651. The plate AA2014T651 which is the harder metal kept on the advancing side and AA6063T651 kept on the retreating side. The input FSW process parameters such as pin diameter, tool geometry, tool offset and the output parameter -tensile strength as were taken the development of ANN model. Good performance of the ANN model was achieved. Eighteen experiments were conducted and responses of tensile strength of the weld were measured. The 70% of data were used for training purpose, 15% for testing the model and 15% for validation. Levenberg-Marquardt algorithm was used for training the ANN model. The ANN model was able to predict the tensile strength with an accuracy of $\pm$ 98 % i.e. within an error of $\pm$ 2%. The optimized process parameter based on ANN model are 7mm pin diameter and 4 degree tilt angle in which tool is offset towards advancing side exhibits better tensile strength

Keywords: Friction stir welding; Mechanical properties; ANN; Modeling.

310.A Study on the Effect of Process Parameters of Laser Hardening inCarbon Steels

Akshaya T [1], Appas Ali.D [2], MR. ARUL C [3]

[3] Assistant Professor, [12] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Surface hardening at functional areas of engineering components is an energy saving process. The components made of En8, En24, En36 and HCHCr steels are hardened in specific areas to meet the functional requirements at effective cost. The formation of martensite structure, leading to hardening, is decided by the composition of the material. Laser beams are used to perform hardening with almost zero deflection. The experimental study is to optimize the process parameters and selecting suitable material for manufacturing components working under critical loads. A 150 W, CO2 continuous wave laser source has been used in the experimental study. Power and scanning speed are the major influencing parameters in hardening process. The results showed that reducing the scanning speed increases hardness and depth due to increased interaction of beam with the work piece. Increasing the power starts melting the surface due to increase in energy. Improved hardness and wear resistance were observed in specimens with higher carbon content.

Keywords: Carbon steel, CO2 Laser, Surface hardening, Hardness and Wear resistance.

311. Process Optimization of GMAW over Aa6351 Aluminium Alloyusing ANN

Aravindh V K [1], Ayisha Siddeequa A [2], MR. ARUL C [3]

[3] Assistant Professor, [12] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Welding of Aluminium and its alloys are becoming very crucial and increasingly significant now-a-days. Researchers around the world are taking up the challenges in analyzing the weldability of aluminium and its alloys. One of the aluminium alloy AA6351 is used for its medium strength with good fatigue and impact resistance and for its extrusion property. Only few researches have been done regarding welding of Aluminium AA6351 using GMAW welding process. In this paper, efforts are made to study welding of GMAW over AA6351 and to examine the optimum weld parameters for the same. Taguchi L9 orthogonal array deign is used to conduct the experimental runs. The controllable parameters which affect the GMAW process that are considered in this paper are welding current, shielding gas flow rate and electrode feed rate. Parameters that are affecting the weld bead geometry which are related directly to the weld bead viz. weld bead width, penetration depth, reinforcement height, dilution percentage are considered as responses. The GMAW welding process is optimized using Artificial Neural Network in MATLAB® software with respect to the maximum percentage of dilution.

Keywords: GMAW, Aluminium Alloy, AA6351, Process Optimization, Artificial Neural Network

312. Modal Analysis of MWCNT Reinforced AA5083 Composite Material

Benasir S [1], Cibina S [2], MR. ARUL C [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Material selection for structural application is the one of the major challenges faced by the designer because of the development of newer materials in the recent past. Aluminium alloy 5083 is widely used forstructural applications due to its strength to weight ratio and resistant to corrosion environment. By adding, Multi- wall Carbon nanotube with Aluminium alloy 5083 in different compositions, the mechanical property of the composite material is enhanced. Mechanical properties of the material play a vital role for evaluating the frequency and deformation under different loading conditions. In this present work using Finite Element Method, free vibration study was carried out to find the natural frequency for the alloy and composite material. Modal analysis results show, the shifting of frequency than for the composite materials compared to the base alloy due to the addition of Multi-wall Carbon nanotube (MWCNT) and the results are validated using analytical method. The findings lead to selection of the operating conditions for the dynamic structural applications to avoid failure due to resonance.

Keywords: AA5083, Multi-wall carbon nanotube, Compo-casting, Damping capacity, Resonance;

313. Effect of inlet valve modification on swirl ratio in a compressionignition engine

Devi K [1], Dhivyadharshini A [2], MR. ARUL C [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The effect of turbulence on the compression ignition engine has the influence on combustion and engine performance. Obstructing the air entering into the combustion chamber has the turbulence effect on the combustion. An inlet valve taken from the diesel engine was modified to make obstruction in the intake air flow into the cylinder. The turbulence effect between the normal valve and the modified valve was compared using the CFD fluent software. From the analysis, it is found that the designed obstruction has a better effect on turbulence and the turbulence energy has been doubled.

Keywords: Swirl, Turbulence, Inlet valve, diesel engine, combustion, compression ignition

314. Prediction of Tensile Strength and Elongation in Hybrid AluminiumComposite Using ANN

Divyakeerthan P [1], Gayathri P [2], MR. ARUL C [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

A feed-forward back propagation neural network model was been developed to predict the tensile strength and elongation in LM6 aluminium alloys reinforced with SiC and flyash. The particulate size and weight percentage of each of the reinforcement has been varied in the study. The hybrid composites, prepared by stircasting as per the combination of parameters determined using central composite rotatable design, were tested in UTM. Closeness of ANN prediction with experimental values demonstrated that multi layered feed-forward back propagation network can be used to satisfactorily predict the tensile strength and elongation in hybrid MMC.

Keywords: LM6, SiC, flyash, ANN, tensile strength, elongation, composite

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikendam, Trichy-620 012

315. Investigation of Antimicrobial Activity of Medical Grade HEPAFilter with Copper Deposition

Gnanaprakasam A [1], Gowrisankar G [2], MR. ARUL C [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Alarming threat in the hospital environment is the nosocomial infections one such to mention is ventilator associated Pneumonia (VAP). The incident of the infection due to micro organisms is increasingly reported even after motivation of appropriate measurement and hygiene practices. The pore size of the HEPA filter (high efficiency particulate air filter) is minimized by depositing copper using DC sputtering by making single, double and triple coating in such a way the sputtering is done for 30 seconds, 1 minute and 1minute 30 seconds. The pore size is reduced significantly from 17.437 μm for uncoated HEPA filter to 4.3811 μm for triple layer copper coated HEPA filter observed using optical microscope and pore size analyzer. The efficiency of the medical grade HEPA filter is compared with the copper coated HEPA filter using microorganism growth test over time which shows the amount of bacteria in the sample. The results of the test incubated for various duration of time shows a control in thebacterial growth for the copper coated HEPA filter than uncoated HEPA filter.

Keywords: Ventilator associated pneumonia, medical grade HEPA, copper deposited HEPA (Cu-HEPA)

316. Investigation on the Microstructure and Wear Characteristics ofHeat Treated Hybrid Aluminium Composites

Hariharan K [1], John P [2], MR. ARUL C [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The present work aims to investigate the wear characteristics of heat treated Al 6061 Silicon carbide - Graphite particulate reinforced hybrid composites subjected to the constant aging duration of 4hr.The composite specimens were prepared for different weight percentages of SiC and graphite particles through stir casting, followed by the heat treatment on cast Al 6061 alloy and its composites at a specific temperature of about 803K for 1hr followed by quenching in water. The aging of the quenched samples was done artificially for the constant duration of 4hr at a temperature of about 448K. After fabrication, the hardness of the specimens was also measured. The microstructure of the specimen, before and after heat treatment was observed using scanning electron microscope and the wear behavior is predicted using the pin-on-disc apparatus. From the results of Scanning electron microscope, it is observed that the abrasion and delamination are the predominant wear mechanisms. It is evident from the results of hardness measurement that hardness increases with a decrease in the weight percentageof graphite particulates. It was found that the wear resistance of the specimens increases with increase in aging duration during the observation of wear. This is an original research work carried out in aluminium composites and the outcome of this work is useful to the automobile industries for making brake drums.

Keywords: Aluminium composites, Wear, composites, Heat treatment, Hybrid composites, Hardness, Surfaceroughness.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main R...

317. Pharmaceutical Inspection using Machine Vision

Kamali A [1], Kamatchi S [2], MR. ARUL C [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In pharmaceutical industries, tablet tracking and sorting is the major task that needs to be done at final dispatch. Manual sorting is the traditional approach that has been preferred by industries. In this approach, visual inspection is performed by human operators. This traditional approach is tedious, time-consuming, slow and inconsistent. Therefore the efforts are made to design and implement the technique of automation to determinecolour based tablet inspection and sorting using image processing technique. In this paper, image of a colored tablet strip which is rolling over a conveyer belt has been captured using appropriate image acquisition device. Using image processing, the tablet of desired color has been tracked using thresholding technique. Once the colour of the object is determined, the system will automatically inspect and sort the objects as per its colour and counts in the strip. In this machine vision system, algorithm for tablet colour determination has been developed in MATLAB software and object sorting assembly has been designed using Arduino microcontroller circuitry.

Keywords: Pharmaceutical, Tablet Tracking, Machine Vision, Image Processing, Thresholding, Object Sorting.

318. Automated pH Monitoring System for Dyeing Process

Keerthika A [1], Kiruthika M [2], MR. ARUL C [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

A pH monitoring system for the continuous working situation in the Bio-Chemical dying industry is designed and fabricated. Our problem is to design a pH monitoring system to be used in the high temperature and high pressure environment for the bio-chemical dyeing industries where the usage of various synthetic chemicals for pH maintenance is reduced. The sensor selected is 396R/396RVP Retractable pH/ORP Sensor with maximum pressure specifications of 150 psig (1136 kPa [abs]) and silcore™2technologies provide increased sensor life when used in elevated temperature applications. The microcontroller due to simple approach, Arduino UNO with 16MHz clock speed and 7V to12V input is selected. The program with the set of functions and control limits for various color codes is written using Arduino C and uploaded to microcontroller. The program includes the control limits for various colors.

The color selection is done through the Numpad Code input. A Numpad input module is connected with the microcontroller module through which the Color code input is given. The microcontroller is programmed to send signal to two terminals - one to indicate the operator and another is a direct signal to stop the complete operation through emergency stop system on the control limit breach. This monitoring system will pave the way to more chances for survival of eco friendly dyeing culture through decreasing the recycling cost by reducing 12000 to 15000 ppm TDS(Total Dissolved Salt) in the used water.

Keywords: pH monitoring system, Arduino, TDS

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

319. Extrusion Process Parameters Optimization using HybridAlgorithm

Mathavan N [1], Miltan A [2], MR. ARUL C [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Extrusion is the process, in which a block of material is forced in to a die orifice to get the required shape. Dies for extrusion can be designed using various methods. Here in this work, upper bound solution is used for formulating the mathematical model for the extrusion of circular rod through a conical converging die. A Hybrid Algorithm, combining genetic and simulated Annealing Algorithm, is used to minimize the extrusion Pressure by optimizing die cone angle and friction factor. Results are shown graphically.

Keywords: Extrusion, Hybrid Algorithm, Cone angle and Friction factor.

320. Power Optimization of Unmanned Aerial Vehicles using solarenergy

Monisha R [1], Priya P [2], DR. JAYALAKSHMI PJ [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Unmanned aerial vehicles (UAV's), widely known as drones are being extensively used for many applications including defence and commercial needs. Though UAV's are being widely accepted, there are few limitations of its own. One such limitation is the endurance that the vehicle can achieve with the existing power source used. Hence, this paper is proposed to motivate research on aerospace renewable energy sources and primary aims was to make calculations and respective designs to create an e-aircraft model, capable of powering its flight using solar energy, overcoming the challenges by increasing the range and endurance of the UAV using the solar power. The creation of power depends on the working geographical region, climate and number of solar cells usedon the UAV. The project deals with the design, construct, flight test of a solar powered UAV. Finally, a prototype will be developed which has better range and endurance.

Keywords: Border surveillance, image processing, renewable energy, solar cells, UAV.

321. Open cv Based Autonomous RC-Car

Priyadharshini G [1], Priyadharshini I [2], DR. JAYALAKSHMI PJ [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Controlling the traffic in the metro cities is the huge due to increase in the vehicles population and increase in accidents too. To prevent, many of the plans are implemented but fails. To overcome these problems we come up the idea of "Controllable Traffic Autonomous Car". The cars most nowadays are smart we utilize that idea and make a prototype which control according to the traffic signals and to prevent the accidents by the machine learning prediction and image processing technique. The main controlling unit if the car is raspberry pi which teaches the car to move in the path and to stop when the red signal in the traffic, to maintain the speed and to stop the car if it get collide with nearby vehicles. The distance between the cars is monitored with the help of ultrasonic sensor. It also associated with the GSM and GPS technique to locate the car and to alert in case of the emergency situations .The result that going to obtained based of the qualities of the image frame from the camera and the collision avoidance according to the sensor data from the ultrasonic sensor. The machine learning and the image processing are done by using the opencv module in python. The self is going to done by the convolution neural network and the object prediction by the harr classifiers. The advance is going to done by the deep learning of the objects

Keywords: Open cv haar classifier, Monocular vision, Region of interest (ROI), Hue saturation value .

