



Indra Ganesan
COLLEGE OF ENGINEERING

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Accredited by PAAU with 'B' Grade, 2014. ISO 9001:2015 Certification by UBC
4G Valley, Madurai Main Road, Manikandam, Trichy-620012

INTERNATIONAL CONFERENCE ON
**ARTIFICIAL INTELLIGENCE
AND AUTONOMOUS SYSTEM**

20-05-2023



978-81-970087-3-3
978-81-970087-3-3

ISBN: 978-81-970087-3-3

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INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE AND AUTONOMOUS SYSTEM(ICOAIAAS-2023)

**INDRA GANESAN COLLEGE OF
ENGINEERING**

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

**INTERNATIONAL CONFERENCE ON
ARTIFICIAL INTELLIGENCE AND
AUTONOMOUS SYSTEM
(ICOAIAAS-2023)**

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CONFERENCE PROCEEDINGS

ACADEMIC YEAR 2022-2023

ISBN: 978-81-970087-3-3


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Preface

The “International Conference on Artificial Intelligence and Autonomous System” is being organized by IGCE, Trichy, Tamil Nadu on 20/05/2023.

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 Artificial Intelligence and Autonomous System 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 prior 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.



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Director's Desk



It is a great pleasure that IGCE is organizing a International Conference on "International Conference on Artificial Intelligence and Autonomous System" on 20/05/2023, Trichy. The conference aims to be a key national forum for the exchange and discrimination of technical information on "Artificial Intelligence" among academicians and practicing engineers, scientists in the domain of interest award the nation.

Engineering developments is an essential ingredient for the industrial and all sound development of any country. So keep this conference paves way for it. I would like to thanks to all the participants IGCE family who have helped me in making the conference success.

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Secretary Message



It is a matter of commitment and pride for all of us to organize “International Conference on Artificial Intelligence and Autonomous System”. We have been thinking about organizing a conference for quite some time and the first aspect which we had to discuss was that would we be able to make it meaningful and fulfill the expectations of the participants and the aspirants.

I am sure the technical and scientific program of the conference would certainly give the delegates an opportunity for fruitful discussions and stimulating interactions.

I would like to thank the participants and conference committee for providing valuable Conference the best.

Principal Message

On behalf of IGCE,I extend a very warm welcome to all the delegates and participants for the international conference on "International Conference on Artificial Intelligence and Autonomous System" IGCE has borne the mantle of excellence, committed to ensure the students their own space to learn grow and towards their horizon of knowledge by indulging to diverse spheres of learning is our endeavor to rarest the standard of discourse, we continue to remain aware in order to meet with changing needs. We are organizing this conference on "20/05/2023".

Hence, we welcome you all to IGCE are hope that this conference will act as a medium for all of us present here to ponds upon the topics of discussion challenge us to strive towards it and inspire us at the same time.

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ISBN: 978-81-970087-3-3


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ISBN: 978-81-970087-3-3

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ISBN: 978-81-970087-3-3

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ISBN: 978-81-970087-3-3


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ISBN: 978-81-970087-3-3


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ISBN: 978-81-970087-3-3


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ISBN: 978-81-970087-3-3

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ISBN: 978-81-970087-3-3


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ISBN: 978-81-970087-3-3


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ISBN: 978-81-970087-3-3


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ISBN: 978-81-970087-3-3


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1. Systematic Evaluation Of Materials To Enhance Soluble Phosphorus Removal Using Biofiltration Or Bioswale Stormwater Management Controls

¹Dr. R. Sivasankar, ¹ Ms K. Vanisri, ² Ganaseelan G, ¹Professor, ² Assistant Professor, ² U.G Student Department Of Civil Engineering, Indra Ganesan College Of Engineering, Trichy.

Abstract: stormwater runoff poses a significant threat to water quality, particularly due to the high concentrations of soluble phosphorus it often carries. this study aims to systematically evaluate various materials for their efficacy in enhancing soluble phosphorus removal within biofiltration and bioswale stormwater management systems. the research adopts a comprehensive approach, considering both traditional and innovative materials to optimize phosphorus retention. the experimental design involves controlled laboratory tests and field-scale trials, assessing the performance of diverse materials such as soil amendments, filter media, and vegetation types commonly used in biofiltration and bioswale systems. parameters like adsorption capacity, hydraulic conductivity, and plant-mediated uptake will be measured to understand each material's impact on soluble phosphorus removal. additionally, the study investigates the influence of environmental factors, including precipitation patterns. insights for urban planners, environmental engineers, and policymakers working towards sustainable water quality management. ultimately, this research seeks to advance the field of stormwater management by offering evidence-based solutions to mitigate the impact of soluble phosphorus on water ecosystems.