PRINCIPAL
Indra Ganesan College of Engineering
Valley, Madurai Main Road
Manikandam, Trichy-620 012

322. Automatic railway gate control using magnetic sensors

Sathya Priya N [1], Sivaranjini M [2], DR. JAYALAKSHMI PJ [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The main objective of this paper is to reduce the number of accidents taking place due to level crossing by automating the railway gate at level crossing which replaces the gates operated by the gatekeeper. In general, the gatekeeper receives the information about the arrival of the train from a nearest station. When the train starts to leave the station, the station in-charge informs the gatekeeper to close the gate and the gate is closed. In situations where the train is late due to some reason, the gates remain closed for long durations causing dense traffic jam near the gates. This too can be prevented by automation. The proposed system uses the Magnetic sensor (Hall Effect sensor) to detect the arrival and departure of trains at the railway level crossing and Arduino to control the opening/closing the gate. The system uses one Hall Effect sensor to detect the arrival of the train and another Hall Effect sensor is used to detect the departure of the train. When the first Hall Effect sensor receives the signal, the buzzer at the railway crossing will blow, the signal turns to red and motor is operated to close the gate. When the train departure is detected by the second sensor, the traffic signal turns green and the motor is operated to open the gate. Thus, the automation of the gate operations at the railway level cross is achieved using sensors.
Keywords: Automation, Hall Effect sensor, Railway level crossing

323. Finite Element Analysis of landing grid Ship Assembly For 6.5 Tonnes in Vertical Loading conditions

Sneka R [1], Sridhar P [2], DR. JAYALAKSHMI PJ [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The parts considered for analysis are the Grid and the grid support, which is mounted on the upper deck of the ship. Ship deck is meshed using shell mesh of shell 63. Support pins between the grid and the grid support are modeled as tapered beam of circular cross section as they have different diameter at ends. The support pins are modeled using beam44 element type. The grid is meshed with tetrahedral elements solid 45 and the grid support is meshed with hexahedral elements solid 45.The grid assembly is to be analyzed for vertical loading conditions and tocalculate the stress and the deformation by using FEA Methods.
Keywords: Shell Elements,FEA

324. Fluid Flow and Heat Transfer Analysis in a Micro-Channel with aBaffle

Sumithira R [1], Swarnambigai V [2], DR. JAYALAKSHMI PJ [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In the present study, heat transfer and pressure drop characteristics of a primary vortex in a micro-channel with step flow are investigated by introducing a baffle in the flow field, which isa two dimensional computational domain. The height and the location of the baffle are considered to be the factors affecting the heat transfer augmentation. Two dimensional mass, momentum and energy equation are solved using finite volume method. The flow is assumed to be laminar and steady in the presence of vorticity for the Reynold's number (Re=117). This numerical study reports that the baffle has enhanced the heat transfer and the parameters influencing the heat transfer enhancement have been optimised.
Keywords: Laminar, Steady flow, Primary flow, Heat Transfer augmentation

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

325. Shear Strength of High – Strength Steel Fibre Reinforced ConcreteRectangular Beams

Thirumavalavan [1], Vinith Roshan A [2], DR. JAYALAKSHMI PJ [3]

[3] Assistant Professor, [12] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In IS 456-2000, the design equation proposed for shear strength of concrete beam does not consider the effect of steel fibres. In this paper, the experimental shear strength by various authors and the predicted shear strengths using the proposed equations in the literatures were reviewed and also experimental investigations were carried out on the shear strength of High Strength Steel Fibre Reinforced Concrete rectangular beams of characteristic compressive strength 80MPa. The ratio between the experimental and theoretical strength possess wide variation, so an equation is suggested for shear strength by comparing the experimental results with that of the theoretical results. Six beams were tested with varying fibre content and shear-span to effective depth ratios. The experimental results were compared with the strengths obtained using the equations proposed in the literature and also with the analytical results. This study reports that the ultimate strength increases significantly as the fibre content increases.

Keywords: High strength Concrete, Steel Fibres, Beam, Shear Strength, Analytical model.

326. Characterization of Particulate-Reinforced Aluminium 7075 /TiB$_2$ Composites

Yuvaraj M [1], Yuvasri S [2], DR. JAYALAKSHMI PJ [3]

[3] Assistant Professor, [12] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Aluminum-based metal matrix composite (MMC) materials are used in the design of ground transportation vehicles and aircraft due to its light weight and high strength to weight ratio. Compared with conventional, unreinforced alloys, composite materials usually exhibit higher strength, both at ambient and elevated temperatures, as well as good fatigue strength and wear resistance. Stir casting process is one of the most effective methods for manufacturing Metal matrix composites (MMCs) due to its high volume reinforcement and fairly uniform distribution. This work deals with the production of Aluminium 7075 alloy reinforced with TiB$_2$ particle. The composites were fabricated by three varying the volume % of Titanium diboride (TiB$_2$) particles. The mechanical properties and microstructure analysis are identified from the experimental results and the ability of the manufactured aluminium matrix composite from the different reinforcements.

Keywords: Metal matrix composite, Reinforcement, Microstructure, Mechanical properties;

327. A review of Advanced Casting Techniques

Yuvasri S [1], Miltan A [2], DR. JAYALAKSHMI PJ [3]

[3] Assistant Professor, [12] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Nowadays, in the area of casting, the focus is on cost and resource efficient production of increasing complex shapes, miniature precision component along with the considering environmental issues,put an all stringent requirements on the advances in casting technology. Casting is the primary manufacturing process is being developed at each and every stages over centuries of years to satisfy the needs of the customer. This paper reviews most of the advanced casting techniques and their advantages, limitations and applications in the field of engineering. full mold process and replicast process. The second section describes about the semisolid process such as thixocasting, rheocasting and thixomolding. The third sections explains non-bonded sand molding process such as vacuum molding and magnetic molding and the fourth sections associates with the centrifugal casting process such as De Lavand process and Moore casting process.

Keywords: Semisolid process, Centrifugal casting process, Replicast process, Expandable Mold withExpandable Patterns

328. Investigation on wear behavior of Al6061 hybrid metal matrixcomposite in braking applications

Aishwariya V [1], Anbazhagan S [2], DR. JAYALAKSHMI PJ [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The present article investigates the dry sliding wear behavior of Aluminium 6061 hybrid metal matrix composite (ALHMMC) and compare the results with cast iron(ci). The (ALHMMC) possess light weight, low corrosion and high strength which offer unique property, which can use in automobile brakes. The main objective of this work to investigate the sliding wear behavior of al6061 composites reinforce mos_2 particles and to optimize the process parameters in braking applications. the composite were prepared by using stir casting technique and optimization were done by using taguchi technique. The optimal combinations input parameters which will positively influence the wear rate and coefficient of friction. Dry sliding wear test method wasused to conduct the experiments by using pin-on-disc wear testing machine. design of experiment was selected for analysis of the data. Investigation about applied load, sliding speed, sliding distance on wear rate and coefficient of friction during wearing process was carried out using ANOVA. results show that applied load has the highest influence followed by sliding distance and sliding velocity.

Keywords: Aluminium Hybrid Metal Matrix Composite(AlMMC), Wear, Stir casting, pin on disc, Design of experiments (DOE), brake

329. A Review of Cofiring Technologies to Reduce Greenhouse GasEmissions from Coal Fired Power Plants

Balamohan V [1], Benny A [2], DR. JAYALAKSHMI PJ [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The need for finding renewable sources of energy together with the necessity of searching for new technologies to reduce the negative impact of waste accumulation has led to the possibility of using biomass as an alternate fuel, especially in electric utilities. Most of the industrial sources of pollution come from coal-fired power plants, which necessitate the need to find ways to decrease the Greenhouse gas emissions from these. Also, the ratification of the Kyoto Protocol and the tightening environmental regulations means that by the year 2008, countries would need to implement measures to meet these standards. One of the options that need to be considered is the application of cofiring technologies to coal fired power plants. In this paper, we seek to review the various cofiring technologies available and also at the methods by which these standards could be met.

Keywords: Renewable energy, biomass, greenhouse gas.

330. Low Power Real Time Surveillance CCTV Recording using Msp430

Boomika P [1], Charulatha B [2], MRS. SAGAYA RANI A [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In recent day's conventional CCTV surveillancesystem recording continuously, so it occupies huge memory space and power consumption even there is no object in monitoring area. In addition the continuous CCTV surveillance recording consumes more time to review the stored video. Aforesaid parameters limit the effectiveness of traditional CCTV surveillance system. The proposed CCTV system initiate the recording process whenever the object movements in the camera coverage area. This system provides solution for enhancement in recording system. Proposed CCTV surveillance system uses MSP430 controller microwave motion sensor and camera. When object movements in monitoring area are identified by the microwave motion sensor, MSP430 controller enable the memory storage system. While no movement of object in coverage area, the system avoids the video recording. So that the system utilizes less electric power, reduced memory space and reduces review time of stored video.

Keywords: MSP430 Controller, Microwave sensor, CCTV, Digital video recorder, Light source.

331. Generate Electricity from Hybrid Road Speed Breaker

Chiranjeevi V [1], Deepika S [2], MRS. SAGAYA RANI A [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

A hybrid energy system usually consists of two or more energy sources used together to provide increased system efficiency as well as greater balance in energy supply. "Conversion of potential energy to electrical energy" is the basic principle of our invention. A crank shaft mechanism is used to generate power when a vehicle moves up on a speed breaker. Piezoelectric and hydraulic system is used in addition to the above to build a hybrid system in production of electricity.

Keywords: Hybrid, Crank Mechanism, Piezoelectric, Hydraulic.

332. Driver Fatigue Detection Using Image Processing and AccidentPrevention

Dinesh M [1], Gowtham B [2], MRS. SAGAYA RANI A [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Driving at night has become a tricky situation with a lot of accidents and concerns for the transport authorities and common man especially because of the increasing heavy vehicle movement. The drivers are forced to drive with minimal rest which takes a toll on their driving capability after a few days of continuous driving leading to reduction in their reflexes and thus causing accidents. In most of the cases of accidents, fatigue is found to be the reason for nodding off. In this paper, a system is developed to detect if the driver is sleepy through eye movement detection of the driver who is driving the car. Analysis and detection is carried out by means of image processing and alert system to alert the driver as well as others is developed in hardware along with a control system to stop the car after ascertaining the position of the car and nearby vehicles.

Keywords: Fatigue, Sleepy eyes detection, accident prevention, alert system, car movement control

333. A Novel Method of Supervision and Control of First Order LevelProcess Using Internet of Things

Hariharan S [1], Hemalatha G [2], MRS. SAGAYA RANI A [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Level process is one of the basic parameters which play a major role in most of the power plants and other process stations right from huge power plants to breaking oil level measurement in vehicles and also water level in domestic purpose. The level measurement and control is much important since the level is one aspect which intends to change or disturb other parameters. The level process is one process where its value changes continuously and rapidly and takes more effort for process monitoring and control. On a part of controlling levels in tanks in industrial applications the most widely used controller is the Supervisory Control and Data Acquisition to acquire values and present it in GPU, the monitoring of process value is local and lagging in remote accessibility. The measurement of level is a continuous process where the variable changes continuously with respect to time for which monitoring is required in remote places. This Proposed work, deals with the implementation of multi position, discontinuous controller for the level process system with the usage of raspberry pi module acting as controller of cloud database (Thingspeak) for storing and retrieving data for remote accessibility. Hence this level process prototype helps in controlling and remote monitoring the level process parameter used in most of the industries.

Keywords: Level Process Station, Internet of Things, Raspberry Pi, Cloud Computing, Data logging, Discontinuous Controller

334. Electrical Demand Response Using Electric Vehicle and Renewable Energy Sources

Jeeva M [1], Jeevitha G [2], MRS. SAGAYA RANI A [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The modern civilization and urbanization has led to the increase in conventional transportation and industrialization. This has created enormous CO_2 emission which drastically degrades the environment. Hence, this is a urgent need to find alternate sources of energy for transport and industry. This paper proposes a new energy management system for controlling electric vehicles and renewable power sources which are considered as alternative solution for CO_2 emission. The system includes standalone PV system and plug in electric vehicle. The demand side management is designed such a way that the load is splitted in the two modes namely online and offline mode. During online mode based on pricing and demand like Time of use pricing, critical peak pricing, real time pricing, peak load reduction credit criterias to be used. In offline mode based on previous and forecasting data we are classified in to peak hours and off peak hours. Smart meter is used to calculate import and export powers and IoT technology is used to manage all the things like data logging online price fetching process. In this paper we are dealing with MATLAB/SIMULINK model for PV and Electric vehicle and their corresponding simulation results.

Keywords: Plug-In Electric Vehicle(PEV), Photovoltaic system(PV), Online mode, Offline mode, Peak demand, Off peak demand, Time of Use(TOU), Critical Peak Pricing(CPP), IoT, Smart meter.

335. Performance Analysis of Multilevel Spatial Modulation of DM Technique (MLSM-MIMO)

Keerthana S [1], Kirubhashree D [2], MRS. SAGAYA RANI A [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Multiple–Input-Multiple-Output (MIMO) techniques are the key technology for next generation wireless communication standards, since it provides improved performance with bandwidth efficiency. The applications such as high speed internet, multimedia data transmission, and medical telemetry data which include images need high data rate transmission. The need for wideband channel and the scarcity of the available wireless spectrum are the main driving forces believed the development of new technologies such as adaptive coding techniques, STC, UWB, MCM and OFDM for the future generation wireless communication standards. MIMO-OFDM is a powerful combination and has already been adopted in many of the wireless standards to enhance system capacity. The main problem with these systems is increasing in computational complexity. Multilevel coding and multistage decoding has been proposed as a solution. In this paper MLSTTC-OFDM and MLSM-OFDM have been proposed and analyzed over frequency selective fast and slow fading channels. Simulation results show that MLSM-OFDM outperforms MLSTTC-OFDM over correlated fast and slow fading frequency selective channel conditions with 40% less computations.

Keywords: Multiple–Input-Multiple-output (MIMO), Orthogonal frequency Division Multiplexing (OFDM), Fading channel, Multilevel coding, multistage decoding, STC (Space Time Coding), SM (Spatial Modulation)

336. Solar Powered Intelligent Street Lighting System for Highway Application

Krishnan N [1], Magesh G [2], MRS. SAGAYA RANI A [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

With the increased energy crisis and global warming, energy saving is inevitable with proper selection of renewable resource. The proposed system relies on effective use of solar energy to drive the street lights. Infrared (IR) sensor and LDR (Light Dependent Resistor) are employed in design for detecting motion of vehicles and atmospheric lighting conditions. Relays are used for switching between grid and solar power based on power availability. Light Emitting Diodes (LED's) are employed for lighting purpose. GSM module is directly interfaced with the controller to intimate the failure condition of the lamps to the specified authority. The system is developed using microcontroller and practically implemented for realization.