Keywords: Stormwater Management, Soluble Phosphorus Removal, Biofiltration, Bioswale, Environmental Remediation, Water Quality, Soil Amendments, Filter Media, Vegetation Types, Adsorption Capacity, Hydraulic Conductivity, Plant-Mediated Uptake, Sustainable Practices, Environmental Variables, Water Pollution Mitigation.


2. Steady-State Hydraulic Analysis Based On Cellular Automata Using A Parallel Paradigm

¹Ms K. Vanisri, ² Ms D. Sheeba, ³ Mohana Priya S, ^{1,2} Assistant Professor, ² U.G Student Department Of Civil Engineering, Indra Ganesan College Of Engineering, Trichy.

Abstract: Cellular Automata, Known For Their Discrete And Locally Defined Rules, Offer A Novel Approach To Simulate Fluid Dynamics. The Study Investigates The Development And Implementation Of A Parallel Ca Model For Hydraulic Analysis, Addressing The Challenges Associated With Traditional Sequential Methods. The Research Focuses On The Parallelization Of The Ca Algorithm To Exploit The Computational Power Of Modern Parallel Computing Architectures. The Proposed Model Is Validated Through Comparisons With Established Hydraulic Analysis Techniques, Demonstrating Its Accuracy And Efficiency In Steady-State Flow Simulations. Key Parameters, Such As Flow Rates, Pressures, And Hydraulic Gradients, Are Examined To Evaluate The Model's Performance Across Various Scenarios. Additionally, The Study Explores The Scalability And Adaptability Of The Parallel Ca Paradigm For Large-Scale Hydraulic Systems. It Assesses The Model's Ability To Handle Complex Networks And Varying Boundary Conditions While Maintaining Computational Efficiency. The Findings Of This Research Contribute To The Advancement Of Hydraulic Analysis Methodologies By Introducing A Parallel Cellular Automata Approach. The Proposed Model Offers A Promising Alternative For Steady-State Hydraulic Simulations, Providing Valuable Insights For Researchers And Practitioners In The Field Of Fluid Dynamics And Parallel Computing.

Keywords: Steady-State Hydraulic Analysis, Cellular Automata, Parallel Paradigm, Fluid Dynamics, Computational Efficiency, Parallel Computing Architectures, Flow Simulations, Hydraulic Gradients, Scalability, Large-Scale Systems, Boundary Conditions, Computational Fluid Dynamics.

ISBN: 978-81-970087-3-3


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3. **Effective Of Photocatalysis, Radiolysis And Ultrasonic Irradiation In The Remediation Of Genx: Computational Study Of The Ultrasonically Induced Mineralization**

¹Ms D Sheeba, ² Ms K Vanisel, ³Ms K Sathyaprabha, ^{4*} Assistant Professor, ⁵ Assistant Professor Sannathan Engineering College, Indra Ganesan College Of Engineering, Trichy.

Abstract: The Research Focuses On Assessing The Efficiency Of Ultrasonically Induced Mineralization As A Potential Advanced Oxidation Process. A Comprehensive Computational Model Is Developed To Simulate The Complex Interactions Between Genx Molecules And The Combined Treatment Processes. The Study Employs Quantum Chemical Calculations To Elucidate The Molecular-Level Mechanisms Involved In The Degradation Of Genx Under The Influence Of Ultrasonic Irradiation, Photocatalysts, And Radiolytic Species. The Impact Of Key Parameters Such As Ultrasonic Frequency, Catalyst Type, And Radiation Dose On The Mineralization Efficiency Is Systematically Investigated. The Computational Simulations Aim To Provide Insights Into The Formation Of Intermediate Products And Identify Potential Byproducts, Contributing To A Comprehensive Understanding Of The Treatment Process. Furthermore, The Research Explores The Feasibility And Scalability Of The Proposed Remediation Approach, Considering Practical Implementation Challenges And Energy Requirements. The Computational Study Serves As A Valuable Tool For Predicting Optimal Conditions And Guiding Experimental Efforts In Designing Effective Treatment Strategies For Genx Contamination.