Key words -Energy saving, LDR, Microcontroller, IR sensor, GSM module, Solar street lighting, LED's

337. Broadbanding Microstrip Patch Antenna Using ElectromagneticBand Gap Structures

Mahasuvetha M [1], Manikandan M [2], MRS. SAGAYA RANI A [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In this paper design, simulation and fabrication of Wideband Microstrip Patch Antenna has been done by inserting Electromagnetic Band Gap (EBG) structures. Microstrip patch antennas suffer from a number of limitations as compared to conventional antennas. The bandwidth, efficiency, gain and power handling capacity of microstrip patch antennas are low compared to conventional antennas. Using EBG structure with Microstrip patch antennas increase their gain, improve their radiation pattern and reduces the side lobe and backlobe levels. The antenna has been designed for the 4 GHz to 6 GHz frequency range of operation. The Simulation of the antenna characteristics has been done using CST microwave studio. The simulation and fabricated results for return loss and radiation pattern are presented.

Keywords—Wideband Microstrip Patch Antenna; Electromagnetic Bandgap; CST Microwave Studio

338. A Circularly Polarized Triangular Slot Reconfigurable Antennafor Wireless Applications

Meenatchi A [1], Mohana Priya K [2], MRS. SAGAYA RANI A [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In this paper, a circularly polarized triangular slot reconfigurable antenna is proposed for wideband application using switches. Reconfigurable antennas are designed to cover various wireless services operating over a wide frequency range. To achieve circular polarization, inverted L shape strip is attached to the ground plane. Gain enhancement of the proposed antenna is achieved using a double layered square loop frequency selective surface (FSS). The ON and OFF states of the switch provide wider bandwidth and multiple narrow bandwidths respectively. The proposed antenna has been designed and simulated using High frequency structural simulator (HFSS).

Keywords: Reconfigurable Antenna, CPW Feed, Circular Polarization, High Gain, Frequency Selective Surface.

339. Implementation of Data Gathering System using Mobile RelayNode in Wireless Sensor Network

Bharathidhasan C [1], Susila N [2], MRS. SHANMUGA PRIYA U F [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Wireless Sensor Networks (WSN) are infrastructure-less network to monitor and share the physical conditions in the environment. There is a growing need for securing the data sharing in WSN. Because it is vulnerable to access unauthorized. In this paper, data sharing is secured by context based cryptographic algorithm which is not only depends on secret key but also depends on context which is set by the sender. To collect secured data from the sensor nodes, Mobile Relay Node (MRN) is used. It is a mobile device which roams around the network for data gathering using Wireless Personal Area Network (WPAN). The sensor nodes and data center are developed using ARM LPC2148 Processor and Mobile Relay Node (MRN) is developed using PIC16F877A microcontroller. To evade the illicit access of the data, context based cryptographic algorithm is developed and loaded into the ARM based sensor nodes and data center.

Keywords – Wireless Sensor Network, Mobile Relay Node, Wireless Personal Area Network, ARM LPC2148, PIC16F877A, Cryptography.

340. IOT Based Smart Security and Monitoring Devices for Agriculture

Pragadhi R [1], Priyanga G [2], MRS. POONGKODI S [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In the real world, many farmers face problem in monitoring their farms. The farmers have more difficulties to monitor all the farms at the same time. Hence the project is developed to monitor the farms in the field using the concept of IOT (Internet of Things). Temperature level, soil moisture and water level are monitored according to the readings of these sensors and the pump is switched on to provide adequate water to the fields. Here all the data's are parsed into the server and are able to monitor the plants continuously and easily able to monitor the health of farms. By using the IOT, the development time gets reduced and thus time for monitoring the farms. Also need not to worry about the health of crops and the readings are displayed in the server automatically through the wireless network. The pump can be switched ON or switched OFF from any part of the world using the concept IOT (Internet of Things). Moisture sensors sense the soil moisture content and switch on or off the pump according to the readings displayed in the web page. Temperature sensor sense the heat in the atmosphere, according to the climate, the switch will be automatically ON/OFF motor.

Key words: PIC (Peripheral Interface Controller), IOT (Internet of Things), A/D(Analog to Digital converter), Wi-Fi(Wireless Fidelity), SQL(Structured Query Language), HTML(Hypertext Markup Language), PHP(Hypertext Preprocessor).

341. Design and Stability Analysis of Buck-Boost Converter for Harnessing Energy from Bicycle Pedaling

Priyanga K [1], Rajeshwari S [2], MRS. POONGKODI S [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

As power crisis is increasing day by day a simple and eco-friendly way to generate pollution free power is the need for the day. In this paper, pedaling of exercise bicycle with efficient power conversion technique is utilized to power up the electrical equipments. Permanent magnet generator is employed to convert rotatory movement from bicycle into electrical energy. A gear setup is used to enhance the speed whenever pedaling is done. The Buck-boost converter has been used to regulate the voltage in the range of 7V to 60V generated by the PMG into 14.37V regulated voltage to charge the battery. Hardware prototype is implemented and the various voltages obtained from the permanent magnet generator at different RPM has been tabulated. An inverter circuit has been designed to supply the AC load. The stability of the converter is examined by adding damping filter. The efficiency and ripple of the converter for various values of load current are analyzed.
Keywords: Permanent Magnet Generator, Buck boost Converter; Switching frequency

342. Fuzzy Logic Based Direct Torque Control of Three Phase Induction Motor

Ramya Devi K [1], Rasika A [2], MRS. POONGKODI S [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

This paper presents the comparison between three different Direct Torque Control (DTC) strategies for the speed control of Induction Motor (IM): (i) DTC strategy with Hysteresis controllers (ii) DTC-Space Vector Modulation (SVM) with Proportional Integral (PI) controller and (iii) DTC-SVM with Fuzzy Logic controller (FLC). Dynamic behavior as well as steady state behavior of all the three methods is analyzed using MATLAB/SIMULINK. Simulation results show that, the FLC based DTC-SVM gives excellent dynamic and steady state performances. Also DTC SVM gives low torque ripples and maintains the switching frequency constant.

Keywords: Direct Torque Control, Space Vector Modulation, Fuzzy Logic Controller, Induction Motor, Torque

Ripple Minimization.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

343. Performance Analysis of Sensor less BLDC Motor Using PI andANFIS Controller

Ravikumar M [1], Sabinath K [2], MRS. POONGKODI S [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The development of power electronics the converters are widely used in motor drive application. Industrial Applications make use of variable speed drives, because of its efficient performance. With the different PWM techniques projected for voltage fed inverters. , there is an increasing trend of using space vector PWM (SVPWM. It is easier digital realization, low level harmonics, concentrated switching losses. It is better DC bus utilization which is used here. In usual control and other sensing techniques there is a necessity to measure the speed and position of rotor by using sensors. It is because the inverter phases acting at any time, must be commutated depending on the rotor position whereas in sensor less control. The performance and reliability of BLDC motor drives have been increased much greater. BLDC Motor involves the estimation of parameters of drive system using Adaptive Neuro Fuzzy Inference system (ANFIS) algorithm which makes use of both adaptive neural networks and fuzzy logic for the estimation of rotor position and aims at minimization of error. This method is like a fuzzy inference system using a back propagation output layer. Therefore, the combination of least squares estimation and back propagation for membership function is used in ANFIS which tries to provide a faster and good dynamic response thereby speed control of BLDC motor. The torque ripple reduction is carried out. The results obtained by using MATLAB/Simulink.

Keywords: BLDC Motor, Sensorless Control, FOC, PI Controller, ANFIS Controller, Dynamic stability of motor.

344. Design of UPQC Based on Modular Multilevel Matrix Converterfor Mitigation of Voltage Sag and Current Harmonics

Sharmi A [1], Sheik Abdulla K [2], MRS. POONGKODI S [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The broadside of this paper is to presents a model aim to design a Single Phase Unified Power Quality Conditioner (UPQC) based on Modular Multilevel Matrix converter (M3C) which is used to mitigate Voltage Sag and Current Harmonics in the medium voltage power distribution system. This Modular Multilevel Matrix converter based UPQC consists of four identical multilevel converter arms and its corresponding filtering inductors and capacitors. In this context a five level multilevel converter is chosen as modular multilevel matrix converter which is controlled by integrated control strategy which uses the arm currents and voltages so as to reduce the Total Harmonic Distortion of load voltage and current. The simulation of Modular Multilevel Matrix converter based UPQC has been carried out using MATLAB / SIMULINK 2013. The effectiveness of the proposed methodology is validated by comparing the THD values of proposed methodology and the system with ordinary UPQC.

Keywords—Unified Power Quality Conditioner, Modular Multilevel Matrix Converter, Five leveL,Multilevel Converter, Voltage Sag, Current Harmonics.

345. An Experimental Investigation of PFC BLDC Motor Drive UsingBridgeless Cuk Derived Converter

Soundarya V [1], Sriram C [2], MRS. POONGKODI S [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

BLDC Motor Drives are finding greater role in low and medium power applications owing to their electronic commutation feature and superior performance. These drives combined with the usage of power electronic based converters, poses a severe challenge to the power quality with the most common problem being distorted supply ure of providing Power Factor Correction, smooth variation of DC link voltage, current flow through a less number of switches. This proposed method has been analyzed using both Simulink Model and suitable hardware setup. The comparative analysis of simulation and hardware results indicates satisfactory performance of the proposed model in terms of power factor improvement and smooth speed control.

Keywords: BLDC, CUK Converter, PFC, Harmonics, Bridgeless topology.

346. Three Phase Load Balancing and Energy Loss Reduction in Distribution Network using LABIEW

Suganya G [1], Sushmeetha A [2], MRS. POONGKODI S [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The aim of this paper is to develop a simulation package using Lab VIEW for energy loss reduction. The daily load usage pattern of typical distribution network is to be studied for energy loss reduction. It can be observed by downloading the data from the energy meter fixed in the distribution transformer. The individual phase voltages, current, power factor can be downloaded by using common meter reading instrument. By using this VI profile, LabVIEW based simulation package is developed. It measures the power and predicts the unbalance current in three phase distribution network. The simulation package tries to shift the specific number of consumer load points for three phase load balancing.

Key words: Current Unbalance, Distribution Automation, Distribution system, Expert system, Fuzzy Logic, Lab View

347. Analysis of Power Quality in Grid-Connected Wind EnergySystem with UPFC using Soft Computing Techniques

Thanasekaran S [1], Thasneem Begam Y [2], MRS. POONGKODI S [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Energy is a prime factor that decides any nation's Gross Domestic Product (GDP). Reliable power from renewable energy sources has become very important in today's energy scenario mainly due to theshortage of fossil fuels. Wind energy is one of the promising renewable energy sources for the future. But the fluctuating nature of wind introduces power quality issues like harmonics and deviations in voltage waveform in the grid, which in turn affects the stability of the entire grid. This paper aims at reducing theseissues using Unified Power Flow Controller (UPFC), one of the Flexible AC Transmission System (FACTS) devices. The incoming power from the wind power plant is fed through Unified Power Flow Controller (UPFC), which is connected at the Point of Common Coupling (PCC). The power quality is analysed using Total Harmonics Distortion (THD) as a performance measure which is simulated in SIMULINK/MATLAB. The UPFC is controlled using Fuzzy Logic and Neural Networks instead of conventional Proportional Integral (PI) Controller and the results are compared. It is found that the Neural Network control gives the lowest THD among all the three methods.

Keywords: FACTS, PCC, THD, WECS, UPFC, Neural Network, Fuzzy Logic.

348. Dimension Reduction of Multispectral Images Using PCAand Folded PCA

Thirumeni v [1], Vaishnavi S [2], MRS. POONGKODI S [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Multispectral satellite imagery provides us with useful but redundant datasets as it contains several bandsof data. Analysis and implementation of such remotely sensed images is much complex and takes lot of time. Using dimensionality reduction algorithms, these datasets can be made easier to explore and use. In this paper, Principal Component Analysis (PCA) and Folded-PCA (F-PCA) in processing of multispectral satellite images have been highlighted. PCA uses orthogonal transformation to convert high dimensional data into linearly uncorrelated variables, namely principal components. Often, the number of principal components is significantly reduced in comparison to the original feature dimension. In F-PCA, the spectral vector is folded into a matrix to allow the covariance matrix to be determined more efficiently. With this matrix-based representation, both global and local structures are extracted to provide additional information for data classification. Also, it reduces the computational cost and the memory requirement against PCA method. The main objective is to reduce the dimension of multispectral images using Folded-PCA method with stopping rule. The sub objective is to compare the performance of the proposed algorithm with existing algorithms such as PCA.

Keywords: Dimension reduction, Feature extraction, Folded-PCA (F-PCA), multispectral imaging, Component Analysis (PCA)

349. A Low Cost Quad-Band Microstripline Bandpass Filter for Cellular, C-band downlink and WLAN Applications

Yasika v [1], Vaishnavi S [2], MRS. POONGKODI S [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The proposed work includes, a quad band bandpass filter design using open stub methodology which will reduce the insertion loss and improve the return loss for the applications like Cellular with a frequency band of 1.9-2.6 GHz, C band downlink with 4 GHz frequency and Wireless Local Area Network (WLAN) with 5 GHz and 5.4 GHz frequencies. Microstriplines for the band pass filter are designed using FR4 substrate with a dielectric constant of 4.6 and a thickness of 1.6. The proposed open stub microstripline band pass filter is simulated using the Advanced Design System 2016.01 (ADS) simulator and the performance measure is analyzed using the results obtained.

Key words: Bandpass filter, quad band, microstripline, ADS, C band downlink, cellular, WLAN.

350. MPC for Internal Temperature of Distillation Column in Petroleum Refineries

Rajeshwari S [1], Meenatchi A [2], MRS. SANTHANA SELVI P [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

ABSTRACT

In petroleum process industries, fractional distillation columns are used to extract the different end products from crude oil. Distillation columns are more complex and non-linear in nature. The optimum control for extracting the end product from the fractional distillation columns will be difficult and it is one of the major threats for the process engineers in the refineries. Petroleum refineries fractional distillation columns are used to extract a maximum of fifty by-products from crude oil with various temperature level of volatile component of crude oil. Due to temperature variation that occurs during nights, winter session and heavy rainfall, the internal column temperature of the fractional distillation columns will be affected and this leads to the decrease of the quality of the end product. The continuous temperature variation of a fractional distillation column is the critical process variable to control within a preset limit as the internal temperature tends to decrease due to environmental conditions. The stability and purity of the end product in a distillation column is in relation to the internal temperature of the column. But it is very difficult to maintain a constant value of the internal temperature by using a conventional control methodology (P+PI+PID). To overcome the drawbacks of the existing system, Model Predictive Control (MPC) is been introduced and implemented.

Keywords: MPC, Distillation Column, Internal Temperature, feed flow, feed temperature, coolant temperature.

351. Functional Distance Based Test Vector Reordering for Low Power Testing of VLSI Circuits

Sriram C [1], Ramya Devi K [2], MRS. SANTHANA SELVI P [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Power dissipation in latest VLSI circuits and systems is not only an issue during design part but also during testing phase. Testing is an experiment in which the circuits are exercised with binary patterns called test vectors to detect the faults. Literature survey results show that testing power raised up to threefold when compared with normal power. Main reason for this high power is that the test vectors are random and there is less correlation between successive test vectors. This randomness reduces the correlation further and hence integrated circuits dissipate more function is used commonly in all literatures of test vector reordering. In this research article, five different functional distances are used to measure the switching activity between successive test vectors to reorder the test vectors such that the distance is minimum. Minimum distance assures high correlation among test vectors and power dissipation is minimized. The proposed method is experimented with ISCAS85 benchmark circuits to prove the effectiveness of reordering algorithm. Comparison results show that other distance functions are also perform better than the hamming distance function. Maximum power reduction of 50% is achieved for Cosine distance while hamming distance achieved 45% only.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

352. Three Port DC-DC Converter for Standalone Photovoltaic System

Thasneem Begam Y [1], Manikandan M [2], MRS. SANTHANA SELVI P [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The most commonly used renewable energy is the solar energy. The Efficiency and cost of the PV system is an important criterion. In this paper, a three - port DC-DC converter for Photo-Voltaic system is designed with improved forward-fly back topology. This converter is designed to achieve high step-up capability and its system efficiency improvement using multiple operation modes of a converter. In this paper, the coupled inductor which acts as the transformer provides flexible voltage conversion ratio and galvanic isolation. Switching pulses to the converter are generated by PWM and Phase shift control technique thereby giving almost constant output voltage regulation. The design of proposed converter is done with MATLAB Simulink software. The converter with three operating modes is designed and results analyzed with experimental work. The proposed converter results compared with Two port converter.

Keywords: DC-DC conversion, MPPT, PWM, Phase shift Technique

353. A Novel Integrated Approach of Wind Energy Conversion Systems with Optimized Matrix Converter Fed Grid Under Different Load Conditions

Rasika A [1], Mohana Priya K [2], MRS. SANTHANA SELVI P [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Matrix converter uses the different techniques to produce the high quality waveforms in the input and output side and also produces the desired output compared with Back to back converter. Genetic Algorithm based PI controller with Space vector modulation technique for Matrix converter under different load conditions fed in to grid are initially presented. This is to improve input power factor and to reduce the harmonics in the output of matrix converter in the integrated approach. The input power factor varies for different load conditions. So it is required to compare the performance under different loads. Results for light and high load conditions and compared results are presented difference. But in the proposed method, integrated approach is used. To reduce harmonics in load and improve the input power factor, integrated approach uses optimized Matrix converter (in the previous section) to one of the WECS (Wind Energy Conversion System) and standard converter to other WECS connected to same grid of wind system. Conventional converter based harmonic performance analysis has been done and compared with integrated approach. Input power factor improvement is also achieved and compared with standard approach. Simulation results are presented which is modelled using MATLAB/Simulink. The output voltage THD, output current THD, lower order harmonics till13[th] harmonic and input power factor for Matrix Converter with optimized PI controller fed grid in the integrated approach are better compared to conventional Wind energy conversion systems from the proved results.

Key words: Matrix Converter, Total Harmonic Distortion, Lower order harmonics, Input Power Factor, Space Vector Modulation, PI controller, WECS.

354. Early stage Diagnosis of Red Lesions in Diabetic Retinopathy

Ravikumar M [1], Vaishnavi KS [2], MRS. SANTHANA SELVI P [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Diabetic retinopathy is a common diabetic eye condition which is the prime reason behind a number of cases of blindness. It is caused due to variations in the blood vessels of the retina. If these variations were diagnosed at an early stage, through screening methods, the treatment and healing would be more promising. One of the key symptoms is development of red lesions like micro aneurysm and white lesions like exudates and cotton wool spots. Our work deals with the detection of red lesions only as it is a sure shot indication of diabetic retinopathy and an algorithm has been proposed to this effect.

Keywords: Retinopathy in diabetic, red lesions, Digital signal processing, Fundus Image

355. Dual Band MIMO Antenna Using Decoupling Slots for WLANApplications

Sabinath K [1], Yasika A [2], MRS. SANTHANA SELVI P [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

A compact dual band antenna system with reduced mutual coupling for WLAN. The antenna design is such that it operates with two loops which cover two frequency ranges. Inner loop covers 1 – 3 GHz and Outer loop covers 4 – 9 GHz frequency ranges. There exist a few methods to minimize the mutual coupling effects between antennas which lead to performance degradation. In this paper reduced mutual coupling is achieved by introducing decoupling slots by etching the ground plane below the substrate. U-Shaped decoupling slots and rectangular slots are analyzed for which the results are found. FR4 substrate is used for printing the antenna. The simulated return loss for the proposed MIMO system with rectangular slots is in the range of - 25 dB to -51 dB for inner and outer loops with VSWR of 1.5. The obtained gain is 20.95 dB.

Key words— MIMO, Decoupling Slots.

356. Design of Multiband Antenna using SRR Structure forLTE, Radar, ISM and X-band Applications

Balamohan S [1], Deepika S [2], MRS. SANTHANA SELVI P [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The proposed work makes use of the advantages of Split Ring Resonator (SRR) structure in antenna which improves the return loss characteristics at the desired frequencies as well as the multiband behaviour of the antenna. The compact, low profile and cost effective multiband antenna was designed for the frequencies of Long Term Evolution (LTE), Radar, Industrial, Scientific, and Medical (ISM) radio band and X- band applications. Flame Retardant (FR4) substrate with a thickness of 1.6 and a dielectric constant of 4.6 is used for the design and fabrication of antenna. High Frequency Structural Simulator (HFSS) is used for the simulation of the proposed antenna design and the design is fabricated and tested. The performance of the proposed antenna at the desired frequencies is evaluated based on the tested results.

Key words: LTE, Radar, ISM, X-band, multiband, SRR.

357. Modelling and Analysis of Single Stage Single Phase Boost Inverter

Rajeshwari S[1], Meenatchi A [2], MRS. SANTHANA SELVI P [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Solar cells are used to generate electric energy from the renewable energy source such as sunlight which can be used to charge a battery. The battery voltage is converted into 230V ac supply using inverter for driving single phase load applications like home appliances. The output of the conventional voltage source inverter is lower than its input and is used to drive the loads after removing the ripples by using filtering circuit. The main attribute of the boost inverter is that it produces an ac output voltage higher than the input dc supply depending on the instantaneous duty cycle. The output of boost inverter can be used to drive the autonomous loads and home appliances without any filter. The main advantages are low cost, less number of switches used, compact size and reduce the power processing stages into single stage.

Keywords: Solar cell, Boost inverter, Inverter, Filter

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

358. High Throughput Quaternary Signed Digital Adder Design forPortable Electronic Applications

Charulatha B [1], Hariharan S [2], MRS. SANTHANA SELVI P [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The requirement for prime speed digital circuits became additional important as handy electronic applications, desegregation informatics and computing. The flinch of the recent electronic devices is high latency of Arithmetic operation; Arithmetic Circuits play an essential role in both broad-spectrum and high bandwidth computational circuit applications. To overcome the latency, we design the QSD (Quaternary Signed Digit) number system with respect to base-4 numeral system. In this proposed QSD number system, it needs a special set of prime modulo primarily based logic components for every mathematical process. The prime modulo are designed by multi level voltage scaling by using TSMC 180nm Technology. The intra and inter delay free mathematical process is achieved employing a higher number QSD number representation system which provides higher performance when put next to Binary CMOS design. An 8 bit and 16 bit adder is designed in both CMOS and QSD and the simulation outputs are verified by the ISCAS workbench circuits. The schematic design and simulation was carried by Tanner 13 and Layout design by micro wind software tools.

Key words: CMOS VLSI Design, QSD, Adder, layout design, Dynamic dissipation.

359. A Design, Simulation and Fabrication of Modified Sierpinski Gasket Fractal Antenna for Wideband Applications

Charulatha B [1], Hariharan S [2], MRS. HEMALATHA V [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

As the growth of antenna systems are in rapid to achieve the higher directive gain with Broad Bandwidth.Eventhough fractal elementary antennas possess broad bandwidth but its fails to meet high directive gain expectations. In order to fulfill this high directive gain expectation, an array is normally used to increase the directive gain. Different types of fractal arrays are proposed to increase the directive gain such as Koch fractal array, Sierpinski fractal array, Cantor and so on. In this paper, a design of modified Sierpinski Gasket Fractal Antenna (SGFA), whose geometry is modified using circular shape. It is designed with relative permittivity of 4.4 and having dimensions (17.89 x 21.45 x 1.6) mm^3.The proposed antenna has return loss of -16.96 dB at 5.1GHz. Probe feed is used to feed the antenna. Antenna has a gain of 13.48dB at 9.8GHz. The simulation of proposed antenna is done using High Frequency Structural Simulator (HFSS) Software and it has been fabricated and tested for the design specification.

Keywords: Modified Sierpinski Fractal, Resonant Frequency, Return Loss, Fractal Antenna, VSWR

360. Simulation Study of Optical and Electrical Characteristics and ItsPerformance Behavior of a Quantum Dot Based Solar Cells

Soundarya V [1], Priyanga G [2], MRS. HEMALATHA V [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Solar cells are constructed with the incorporation of Quantum dot layers in it. This technology of using Quantum dots in the solar cells now has become an emerging area of research in the nano-technology field. A new design of Quantum dot based solar cells with the use of different material layers to study the electrical and optical characteristics of a solar cell which influences the performance is developed. Cross light-APSYS software tool has been used to design the quantum dot solar cells using ZnO/CdZnO as photosensitive layer. Bandgap energy, Concentration of holes and electrons, current trap occupancy graphs are obtained from the simulations.

Key words— Quantum dot, Solar cells, photovoltaic material, quantum confinement.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

361. A Non Invasive Identification of Malignant Thyroid Nodules withUltrasound Images using Textural Features Classification

Keerthana S [1], Sumithira R [2], MRS. HEMALATHA V [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

ABSTRACT

Focal and diffuse thyroid abnormalities are commonly encountered while performing computed tomography (CT) examination for various clinical purposes. These findings can often lead to a diagnostic dilemma, as the CT reflects nonspecific appearances. Ultrasound (US) examination has a superior spatial resolution and is considered the modality of choice for thyroid evaluation. Suspicious thyroid conditions are indicated with the existence of palpable nodules with solid or cystic composition. Solid nodules have high possibility to be malignant than cystic. An effort to detect and classify the internal aggregation of thyroid nodule is a challenging area of research. Interpretation of disease condition in ultrasound imaging is operator depend. We propose a technique to automate the interpretation which works on texture analysis of histogram statistic, gray level co-occurrence matrices (GLCM) and gray level run length matrices (GLRLM). The fine needle aspiration (FNA) is a type of biopsy procedure requiring needle intervention into the area of abnormal-appearing tissue or body fluid usually used for identification of malignant lesions. It can be directly replaced with the proposed textural classification because the textural pattern is significantly different between solid and cystic nodules or be used as a guide to aid FNA. The Artificial Neural Network (ANN) Multi-layer perceptron (MLP) was adopted to do classification process for thyroid images yielding appreciable accuracy.

Key words: ANN, MLP, Texture classification, Thyroid Nodule; Ultrasound imaging.

362. Generation of Electricity using Waves

Monisha R [1], Priyadharshini G [2], MRS. HEMALATHA V [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Ocean waves are huge, largely untapped energy resource. Wave energy convertors capture the energy obtained in ocean waves and use it to generate electricity. This review introduces the general states of wave energy and evaluates the device types that represent current wave energy converter (WEC) technology. With respect to the present techniques, this form of production would create an upcoming impulse.

Keywords: Ocean waves, Electricity, Wave Energy

363. Energy from Outer Space by the use of Hybrid Solar Cells in Space Based Solar Power (SBSP)

Hariharan K [1], Kamali A [2], MRS. HEMALATHA V [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

ABSTRACT

Energy plays a vital role in the economic growth of a country. Everything in the world depends on the availability if energy. Energy is mainly being extracted from renewable and non renewable sources. Energy from non renewable sources has destroyed our environment. The problems like global warming is at it's peak. Extraction of energy from renewable sources like solar. Thus the maximum of sun's energy can be captured and utilized. Outer space consists of huge amount of un interrupted solar energy. So, space based solar power generation is capable of generating energy almost all the time irrespective of day and night cycle , climatic promising properties such as high charge mobility, thermal stability, photo conducting and luminescent properties. If we use organic materials such as conducting polymers the solar cells would be easy processing, recyclable, relatively low cost, scalability, etc. In order to utilize the advantages of both hybrid solar cells with both organic and inorganic materials can be used for targeting a better power conversion efficiency.

Keywords: Space Based Solar Power, Hybrid solar cells, Si-P3HT, Nano rod coaxial Si.

364. Incremental Conductance Method of Maximum Power PointTracking for Photovoltaic Array with Single Switch DC/DC Converter

Benasir S [1], Divyakeerthan P [2], MRS. HEMALATHA V [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The increase in electricity requirements of the world and the power demand has been running ahead of supply. Conventional power sources like coal, natural gas results in significant emission of CO_2 into the earth's atmosphere and these sources are depleting in nature. Therefore, the world is switching over to renewable energy sources like solar, wind etc. The major advantages of these renewable energy sources are that these sources are eco-friendly and exists abundant in nature. In this paper, the focus is on the solar energy and extracting the maximum power from the solar array using maximum power point tracking (MPPT) algorithm. Also single switch DC/DC converter is used. Even though many MPPT algorithms were suggested in the literature, the Incremental Conductance algorithm is proved to be an efficient technique for solar PV system with single switch DC/DC converter. The purpose of the analysis is to determine the parameters like voltage, current and power for the proposed system using single switch DC/DC converter connected with the motor load. The entire system is modelled and simulated using MATLAB/ Simulink 2012a software.