Keywords: Genx, Remediation, Photocatalysis, Radiolysis, Ultrasonic Irradiation, Computational Study, Advanced Oxidation Processes, Mineralization, Quantum Chemical Calculations, Treatment Efficiency, Intermediate Products, Byproducts, Feasibility, Scalability, Persistent Organic Pollutants.


4. **Application Of Machine Learning In Estimating The Oxygenation Performance Of Various Configuration Of Plunging Hollow Jet Aerators**

¹Dr. R Sivasankar, ² Kaliraj M, ³ Manikandan M, ⁴ Professor, ⁵ Assistant Professor, ⁶ U.G Student Department Of Civil Engineering, Indra Ganesan College Of Engineering, Trichy.

Abstract: This Study Investigates The Application Of Machine Learning Techniques In Estimating The Oxygenation Performance Of Various Configurations Of Plunging Hollow Jet Aerators, A Critical Aspect Of Water Treatment And Wastewater Management. Machine Learning Models, Specifically Regression Algorithms, Are Employed To Establish Predictive Relationships Between Aerator Design Parameters And Oxygen Transfer Efficiency. A Comprehensive Dataset Is Compiled, Incorporating Diverse Aerator Configurations And Operating Conditions. Key Parameters, Such As Jet Velocity, Hollow Jet Diameter, Submergence Depth, And Water Quality Characteristics, Are Considered As Input Features For The Machine Learning Models. The Target Variable Is The Oxygenation Performance, Quantified Through Metrics Like Oxygen Transfer Rate Or Saturation Efficiency. The Study Evaluates The Performance Of Different Machine Learning Algorithms In Capturing The Complex Relationships Within The Dataset And Producing Accurate Predictions. Model Interpretability Is Also Explored To Provide Insights Into The Influential Factors Governing Aerator Performance. Furthermore, The Research Aims To Identify Optimal Aerator Configurations For Enhanced Oxygen Transfer Based On The Machine Learning Predictions. This Approach Offers A Time-Efficient And Cost-Effective Means Of Evaluating Numerous Design Possibilities, Contributing To The Advancement Of Efficient Aeration System Design.

Keywords: Machine Learning, Aerators, Oxygenation Performance, Plunging Hollow Jet, Water Treatment, Wastewater Management, Regression Algorithms, Predictive Modeling, Design Parameters, Oxygen Transfer Efficiency, Dataset, Model Interpretability, Optimization, Aeration System Design.

ISBN: 978-81-970087-3-3


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5. Two Birds With One Stone Strategy For Controlling Environmental Antibiotic Resistance: Dual Function Of Magnetic Nanosilver In Inhibiting Multidrug-Resistant Bacteria And Catalyzing Antibiotic Degradation

¹Ms K Vanisri, ² Ramalingam S, ³ Gunaseelan G, ^{1*} Assistant Professor, ² U.G Student Department Of Civil Engineering, Indra Ganesan College Of Engineering, Trichy.

Abstract: This Research Introduces A Groundbreaking Strategy To Combat Environmental Antibiotic Resistance, Leveraging A "Two Birds With One Stone" Approach. The Study Explores The Dual Functionality Of Magnetic Nanosilver, Demonstrating Its Efficacy In Inhibiting Multidrug-Resistant Bacteria While Concurrently Catalyzing The Degradation Of Antibiotics. The Goal Is To Address Both The Proliferation Of Antibiotic-Resistant Strains And The Environmental Persistence Of Antibiotic Residues. Magnetic Nanosilver Is Synthesized And Characterized For Its Antimicrobial Properties Against Multidrug-Resistant Bacteria. The Investigation Delves Into The Intricate Mechanisms Behind Bacterial Inhibition, Encompassing Disruptions To Cell Membranes And Interference With Critical Cellular Processes. Simultaneously, The Catalytic Activity Of Magnetic Nanosilver In The Degradation Of Diverse Antibiotics Is Examined. A Comprehensive Analysis Is Undertaken To Assess The Effectiveness Of This Dual-Function Strategy In Controlling Antibiotic-Resistant Bacteria And Reducing Antibiotic Of This Study Not Only Contribute To The Innovative Arsenal Against Environmental Antibiotic Resistance But Also Offer Sustainable Solutions With Potential Applications In Water Treatment And Public Health. The "Two Birds With One Stone" Strategy, Employing Magnetic Nanosilver, Emerges As A Versatile And Promising Tool To Address The Complex Challenges Associated With Antibiotic Resistance And The Environmental Impact Of Antibiotic Residues.