Key words: Incremental Conductance, Maximum Power Point Tracking(MPPT), Single switch dc-dc converter.

365. Intelligent Controller based Dynamic Sag Compensator

Gowrisankar G [1], Kiruthika M [2], MRS. HEMALATHA V [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Switching of heavy loads and abnormalities in the utility grid cause voltage sag, swell, flicker, interruptions, harmonic distortion and other power quality problems. The effects of the voltage deviations are the tripping or malfunctioning of the sensitive equipments and protective devices. For compensating the voltage sag instantaneously, an intelligent controller based dynamic sag compensator has been designed and implemented. This controller responds to the system parameter variations and maintains the voltage level constant. Photovoltaic system is incorporated with PI controller and an additional DC source is provided as a backup. The proposed fuzzy logic control system is simpler than the model based controller. The dynamic sag compensator has been designed and implemented in Simulink environment and the result has been verified.

Keywords: Dynamic Voltage Restorer, Phase Locked Loop, Photovoltaic Cell, Fuzzy Controller, Voltage Source Converter.

366. A New Modulation Strategy of L-Z-Source Inverter in DG System

Gnanaprakasam A [1], Kamatchi S [2], MRS. HEMALATHA V [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

This paper presents on the beginning of open loop L-Z source inverter. The capacity of converters is not used for all time by reducing the harmonics in the distributed generating system. The distributed generating system is linked to the grid by using the power electronics converter. The input voltage to be boosted is done, by adding inductance and diode to the input side of power electronic converter. It reduces the inrush current and eliminates the ripples in the input current. In normal DC-DC converter is not used for the high range of distributed generating system. The special power converter need for the interfacing with grid. Based on the presentation, the proposed L-Z-source inverter will be suited. The power quality of the grid is to be improved by the harmonic reduction. The results obtained by using the MATLAB Simulink software. The obtained result is tested with it.

Key words —Inductor-Impedance Source Inverter, Total Harmonic distortion, Grid, Power Quality.

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

367. A Modified Single Phase Multilevel Inverter Topology for Distributed Energy Resources

Aravindh V K [1], Santhosh Kumar R [2], MRS. HEMALATHA V [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Distributed energy resources systems are small scale power generation which is used to modernize advanced renewable technologies to facilitate smarter grid. Even though MLI holds special features such as betterquality waveform, low electromagnetic interference, harmonic reduction but then usage of more switches in conventional MLI poses a constraint. The objective of this paper ismainly focused on single phase Multilevel Inverter (MLI) for distributed energy resources thereby minimizing power electronic switches for higher level output which essentially reduces the cost, switching losses and harmonics for real time application. The proposed inverter is modeled and compared with Cascaded H-Bridge MLI, simulation results are shown for 15-level and performance of MLI is validated using MATLAB 7.10 version (Simulink).

Key words: Multilevel inverter (MLI), gate pulses, distributed energy resources (DER), harmonics, switching losses.

368. A Dynamic Carpooling System with Social Network Based Filtering

Mathavan N [1], Priya P [2], MRS. HEMALATHA V [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In this 21st century, India is the second largest populated country in the world. According to the future projection of population growth, India will reach more than 5.4 billion people around 2030. Population is concentrated more in urban areas than in rural areas [1,2]. People prefer to travel by car than using a public transport system. As a result, the problem of traffic congestion increases heavily. In order to overcome the problem, a Real time ridesharing is proposed. This method is put into an operation by developing an Android application. Real time ridesharing is an extension of carpooling to best suite one's preferences using the data composed from Social networking. It enables users, particularly colleagues, classmates to share their vehicle among the fellow passengers to the same or nearby destination. The system gives real time guidance in a map, with addition to ridesharing. Users can either set their travel to be private or public by making to available to some of their friends using privacy settings. The concept can also be extended to taxis and rickshaws and can also be implemented in any other public transport systems. Execution can be done by integrating with social networking sites, by identifying the location using GPS. For simplicity this is mainly incorporated in mobile phones. The system supports the use of mass public transport system and taking a trip together will become obligatory to manage the depletion of fuel, making the atmosphere green and to control traffic.

Key words: Web service, Client application, Carpooling, Rating services, Ridesharing.

369. Smart Public Transportation System using Android App

Mathavan N [1], Priya P [2], MRS. YAMUNA DEVIN [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Road transport is highly affecting the routine activities of the people due to over population and availability of poor resources. In order to utilize the precious time available in an efficient manner an Android App could be a solution. This paper aims in providing a dynamic time chart for the Public who rely on the bus transport facilities. In the proposed work the Android App continuously sends information regarding the location of the bus to the database linked with the APACHE server. The database also contains the distance and the location of the bus stop. The time taken to reach the destined bus stop is calculated using the database. On opening the webpage the publics can select the bus stop and view the arrival time of the buses to the respective bus stop. By linking the app with the traffic monitoring system of that area an accurate arrival time of the buses could be predicted to suite the real time scenarios.

Key words: Quantum Mechanics, Quantum key distribution, Quantum cryptography, QKD Protocols, PKI,Network Security

370. Colour Image Encryption Using Chaotic System

Gayathri M [1], Abinesh T [2], MRS. YAMUNA DEVI N [3]
[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In this paper, color image encryption using the chaotic algorithm for a highly secure transmission is proposed. The RGB image matrices are divided into blocks of 16 pixels such that every 16 pixels will be encrypted with different session keys using chaotic logistic map. This is done by changing the initial condition with change in key for every block of pixels. The proposed scheme utilizes two chaotic logistic maps and an external key of 80-bit. To make the cipher more sheltered, the secret key is customized after encrypting a block of pixels of the image. To improve the speed and Accuracy, the number of blocks of pixels for which the key has to be changed, is increased. The results of several experimental, statistical analysis and key sensitivity tests show that the proposed image encryption scheme provides an efficient and secure way for real-time image encryption and transmission.
Key words -Secure image encryption, Logistic map, Pixels Block division.

371. Comparative Study of Pentagon Shaped Patch Antenna with Different Substrates operating at WLAN Frequency

Naveen R [1], Sophiya K [2], MRS. YAMUNA DEVI N [3]
[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Microstrip antenna finds a great attention for the past four decades due to their low profile, low cost and ease of fabrication. This work presents a design and analysis of pentagon shaped patch antenna operating at 5.8GHz (WLAN frequency). Substrate plays a vital role in the design antenna in terms of Miniaturization and bandwidth broadening. The comparative study is made by choosing different substrates such as FR4 and Roger in the design of proposed antenna. The effect of changing substrate material for the given antenna is observed in term of its gain, directivity, return loss, VSWR and Bandwidth. Size of the antenna is $25 \times 25 \times 1.6$ mm^3 makes it convenient for wireless communication systems. High Frequency Structure Simulator (HFSS) software is used to simulate the proposed antenna design.
Key words: Patch Antenna, Substrates, FR4, Roger, WLAN

372. Quantum Key Distribution (QKD): A Review on Technology,Recent Developments and Future Prospects

Mohandoss S [1], Manikandan K [2], MRS. YAMUNA DEVI N [3]
[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Quantum Key Distribution (QKD) provides promising secure communication, the crucial need for online security in Public Key Infrastructure (PKI). QKD is mainly used for distribution of keys securely between two parties and is a commercially available application of Quantum Cryptography (QC). QKD has the ability to enable the authenticated users to detect unwanted attempts by the intruder in trying to gain knowledge of the secret key. Through the fundamental nature of quantum mechanics, in Principle QKD has the distinction of being, unhackable. Quantum cryptography harnesses the counterintuitive behavior of elementary particles such as photons and ensures the confidentiality of information transmitted between two parties. There are many QKD protocols that provide a secure key which include BB84 protocol, BB92 protocol, SARG04 protocol, E91 protocol, COW protocol, DPS protocol ect.,. In this review the trends and challenges in Quantum Key Distribution isdiscussed .Also the contribution of QKD towards network security is presented by analyzing its strengths and weakness..
Key words: Quantum Mechanics, Quantum key distribution, Quantum cryptography, QKD Protocols, PKI, Network Security

373. Power Generation Using Solar Panel and IR Grid

Latchiya K [1], Vanila G [2], MRS. YAMUNA DEVI N [3]
[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract
Increasing power demand provokes the young minds to found alternative solution to generate power using various modes. Among the various method of conventional power generation, solar is a prominent energy source for generating power. But the availability of the same is possible only during the day time and is also affected by monsoon variations. An alternative effort to solve this problem is proposed in this paper using IR sensors. The IR sensor in a grid arrangement could be used for energizing the solar panel during the night time and even during the days of monsoon variations. This work analyzes the efficiency and driving capacity of the IR grid used for power generation. This paper also focuses on the alternatives to the IR sensor which is under the study for future development.
Key words :(Power generation, IR grid, Solar Cells, Photovoltaic Effect, LDR).

374. IOT Based Accident Prevention and Emergency Services

Sachunathan N [1], Soundharya U [2], MRS. YAMUNA DEVI N [3]
[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In this accelerated world, many technologies have been evolved for each and every second to improve human life style. There have been massive advancements in automobile technologies and still to come. Though advancements are made for the comfort of people, there are lot of accidents taking place because of increased vehicle density, violation of rules and carelessness. During night travel many drivers feel drowsy, they fall asleep unknowingly which leads to accident. To prevent this, sensor is used to detect whether the driver is dozy or not. If the driver is dozy the driver is alarmed through a buzzer and the speed of the car is drastically reduced. Hence, reduces the risk of major accidents. If accident occurs due to other reasons like violating the traffic rules then the accident is detected by a vibration sensor and the current global position of the vehicle is sent to nearest ambulance server by the use of Internet of Things (IoT) and ambulance can reach the accident spot immediately, which in turn saves any human lives.
Key words: IoT, Traffic density, Accident prevention, Global Positioning System, Automatic Emergency services

375. Spectrum Sensing Techniques for Cognitive Radio Application: AReview

Yoga Priya R [1], Balamurugan A [2], MRS. YAMUNA DEVI N [3]
[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract
In the advanced technology, nearly 70 to 80% of the radio spectrum remains un utilized, while at the same time the other region of the spectrum is overcrowded, so we are approaching the cognitive radio network. The ultimate need for this new approach is to sense the unused spectrum, by avoiding any interference with the primary or licensed user and allocate them to the secondary users, thus by improving effective Spectrum utilization. Spectrum sensing is a key function of Cognitive radio networks. An important achievement of the Cognitive radio network is to utilize the unused spectrum. Detecting the primary users is the most efficient way by detecting the empty spectrum. The various spectrum sensing techniques includes Energy detector, Matched filter, Cyclostationary feature detection. The spectrum sensing depends on the sensing time and the fusion scheme for its performance. In this paper, the different techniques are going to be compared.
Key words: Cognitive radio, Cooperative spectrum sensing, Energy detection, Matched filter, Cyclostationary feature detection.

PRINCIPAL
Indra Ganesan College of Engineer
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

376. IOT based Home Automation System through Adaptive DecisionMaking Fuzzy Algorithm

Sophiya K [1], Shri Harini Priya B [2], MRS. YAMUNA DEVI N [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Real time automation is increasingly gets popular due to its flexibility in utilizing open source tool and adapting the new node without any complexity in programming. This paper proposes the human machine interface through context aware and decision support system using distance based fuzzy algorithm which utilizes the user's domain knowledge to frame the rules. The developed system is based on Linux OS and the algorithm is developed in python and results were stored in internet by FHEM API, used in Raspberry Pi B+ kit which is an IoT application and the mobile SSH settings using Wi-Fi modem. Using this app we can access through home automation systems by connecting IP address of the web server and also voice assisted module helps the patients to control the appliance through voice control. Effective algorithmic decision making and voice assisted automation produces the better result in automating the things in real world.
Key words: Real time automation, human machine interface, decision support system, FHEM API, Raspberry Pi B+, voice control.

377. Telemedicine Approach For Patient Monitoring System Using Iot

Sunil Kumar B [1], Karthik D [2], MRS. YAMUNA DEVI N [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Accessing the hospitals in emergency situations, from any rural area for providing appropriate medical assistance is the biggest challenge in saving the life of a patient. Also, the patients who have undergone surgery should be monitored on a 24*7 basis. The above problems can be solved with a help of Health monitoring system using IoT. The proposed system continuously monitors the diagnosis parameters such as heart beat, pressure, activeness and temperature using appropriate sensors like heartbeat sensor, pressure sensor, MEMS sensor and temperature sensor. The sensed medical information is collected and stored in the database of the server which is a Raspberry Pi device. The Raspberry Pi processes these data and displays the values on the web page. It also sends the alert messages to the Doctor, Care taker as well as the patients using the GSM module connected to the Raspberry Pi. This enables the review of reports and real-time video of the patient through patient monitoring system from a remote area thereby reducing the periodical visit.
Key words: Raspberry Pi Processor, ECG Sensors, Pressure Sensors, Temperature Sensors, MEMS Sensors, IoT

378. An Efficient Fuzzy Based Feature Selection Algorithm for HighDimensional Data

Kamaraj S [1], Kishore R [2], MRS. YAMUNA DEVI N [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Optimization algorithms have become a common choice for problem solving which are difficult to solve by conventional methods. In this paper, a novel fuzzy based feature selection is implemented for feature reduction in unsupervised environment. Correlation of fuzzy clustering is done using fuzzy K-means clustering to make the raw data to be correlated into clusters. Optimization algorithms namely genetic algorithm, Particle Swarm Optimization are used along with an approximation technique. Each optimization technique uses rough set as a function handle and performs feature selection with necessary optimization. Then, fuzzification is done which includes the reduced feature set along with the raw data features which are not correlated based on kernel mapping method, net similarity is calculated and adjusted to the fuzzy membership value and finally plotted as several group of clusters. Then comparison is made between the optimization algorithms with real world and synthetic dataset based on the clustering quality and result is depicted.
Keywords: Optimization algorithms, fuzzy based feature selection, rough set, fuzzification, kernel mapping method, clustering quality

379. A New Approach to Image Retrieval Based On Sketches UsingChamfer Distance

Prasannaa.J [1], Priya P [2], MRS. YAMUNA DEVI N [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Sketch based image retrieval (SBIR) is an emerging research area in which retrieval of an image is done based on input query as a sketch instead of the content of images (such as textures, shapes, colour, etc).This paper presents a new methodology for retrieval of natural images based upon user hand drawn sketches. Initially Geometric transformations are applied over the user input sketches and the testing is carried out over a data set of 100 natural images which includes 10 different types of images. Chamfer matching method has been used for the matching process between input sketch and database images. Experiments are carried out and the results are discussed based upon the performance measures such as precision and recall.