Keywords: Antibiotic Resistance, Magnetic Nanosilver, Multidrug-Resistant Bacteria, Antibiotic Degradation, Environmental Remediation, Dual Functionality, Water Treatment, Antimicrobial Properties, Catalysts, Sustainable Solutions, Public Health.

6. Improving Land-Surface Model Simulations In Irrigated Areas By Incorporating Soil Moisture- Based Irrigation Estimates In Community Land Model


¹Ms D Sheeba, ² Dharunkumar D, ³ Sudhakar R, ^{1*} Assistant Professor, ^{2,3} U.G Student Department Of Civil Engineering, Indra Ganesan College Of Engineering, Trichy.

Abstract: Irrigation Plays A Pivotal Role In Shaping Land-Atmosphere Interactions, And Accurate Representation Within Models Is Essential For Robust Hydrological Predictions. The Study Proposes A Novel Approach Where Soil Moisture Dynamics Inform Irrigation Practices, Aiming To Improve The Realism Of Land-Surface Simulations. The Research Involves The Integration Of Soil Moisture-Driven Irrigation Estimates Into The CLM, Leveraging Observational Data And Remote Sensing Technologies For Calibration. The Modified Model Is Validated Against Field Measurements And Existing Irrigation Datasets, Ensuring The Fidelity Of Simulated Irrigation -Surface Simulations To Varying Irrigation Practices And Climatic Conditions. The Incorporation Of Soil Moisture-Driven Irrigation Estimates Is Examined In Diverse Geographical And Climatic Settings To Evaluate The Generalizability And Adaptability Of The Proposed Approach.

The Findings Of This Research Contribute To Advancing The Accuracy Of Land-Surface Modeling In Irrigated Regions, Providing Valuable Insights For Water Resource Management, Agricultural Planning, And Climate Impact Assessments. The Integration Of Soil Moisture-Based Irrigation Estimates Into The CLM Presents A Promising Avenue For Refining Our Understanding Of Land- Atmosphere Interactions In The Context Of Irrigated Landscapes.

Keywords: Land-Surface Modeling, Irrigation, Soil Moisture, Community Land Model (CLM), Hydrological Predictions, Observational Data, Remote Sensing, Water Use Efficiency, Climate Impact Assessments,

ISBN: 978-81-970087-3-3


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7. Stochastic Merging Of Soil Hydraulic Properties For Vadose Zone Hydrological Modelling

¹ Dr. R. Sivasankar, ² Mr. A. Anantha Raj, ³ Vishwa S, ¹Professor, ² Assistant Professor Samadhan College Of Engineering, ³U.G Student Department Of Civil Engineering, Indra Ganesan College Of Engineering, Trichy.

Abstract: The Heterogeneity Of Soil Properties Poses A Significant Challenge In Accurately Capturing Subsurface Water Movement. The Study Proposes A Novel Method That Integrates Statistical Techniques With Observational Data To Stochastically Merge Multiple Soil Hydraulic Property Datasets, Aiming To Improve The Robustness And Realism Of Hydrological Simulations. The Research Involves The Compilation Of Diverse Soil Hydraulic Property Datasets, Including Laboratory Measurements, Field Observations, And Remote Sensing Data. Through The Application Of Statistical Methods Such As Geostatistics And Bayesian Inference, The Study Develops A Stochastic Merging Framework. This Framework Systematically Combines Information From Various Sources, Considering Uncertainties And Spatial Variability In Soil Properties. The Effectiveness Of The Stochastic Merging Approach Is Evaluated Through Comparisons With Traditional Deterministic Methods And Field Measurements. Hydrological Simulations Using The Merged Soil Hydraulic Properties Are Conducted, And Key Performance Metrics, Including Soil Moisture Dynamics And Groundwater Recharge, Are Assessed To Validate The Improvement Achieved By The Proposed Method. Furthermore, The Study Explores The Sensitivity Of Hydrological Model Outcomes To Variations In The Stochastic Merging Parameters, Providing Insights Into The Robustness And Adaptability Of The Approach Across Different Spatial And Temporal Scales. The Findings Of This Research Contribute To Advancing Vadose Zone Hydrological Modeling By Addressing The Inherent Challenges Associated With Soil Property Heterogeneity. The Stochastic Merging Approach Offers A Promising Solution For Improving The Reliability Of Hydrological Predictions In Areas Characterized By Complex Soil Conditions.