Keywords: Chamfer, image retrieval, Sketch

380. Normalized page count and text based metric for computing semantic similarity between web documents

Prasannaa.J [1], Priya P [2], MRS. NUSRATH SULTHANA S [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Nowadays, web-based metrics that measures the semantic similarity between words or terms are expected to have increasingly important in the future. Semantic similarity is a dynamic phenomenon that changes over time and across domain. The fundamental assumption is that similarity of context implies similarity of meaning, where relevant web document are downloaded from a web search engine and contextual information for words of interest are compared. We basically use two types of metrics. The first one is normalized page count based metric and second one is context based metric. These two types of metric are unsupervised metrics. It means the proposed system does not require any ontology and human resources. The result of proposed work are compared the correlation factor of different page count metrics including our normalized mutual information metric and retrieved the accuracy of web documents.

Keywords: Jaccard (J) and Dice (C) coefficients, Page Re-ranking, Semantic similarity

381. Automating the Irrigation System

Kamaraj J [1], Kishore Kumar M [2], MRS. NUSRATH SULTHANA'S [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In India, agriculture plays a vital role in our day to day life and the Future India depends on our agriculture. Agriculture depends on monsoon condition, soil quality to make the crops to grow and water is required to plant crops sufficiently. The field of agriculture farmers face major issues in watering their crops. It is a result of not having a correct plan concerning the supply of water facility. The farmers have to make arrangements to pump water and need to wait till the land is completely wet, that compels them to prevent doing other activities. They lose their precious time. Also irrigating water to the plant in excess, which increases the concentration of high soil content and endeavouring the plant (crops) to destroy. In this paper, automation of irrigation system based on Arduino microcontroller and GSM module is proposed and implemented. This system controls the exact condition of water level of the agriculture land based on the soil quality.

Keywords: Irrigation system, Soil moisture sensor, GSM, Arduino Microcontroller, Arduino software

382. A Prototype Model for Automatic Vehicle Detection in Toll Plazaenabling Easy Entry

Karthick C [1] Premalatha M [2], MRS. NUSRATH SULTHANA S [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In this era of technological advancements, we are marching towards automation in every field. The technological development of any country is based upon its basic amenities and infrastructure offered to lay man. Toll plaza is a common occurrence in the day to day life of all. On the outset we see vehicles arrayed in long queues to pay the toll fee and pass through the toll gate. These toll plazas are operated manually and consume valuable journey time and fuel. Further the emission of carbon dioxide results in pollution and degrades the environment. This paper proposes a model for automatic vehicle detection in toll plaza entry by using Internet of Things technology. The proposed prototype model can also be deployed in any organization that has security checks at the gates and allows only registered and authenticated vehicles to enter the campus. This automated system involves paperless and cashless method for toll fee collection. We use cameras, sensors and mini-computers to choose the type of token the traveler wants and display the current operation status.

Keywords: IoT, Toll Plaza, automatic vehicle detection, security

383. An Incremental Learning with CGHSSL for Unsupervised Feature Selection of Benchmark Dataset

Keerthana R [1], Shri Harini Priya B [2], MRS. NUSRATH SULTHANA S [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Feature Selection is a key mechanism in machine learning and pattern classification, especially for high-dimensional data. The existing unsupervised cluster learning based feature selection techniques, are not at all times accurate for the assignment of class labels, and are not enough to deal with ultra-high dimensionality dataset. To provide a solution for these drawbacks, an unsupervised feature selection algorithm is proposed by using Hybrid Support Vector Machine along with optimized realizations. This is clustering-guided with HSVM based sparse structural learning (CGHSSL). It is an integration of HSVM for the class label assignment along with a sparse structural analysis into a joint framework. Nonnegative spectral clustering is developed for learning cluster labels of the input. The prediction of the cluster labels is done by HSVM by utilizing the hidden structure shared by diverse features. The parameters of HSVM is then optimized by the Particle Swarm Optimization (PSO) that can explain the feature correlations to render the results. Row-wise sparse models are then balanced to build the model proposed. The experimental results indicate that the proposed algorithm is effective, scalable and robust, with a lesser computational complexity, but also accomplishes good learning accuracy when compared to the state-of-the-art CGHSSL and FS techniques

Keywords: Feature Selection (FS), Nonnegative Spectral Clustering, Row-Sparsity, High Dimensionality, Hybrid Support Vector Machine (HSVM), Particle Swarm Optimization(PSO)

384. Performance Analysis Of Compressing Sensing Framework OnInteractive Media Content

Jancy J [1], Pradhap J [2], MRS. NUSRATH SULTHANA S [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Compression has constantly assumed an important part in storing and transmission of heavier interactive media documents. The presence of compression calculations are over two decade old. The ordinary compression calculations are infrequently not required to prepare a flag as a rule where the signs are scanty. In such cases, compression detecting exceptionally contributes and repays the issues of traditional compression calculations as it performs examining and in addition compression at a same time. The idea of compression detecting is very new and is very little in developed stage. Our discoveries announced in this paper is a consequence of perception being done on all significant research diaries, which expresses that there are little measure of studies being done on compressible detecting and reproduction of sight and sound substance. The paper additionally examines about the huge research hole and assesses the viability of existing systems.

Keywords: Compression Sensing, Interactive media, Scanty

385. Secure and Enhanced Information Encoding In Matrix Barcode

Alex Immanvel S [1], Snega M [2], MRS. NUSRATH SULTHANA S [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

This paper presents a high cutoff shading cross area organized tag and addresses titanic number of parts which must be considered while improving printed marks for their use in preservationist applications. The sorted out ID that is proposed uses the cyan, red, yellow colorant divisions open in shading printers and associates with high most extraordinary by methods for self-governingly encoding data in each of these separations. In each colorant channel, payload data is passed on by using an eccentric show of circularly formed bits whose individual associates are balanced with encode the data. The peruser recuperates the institutionalized stamp data from an anticipated shading degree of the scanner tag, using red, green, blue channels correlative, to print C, M, and Y channels. To beat the shading impedance making in light of colorant ingestion in non - looking at scanner channels, a novel deterrent convincing data encoding.

Keywords: Matrix barcode(QR) , Circular Specks, Colorant ingestions, Interference.

386. Next Generation Vehicle Diagnostic Systems

Banu Priya G [1], Mancy E [2], MRS. NUSRATH SULTHANA S [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Engine Control Unit (ECU) plays a vital role in an automobile industry which allows the automobiles to be more fuel efficient and to provide optimal performance. It is the core part of vehicle engine and consists of microprocessor, peripheral hardware and control software. It ensures the proper functioning of a vehicle. A large number of micro controller chips are embedded inside the ECU and ensuring accurate functioning of these chips is essential, because proper functioning of these chips ensures the proper functioning of vehicle. The proposed work deals with ensuring the proper functioning of ECU. It makes use of Robert Bosch's CarPU Flash Interface (CFI) tool to test thirteen different micro controller chips embedded inside the ECU. CFI tool enables initialization, programming and testing of ECU. Proposed work involves ensuring whether the chip performs it assigned functionality accurately

Keywords: Engine Control Unit, Controller Area Network, CarPU Flash Interface.

387. Smart Security Surveillance Rover

Yuvaraja A [1], Vigneswaran K [2], MRS. NUSRATH SULTHANA S [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

India's land border has extended over 15,207km with the coastal area extending over 7517 km in length. A total of ninety-two districts over seventeen states are meant for the bordered districts. Large tracts of India's political borders square measure controversial, poorly demarcated or not demarcated by natural features. In addition, the risk of conventional international disputes these unsure borders additionally gift the challenge of cross-border infiltration, smuggling, illegal migration, and other forms of criminal activity. Hence, the human labor is wasted in the form of mere monitoring activities. Instead it could be used productively in case of attacks and defense scenarios where the human intervention is really necessary. The surveillance robot serves as a security monitoring device which replaces the human security at less critical areas where humans are really not necessary. The recorded evidence also hence take necessary action with automatic alerts from the robot when unusual activity occurs.

Keywords : Internet of Things (IoT), Image Processing, Ultrasonic Sensor, Raspberry Pi, Arduino.

388. Adoption Of Knowledge Management Framework In Academic Setting – An Experimental Study Conducted for Capturing Student's Learning in Computer Laboratories

Anitarani S [1], Jeevasen N [2], MRS. NUSRATH SULTHANA S [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The gamut of Knowledge Management (KM) for creating, disseminating and retaining information for divergent usages in academic environments has gained momentum and regularly appreciated. It is also found evident that literature and experimental studies have reiterated that, success for growing organizations widely relied upon the ability to share their knowledge. Apparently, the increased interest and the need to examine the ways to share tacit knowledge among learning platforms is gaining significant attention during recent times. To substantiate, this paper attempts to report the study results of deploying a web based Knowledge Management System for Computer Laboratories (KMSCL) framework for the Post Graduate students to facilitate knowledge sharing in regular computer laboratory environments. Using a questionnaire survey, the data was collected to study the student's perception, support and usefulness level of various tools in the framework. The findings of the study suggest that adoption of the KMSCL framework enables the student community to collaborate and learn effectively.

Keywords: Knowledge Management, Tacit Knowledge, Computer Laboratories, Learning Support, Collaboration, Rough sets

389. Detection of Abnormalities in Color Fundus Images of Diabetic Retinopathy using Bootstrap Segmentation with Learning Classifier

Anbarasan M [1], Dhanushraja P [2], MRS. NUSRATH SULTHANA S [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

DIABETIC RETINOPATHY (DR) is the most important cause of blindness in the working population of the world. It affects blood vessels in the light-sensitive tissue called the retina. A different signs in DR can indicate the presence of lesions. The most prominent signs of abnormalities visible on retina images are microaneurysms, haemorrhages, and exudates. The early detection and diagnosis of retinal lesions is inevitable to save the vision of diabetes patients. Realizing it's important, Computer-Aided Detection (CAD) system has been developed as a double reader to improve the performance of opthalmologists. The proposed system includes pre-processing for lesion detection, extraction of features and classification. The proposed method is capable of segmenting the regions of varying intensity distribution in a retinal image. The publicly available database called DRIVE and STARE are used to test the proposed method. The new CAD system is evaluated based on performance measures such as sensitivity, specificity and accuracy and the results are encouraging. It is found to be robust with respect to changeability in image resolution, quality and acquisition system.

Key words: Diabetic Retinopathy, lesion, Computer aided detection, Segmentation, Feature extraction

390. Combining Intelligent Web Caching with Web Pre-fetching Techniques to Predict Tourist Places

Arunkumar M [1], Kanishkavardhini S [2], MRS. SUJANA E [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Internet has become the universal source of information for billions of people, at homes, at educationalinstitutions, and at workplaces. The number of Internet users is continuing to be on the rise and is expected to cross 50% of the world population in the next few years. Internet users experience significant delay in access to information due to this enormous growth in web traffic. To overcome this delay, the frequently accessed information may be maintained in a location nearer to the user, typically in a cache memory. As the cache size is limited, efficient replacement techniques have to be deployed when the cache becomes full. Web caching is the process of maintaining copies of web objects in the cache memory that are available in the original server, thereby having the distinct advantage of serving the user requests immediately. Web pre-fetching is a technique, that is used to preload the yet to be requested web objects with an expectation that a user will be requesting it in the future. In this paper, we combine web caching techniques with web pre-fetching technique to predict attractive tourist places that are to be visited next based on visit history of various users. The proposed approach demonstrates the performance of the various machine learning techniques in terms of Hit Ratio.

Keywords: Web Cache, Classification, Support, Confidence, Hit ratio, Machine learning

391. An efficient approach for analyzing and improving data quality indata integration

Arunkumar M [1], Kanishkavardhini S [2], MRS. SUJANA E [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In data integration, the existing methods tend to improve the quality of the end users' data by selecting best quality data sources during data integration, choosing best query plan and using quality metadata of data sources. Nevertheless, the quality of end users' data set could not be predicted before integration. To mitigate the above issues, DEduplication and Completeness (DEC) approach has been proposed to achieve the quality of the service for the end users' data. The duplicate records of the end users' data are detected and removed using record linkage and Markov Logic Networks approach. The incompleteness is detected and resolved using different types of completeness such as source completeness, tuple completeness and attributes completeness. The deduplication and completeness improves the precision of the data integration. The E-shopping for computer peripherals application has been proposed to analyze the performance of the DEC approach. Experimental results illustrates that the proposed DEC approach is relatively better precision than the traditional data integration. It is observed that the precision of deduplication has been improved by 26% than the record linkage and precision of data integration has been improved by 12% than the Fusionplex approach.

Keywords: Data integration, data quality, deduplication, completeness, Markov logic networks

392. Geo- Intelligence System: A Frame Work for Agricultural Improvements

Dhanushraja P [1], Kanishkavardhini S [2], MRS. SUJANA E [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

This paper sets out a conceptual framework to guide farmers and to help the stakeholders in agricultural sector. Its prime focus is to increase the productivity in this sector by proper utilization of Information and Communication Technologies (ICT). Geo-Intelligence is an agricultural knowledge base that can help the farmers to be connected with agriculture knowledge services like weather details, soil fertility related information, crop patterns, pest alerts, and government schemes. It reviews and analyzes the past data on agriculture and farming activities to assess and provides the necessities and requirements to the farmers. This framework forge linkages with the stakeholders like farmers, government, experts, and academician that can help them to transfer more timely knowledge and technology enhancements in agricultural enrichment.

Keywords: Agriculture, Data Mining, Knowledge Base, Spatial Data, Data Analysis

PRINCIPAL
Indra Ganesan College of Enginee...
KG Valley, Madurai Main...
Manikandam, Trichy-...

393. Smart Vehicle Collision Detection and SOS Service

Loganathan C [1], Sanjay Kumar M [2], MRS. SUJANA E [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The in-vehicle monitoring technology (black box) is growing rapidly in the world and many different forms of this technology is now available. Essentially, it monitors how, when and where a vehicle is being driven, records the data, and provide an analysis as feedback to the driver and/or other parties. Some also offers in-vehicle alerts if predefined parameters are exceeded (eg, hard acceleration). In this paper, the black box created will be connected to the cloud to provide continuous updates, which helps to inform the nearest hospital of a crash instantly.

394. IOT based Garbage Monitoring System

Arunkumar M [1], Kanishkavardhini S [2], MRS. SUJANA E [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The aim is to cover all the rural and urban areas of the country to present this country as an ideal country before the world. With the proliferation of Internet of Things (IoT) modules such as smartphones, sensors, cameras. It is possible to collect massive amount of garbage. In the metropolitan cities it is not possible to check each and every place where the garbage dump yard is full or not. So we have introduced a new concept using load cell. This is a sensor which intimates about the load placed on it. So that the garbage can also be checked in this way. Here we are using AT89S52 as our controller. A threshold value is set in the controller. Controller will monitor the status load cell. When that value is met then an intimation will be sent to the officials through IoT about the over load and also to clear the garbage as soon as possible.
Keywords: Load sensor, IOT module, AT89S52, embedded system

395. A survey on healthcare and social network Collaborative serviceutilization using internet of things

Ganana sekar S [1], Santhosh Kumar R [2], MRS. SUJANA E [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Applications of internet of things have evolved with multiple numbers of real time problems. This paper proposes a (MPU IoT) Most People Usage Internet of Things structure to solve issues in the applications of people recognizable services in the fields of health care and social networks, which face the most unsolved issues in reality. Healthcare systems face a lot of issues due to unavailability of doctors, diseases which are hard to diagnose and cure and deficiency of medicines in the markets. Social networks can provide solutions for theseproblems or issues in the healthcare systems but have the security problems like privacy preservation, attractive advertisements, publishing more self-information and, unknown friend request acceptance. Existing survey analysis provides diverse methodologies to solve the issues occurring in these two separate sectors ofapplications. The proposed MPU-IoT is designed to share and connect information in these two different sectors and at the same time will provide better solutions for the issues raised in them. It also solves the security issues that are identified during the transmission of information from Healthcare to social networking systems.
Keywords: Most People Usage Internet of Things (MPU-IoT), Health Social Cloud Center (HSCC), AgentTracking System (ATS), Expert Member (EM), Monitoring Locate Center (MLC), Type Network Center (TNC), Health Social Distributor (HSD)

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road,
Manikandam, Trichy-620 012

396. Posteriori Probability inspired Minimal Rule Generation inAssociative Classification

Sathishkumar V [1], Velmurugan M [2], MR. PRABHU G [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Conventional Association rule mining technique in data mining produce large number of candidate rules in each phases during database scans. This is used to find frequent itemset in the form of x -> y, means that if a database contains antecedent x then it will likely to contain consequent y as well. Associative Classification (AC) is a branch in data mining approach that combines association rule and classification technique applies in decision support system of finding accurate informative pattern in classifying the data. Output of this AC in the form if- then rule, which is easier to recognize by the end user and better prediction of class label. Generally, AC generate a large number of class Association Rules (CAR) that lead to high processing overhead. This paper proposed Posteriori Probability based AC method which generate minimal order rule during class prediction using Posteriori probability property. This method highly suitable when the datasets that require quick response over time. Experimental analysis reveals the proposed method over performs the existing methods.

Keywords: Association Rule Mining, Classification, Associative Classification, Cogency

397. Pstree Based Associative Classification of Data Stream Mining

Saravanan M [1], Vijaya kumar G [2], MR. PRABHU G [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The data streams have a modern technique to examine the problems of continuous data. Mining with data streams is the process of extracting knowledge structures from continuous, rapid data records [1]. An important goal in data stream mining is mainly used to generate a compact representation of data. The main aim of the proposed work is used to build efficient classifiers and improve the performance by aligning the datasets with a stream. This method m is also useful in reducing the time and space needed for further decision making process. In this paper, a new scheme called Prefix Stream Tree (PST) for associative classification has been proposed that helps in the compact structure of data streams. The Pstree has been developed based on a single scan. Pstreediscovers the exact set of frequent itemsets from a single Scan.

Key Words: Effluent, Electrochemical dyeing, K/S value, TDS, Reactive dyeing

398. Dynamic Virtual Machines Generation to Improve the QueryResponse Rate in Cloud Environment

Ganana sekar S [1], Santhosh Kumar R [2], MR. PRABHU G [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Dynamic provisioning of resources in cloud environment supports parallel processing that leads to better utilization of resources. Effective resource utilization reduces the information retrieval cost in cloud computing. High resource utilization can be achieved by generating a number of virtual machines dynamically based on the application requirements. Distribution of queries among Virtual Machines(VM) helps in load balancing that is needed to be addressed in cloud computing. This work focuses on efficient database fragmentation, query decomposition and query distribution techniques. High parallelism is achieved by increasing the number of VMs in CPU bound tasks whereas number of VMs is reduced in case of small applications to avoid the needless energy consumption. The experiments analyse the impact of high resource utilization on energy consumption with an efficient load analyser. The experimental result reveals that the proposed approach increases the performance in terms of query response cost.

keywords: Parallel query processing, dynamic virtual machine creation , Database fragmentation , Query decomposition and distribution , Load balancing

399. A critical review on Parkinson's disease due to Pesticides exposure

Thamaraiselvan K [1], Yuvaraja A [2], MR. PRABHU G [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

An idiopathic disease called Parkinson's Disease (PD) second most common neurodegenerative disorder disease which affects the nervous system and causes tremor or shaking, slowed movement, rigid muscles, impaired posture and balance. Pesticides employ their neurotoxicity in many ways. The exact causes of Parkinson's remain unknown, many researches are undergoing on two factors genetic and environmental causes. Persons with Parkinson's exhibit several problems like signs of depression and eventually lead to cognitive problems, including dementia. Dousing crops with large amount of pesticides increase the risk of Parkinson's. The people who are working in farms and living in rural areas have high exposure to pesticides which leads to PD patient. This paper is proposed to detail study of pesticide which is one of the environmental factor and their effects on human body

Keywords: Parkinson's, Pesticides, Dopamine, Alzheimer's disease

400. Best Classification Threshold Identification for Imbalanced Datasets

Mohamed Ashif A [1], Sheik Ameer R [2], MR. PRABHU G [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The world today is witnessing an exceptional growth in data from various fields of science and technology, triggered mostly by developments in technology. A consequence of this increased the need for efficient andeffective data mining to uncover the information contained implicitly in the data. In medical field, there are millions of protein sequences in medical database and new protein sequence is found day by day. In existing systems, it is difficult to find the similarity between a newly found protein sequence and the sequences in the database. In addition, classification of protein sequence depends on the threshold value which is not constant for all families. In general, the classification threshold is simply fixed to a random value, which is usually unsuitable for an imbalanced dataset. This paper proposes a novel framework for finding the best classification threshold value according to the data in a particular family. The proposed model using Random Forest algorithm with Auto-tuning, reduces the misclassification rate and increases the classification accuracy for imbalanced classes.

Keywords: Imbalanced dataset, Random Forest, Auto-tuning, SMOTE

401. Sentiment Analysis System

Velmurugan M [1], Kamaraj S [2], MR. VIJAY ANAND K [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Sentiment Analysis system is mostly used in order to find the views of the people on a certain movie or product based on the tweets that are posted in a social website such as Twitter. This system helps to analyze the peoples' sentiments based on the usage of the words and their meanings. The proposed system would be built using classification algorithms like Naive Bayes and SVM. A comparison of these two algorithms would be carried out for producing correct reviews of a certain movie or set of movies in accordance with the original movie reviews. This system can be used by people in the cinema industry and movie goers to attain knowledge about today's views of the people on the movies released and those yet to be released.

Keywords: Sentiment analysis, Naive Bayes, SVM, movie review, Twitter, machine learning

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

402. A Study on the Comfort Properties of Multi Layer Weft KnittedFabrics

Saranya Sree T A [1], Jeevasen N [2], MR. VIJAY ANAND K [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Apparel industry has been using stretchable fabrics for years and apparel marketing campaigns have done a good job advertising the temperature control and moisture management factors as benefits to consumers. Most consumers have experienced pleasing benefits when wearing apparels such as stockings, long johns, bras, briefs, gloves, headbands, made from fabrics with a compression factor, In this research work a detailed studyon the properties of Polyester and Cotton weft knitted multilayer fabric with various loop lengths has been done. The multi-layer knitted fabric is produced by using Polyester (30s)and Cotton (30s) Combed yarn and dyed using reactive dye. The fabrics are produced with three different sets of loop lengths of 3.90mm/3.68mm,3.42mm/3.30mm, 3.08mm/3.00mm The GSM of the fabric is maintained as 197, 221, and240. The comfort properties like absorbency, wicking, wetting, thermal conductivity, thermal resistance and air permeability of the knitted fabric produced with the above mentioned specification were studied. Fastness properties of the fabric with respect to washing, perspiration, rubbing and light have been analysed. The mechanical properties of the multi-layer fabric with respect to bursting and pilling has been analysed. The optimization of the findings has been done using statistical tools.
Keywords: Multi layer fabrics, Loop length, pilling, combed yarn, wicking, thermal resistance

403. Effect of plasma Treatment on Antimicrobial properties of SilkSuture

Vishwa S [1], Arunkumar M [2], MR. VIJAY ANAND K [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The effect of plasma treatment on the mechanical and antimicrobial properties of silk braided suture was investigated. The surface modification was done by using atmospheric plasma with oxygen as treatment gas for 2min, 6min and 10min. The SEM observation clearly showed the degradation of the structure treated for more time. It was found that moderate increase in treatment time increased the wettability of the suture material. The plasma treated suture was subjected to antimicrobial study [AATCC 100] against *S. aureus* and *E. coli* and found that plasma treated suture possessed the bacterial reduction percentage of 43% and 38% respectively.
Keywords: Degradation, plasma, silk, suture, wicking

404. Development of sericin coated knitted polyester blend fabricUsed for wound dressing

Iyyapanmani A [1], Dharunkumar R [2], MR. VIJAY ANAND K [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Sericin is a silk protein which is removed by the degumming process during the manufacture of silk to ensure its lustrous appearance. Sericin is found to have wide range of application in the medical textile field as a bio active material. Researchers have found that it has enhanced moisture absorbency, smoothness, hygroscopicity, antimicrobial, antistatic and wicking property. Sericin coated polyester / cotton blend fabrics can be used as a bioactive material in the applications such as wound care, wound dressing, medical wipes, medical drapes and surgical meshes which will enhance the skin healing properties of the fabric.
Keywords: Sericin, wound healing, bio-active, medical wipes and drapes, antimicrobial

405. Development of Mesta Fabric Composites for Automotive Applications

Dharunkumar R [1], Mohana Priya S [2], MR. VIJAY ANAND K [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

This research work has been carried out by production of Mesta (*Hibiscus sp.*) fiber reinforced composite with polypropylene as the polymer by uni-polymer compression moulding technique. Four composite samples using plain woven, twill woven, satin woven with grams per square meter (GSM) of 107 to 120 and needle punched non-woven fabric with 57 GSM were produced and tested for the properties tensile load bearing capacity, tensile strain and flexural rigidity. The test results were analysed by statistical method and it can be concluded that woven fabric reinforcement composites have higher extension rate, higher impact strength compared to nonwoven fabric. Further the woven mesta fabric reinforced composites with twill weave exhibited higher impact strength, higher flexural strength compared to plain and satin weave structure. By considering the advantages and applicability, the composite produced from the Mesta fibre twill fabric can be used in the automotive parts such as, Dash boards, Door panels, Head liners and Trunk liners etc.

Key words: Mesta fibre, Natural fibre composite, Flexural rigidity, reinforcement, polymer, needle punching.

406. Development of Natural Fibre Composite for Acoustical and Thermal Insulation Applications

Sudhakar R [1], Anbarasan M [2], DR. ANITHA S [3]

[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

There is an increasing demand for the Natural Fibre Reinforced composites in marine, agriculture industry, construction, automobiles and home decoration material. The study has been carried out with Agave Americana and Wool, since both of them are natural fibres. Agave Americana is a cheap and highly available fibre which has hollow structure, high bundle strength and it can withstand heat to a high temperature. Hollow structure of the agave makes it suitable for acoustic application. Wool fibre naturally has good thermal insulation property. Acoustic, Thermal Insulation, Tensile Strength and Flexural Strength testing were carried out for the samples produced. Sample with combination [40:40:20 Agave (40%), Wool (40%), Polypropylene (20%)] found to have the better Acoustical, Thermal and Mechanical properties. These developed composite materials might be suitable for applications such as falls roofing, Room Separators, Automobile applications, Office tables, Cardboards, Exam pads, Switch boxes etc.

Key Words: Composite, Agave, Wool, Acoustic, Thermal, Mechanical properties

407. UV Protection for Window Textiles

Abinesh A S [1], Dharunkumar R [2], DR. ANITHA S [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Cotton fabrics were treated with natural agents such as (combination of eucalyptus leaf and egg albumin powder extract in the ratio 1:1) and synthetic agents namely Titanium dioxide to evaluate Ultra Violet Protection (UV) Efficiency. The extract (only for natural agents) was done through Soxhlet apparatus method and the extracts obtained from the experiment were applied on cotton fabric by conventional pad-dry-cure method. The purpose of this investigation was to determination of UV protection properties of the finished fabric and to compare the natural and synthetic agent's effect on cotton fabric. The UV protection properties were evaluated by functional testing of UV protection factor (UPF values). The synthetic agents have a standard effect on UV blocking values almost 100%, while UPF values ranges in between 217 -234. On the similar stage UV blocking values were in the range 95 - 99%, while UPF values obtained as nearly 2000 range for combined (eucalyptus leaf & egg albumin) powder extract.

Key Words: Cotton, Eucalyptus leaf, Egg albumin powder, Titanium dioxide, Pad-dry-cure

408. Investigation on Effect of Salt-Free Electrochemical Dyeing ofCotton With Reactive Dyes

Muthuselvam A [1], Kanishkavardhini S [2], DR. ANITHA S [3]

[3] Assistant Professor, [1,2]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

The major disadvantage of dyeing of cotton requires large amount of salt which increases the effluent load. This paper investigates the effect of salt-free electrochemical dyeing of cotton with reactive dyes. Anthraquinone based Reactive Blue 4 and azo based Orange 4 reactive dyes were taken and four process conditions like applied voltage, distance between electrodes, electrifying time and dyeing time were optimized. The electrochemical dyed samples were evaluated for the K/S values, colour fastness properties and for dye effluent it was evaluated for colour analysis and TDS values in comparison with the conventional dyeing process with salt. The K/S values of the electrochemical dyed fabric samples shows significant increase in the dye strength compared to the conventional dyed samples. There is no significant change in the colour fastness to washing and rubbing, but the TDS of dye bath effluent is reduced by 70 % than the conventional dye bath effluent.

Key Words: Effluent, Electrochemical dyeing, K/S value, TDS, Reactive dyeing

PRINCIPAL
Indra Ganesan College of Enginee
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

409. Design and Development of Fibre Reinforced Composite for Road Barrier

Vishwa S [1], Anitarani S [2], DR. ANITHA S [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In Geo Textiles, the road barriers are playing vital role especially in road safety aspects. In recent days, various composite materials are experimented in road barrier. In this analysis a composite road barrier/divider is designed and developed using textile sub-wastes. Textile sub-wastes are materials like glass fiber, coir pith, crushed rock and marble sludge. Fabrication of composite barrier is carried out by hand layup process using E-Glass/ Epoxy bidirectional laminates built up by applying a serious of fiber glass and liquid resin layers and evaluated for the impact and compressive strength.

Keywords: Geo Textile, Reinforced composite, Glass fiber, Coir pith, Marble sludge

410. Online Sewing Defect Monitoring For SNLS Machine by ImageProcessing Technique

Bharathidhasan C [1], Susila N [2], DR. ANITHA S [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Apparels are subjected to visual examination to detect sewing defects after making of the garments which results in higher rejection, time, cost etc. Sewing defects must be detected early i.e during sewing itself and accurately to overcome above quality issues. Apparels are mostly sewn with lock stitch in straight and curve directions, with different colours and stitches per inch. The paper discuss the on line detection of sewing defects occurring during the sewing process. Common defects such as skipped stitch, missed stitch, or loose stitch occurring in lockstitch are detected and marked. Using image processing methods, the proposed work follows the stitch path by capturing digital images of stich lines in lock stitch sewing machine and processed through PYTHON software to detect the sewing defects and subsequently stop the machine during sewing.
Key Words: Sewing, Defect, Online, Image processing, SNLS

411. Development of Eco-friendly Water Repellent Fabrics

Gayathri P [1], Sridhar P [2], MS. MARIA KIRUBA PRIYADHARSHINI F [3]
[3] Assistant Professor, [12]U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Lignin a natural source which is abundant, has a complex structure that doesn't allow water to escape outside and this paper investigate the possibility of extracting and coating of lignin in an eco friendly approach on textile materials. Laccase enzyme was extracted from Pleurotusostreatus mushroom showed an activity of 2.2.Enzymatic extraction of lignin from sugarcane bagasse and coir fibre was done, the amount of lignin isolated was 19% and 25.5 % respectively. The extracted lignin was coated on 100 % cotton and silk fabrics by pad – dry –cure process. Three different composition of cross linking agents and extracted lignin were taken and out of which 1% glutaraldehyde , 10% gelatine and 84 % lignin showed effective spray rating test result of 80. The SEM analysis of the cotton and the silk fibre reveals that the water proof coating is uniform in cotton than that of the silk fabric
Key Words: Water repellent fabrics, lignin, coating, coir, sugarcane bagasse

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

412. Investigation of micro polyester fabric finished with sericin

Miltan A [1], Sumithira R [2], MS. MARIA KIRUBA PRIYADHARSHINI F [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

Synthetic fibers, especially micro fiber development, have made a big way for sophisticated textiles and apparel, medical and allied applications. Micropolyester fabric is known for its liquid moisture transmission property, also provides thermo physiological comfort. The present study is concerned with application of sericin on 100% Micropolyester fabric using cross linking agent like Glutaraldehyde. The combination of sericin and Micropolyester fabric makes suitable for applications in medical textiles. The micro polyester fabric has been pre modified with alkali and it has been treated with glutaraldehyde as a cross linking agent. The treatment has been carried out in Padding Mangle in the temperature of 70°C for 1hour and the treated sample has cured at 130°C for 3minutes. Then the treated samples are analyzed for Bending length, Wicking, Moisture vapour transmission and air permeability. Results shown that Moisture Vapour Transmission, Anti bacterial activity and Bending length increased when the concentration of the sericin increased whereas the reverse trend was seen in Wickability and Air Permeability.

Keywords : Sericin, Micropolyester, Air Permeability, Water vapour transmission, Medical garment.

413. Developmentof Wet Wipes from Natural HerbalExtract

Boomika P [1], Charulatha B [2], MS. MARIA KIRUBA PRIYADHARSHINI F [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract
A wet wipe is a small moistened piece of paper or cloth that often comes folded and individually wrapped for convenience. Wet wipes are used for cleaning purposes, like personal hygiene or household cleaning. This project aims at manufacturing wet wipes for cosmetic purpose with pure natural ingredients rather than chemicals widely used in commercial wipes. Viscose fiber is used to provide a soft, gentle feel for contacting the skin of the user and polyester fiber is used to provide strength and. Natural extracts used are aloe vera, mint, nutmeg, glycerin, rosewater and lemon. Using these ingredients, three recipes have been developed and a comparison study has been made between the shelf life of the commercial wet wipes and the herbal wipes. Sample A has the combination of aloe vera, mint, and lemon extracts. The sample B has nutmeg, rosewater extract. The sample C has the combination of rosewater extract and glycerin. The anti-bacterial and anti-fungal test has also been made for the herbal wipes and commercial wipes, and the results are found to be satisfactory.

Key words : Wet wipes, herbal extracts, aloe vera, mint, nutmeg, glycerin, rosewater, lemon, anti- bacterial

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

414. Fabrication and characterization of wool fibre reinforced polypropylene composites

Jeeva M [1], Magesh G [2], MS. MARIA KIRUBA PRIYADHARSHINI F [3]

[3] Assistant Professor, [12] U.G Student Of Indra Ganesan college of Engineering., Trichy.

Abstract

Wool fibre reinforced polypropylene composites were fabricated by compression moulding technique by varying the fibre weight fractions (20%, 30%, 40%, 50% and 60%). The influence of fibre weight fraction on mechanical properties of the composites was investigated. It was observed that the composites containing 40% fibre weight fraction has given better mechanical properties of 14.62 MPa, 196.64 MPa, 12.84 MPa, 274.14 MPa and 12.82 Kj/m² respectively for tensile strength, tensile modulus, flexural strength, flexural modulus and impact strength. It was also observed that the incorporation of wool fibres in polypropylene resin has improved the mechanical properties when compared to polypropylene composite.

Keywords: Composite, wool, tensile strength, polypropylene, impact strength, compression moulding

415. Study of Kenaf-Cotton blended yarn for the Development of Sustainable Textiles

Gowtham B [1], Mohana Priya K [2], MS. MARIA KIRUBA PRIYADHARSHINI F [3]

[3] Assistant Professor, [12] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

In the recent years, developing new yarn is the fundamental phenomenon for technical textiles. Different yarns are required now days for both technical as well as for aesthetic properties. Kenaf has good antimicrobial, fire resistance and absorbency that can be utilized in various textiles needed for society. The Kenaf cotton blended yarn of 50%-50% was produced through rotor spinning and was spun into 10Ne count. The quality was evaluated for yarn strength, yarn elongation, evenness and hairiness. The quality parameters of Kenaf-Cotton blended yarn were compared to 100% cotton yarn. The results reveal that the Kenaf-Cotton blended yarn were in comparable quality with 100% cotton and can be made into fabrics of different weave structures and can be utilized for various potential applications like home textiles and medical textiles focusing towards a sustainable environment.

Keywords: Kenaf, Cotton, Yarn, Quality, Sustainability

PRINCIPAL
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

416. Process optimization for plasma treatment of recycled polyesterknitted fabric using box & behnken design

Sabinath K [1], Thirumeni v [2], MRS. SHANMUGA PRIYA U F [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

Specialized materials are being used to develop functional sportswear to enhance performance. Polyester has many properties suitable for sportswear, but hydrophilicity is lacking in the fiber. Knitted fabric from Recycled Polyester (RPET) was subjected to plasma treatment to improve its hydrophilic properties. The aim of the study was to determine the effect ofplasma parameters like distance between electrode plates, duration of plasma treatment and applied voltage on single jersey knitted fabrics. The optimal experimental conditions and their effects have been ascertained by response surface methodology using the Box-Behnken design. The optimum values were found to be electrode distance 4.5mm, time 8 min. and 400 volts. Based on the results of the study it can be understood that plasma treatment performed with these optimal values is suitable for improving the hydrophilicity of single jersey fabrics made from recycled polyester.

Key Words: Plasma Treatment; Recycled Polyester; Box and Benkhen Statistical Design

417. DEVELOPMENT AND CHARACTERIZATION OF BAMBOO AND BANANA FIBER BASED NON WOVEN FABRICS FOR WOUND DRESSING APPLICATIONS

Suganya G [1], Soundarya V [2], MRS. SHANMUGA PRIYA U F [3]

[3] Assistant Professor, [1,2] U.G Student Of Indra Ganesan college of Engineering., Trichy

Abstract

This paper reports study on the development and characterization of wound dressing and hygienic product made from two different fibres bamboo (Regenerated fiber) and banana (Natural fiber) with three different fibre blending namely in the blend ratio of 50:50, 60:40 & 40:60 and layer (Sandwich) blending namely in the blend ratio of 50:50, 60:40 & 40:60. The ultimate aim is to increase antibacterial activity which reduces frequency changing of wound dressing. Antibacterial activity tests have been carried out on wound dressing against Gram positive S.aureus and Gram negative E.coli. Also various tests are conducted such as tensile strength, air permeability, absorption capacity, liquid strike through; water vapour permeability and p^H have been carried out to study the performance of the wound dressing. The results are found that the wound dressing made from the bamboo and banana fiber exhibits better performance sophisticated multifunctional systems with optimal wear time.

Keywords: Wound dressing, Anti bacterial activity, liquid strike through; water vapour permeability, Layer & Fiber blend
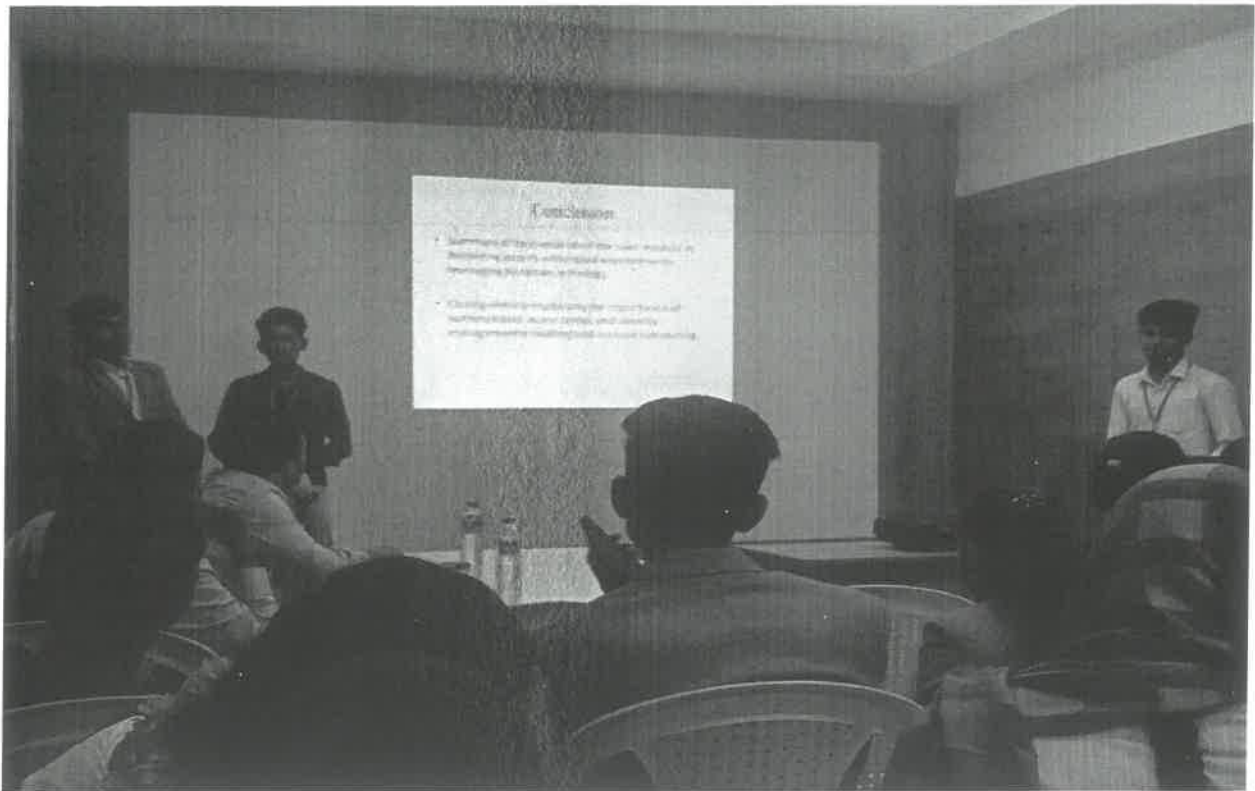
PRINCIPAL
Indra Ganesan College of Engineering
10 Valley, Madurai Main Road
Manikandam, Trichy-620 012