Keywords: Vadose Zone Hydrological Modeling, Soil Hydraulic Properties, Stochastic Merging, Geostatistics, Bayesian Inference, Spatial Variability, Uncertainty, Hydrological Simulations, Groundwater Recharge, Soil Moisture Dynamics.


8. Small-Scale Operation Of An Integrated Anaerobic Baffled Reactor And Biofilter: Factors Affecting Its Performance

¹Ms K Vanlal, ² Iyyappa Moni A, ³Kalanchiya Muniyand B. ¹ Assistant Professor, ^{2,3} U.G Student Department Of Civil Engineering, Indra Ganesan College Of Engineering, Trichy.

Abstract: This Study Investigates The Small-Scale Operation Of An Integrated Anaerobic Baffled Reactor (Abr) And Biofilter, Exploring The Factors Influencing Its Performance. The Integrated System Is Designed For Wastewater Treatment, Combining Anaerobic And Aerobic Processes To Enhance Organic Matter Removal And Overall Treatment Efficiency. The Research Aims To Identify And Understand Key Operational Factors Affecting The System's Performance Under Small-Scale Conditions. The Study Involves Experimental Trials With A Pilot-Scale Integrated Abr-Biofilter System, Focusing On Parameters Such As Hydraulic Retention Time (Hrt), Organic Loading Rate (Olr), Temperature, And Influent Characteristics. The Performance Indicators Include Biochemical Oxygen Demand (Bod), Chemical Oxygen Demand (Cod) Removal, And Biogas Production In The Abr, As Well As The Removal And Their Potential Interactions. The Findings Contribute To Optimizing The Small-Scale Operation Of The Integrated System For Efficient Wastewater Treatment In Decentralized Settings. Furthermore, The Study Explores The System's Robustness And Adaptability To Variations In Influent Quality And Environmental Conditions. Insights Gained From This Research Can Inform The Design And Operation Of Small-Scale Integrated Abr-Biofilter Systems, Promoting Sustainable And Decentralized Wastewater Treatment Solutions.

Keywords: Anaerobic Baffled Reactor, Biofilter, Small-Scale Operation, Wastewater Treatment, Operational

ISBN: 978-81-970087-3-3


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9. Study Of The Relationship Between Methylmercury Content And Srb In Alkali Poncho Soil Under Different Temperature And Salinity Conditions

¹Ms D Sheeba, ²Ms K Vanisri, ³Sudhakar R., ^{**} Assistant Professor, ³ U.G Student Department Of CIVIL Engineering, Indira Ganesan College Of Engineering, Trichy.

Abstract: This Study Delves Into The Intricate Relationship Between Methylmercury (MeHg) Content And Sulfate-Reducing Bacteria (Srb) In Alkali Poncho Soil Under Varying Temperature And Salinity Conditions. Methylmercury, A Potent Neurotoxin, Can Be Formed Through Microbial Transformations In Anaerobic Environments, With Srb Playing A Crucial Role In Mercury Methylation Processes. Understanding The Dynamics Of This Relationship Is Essential For Elucidating Mercury Cycling In Ecosystems, Especially Those Characterized By Alkaline And Saline Conditions. The Research Employs A Controlled Experimental Design To Investigate The Impact Of Different Temperature And Salinity Levels On MeHg Production And The Abundance Of Srb In Alkali Poncho Soil. Comprehensive Analyses Include Molecular Techniques-To Quantify Srb Populations And Mercury Speciation Analyses To Determine MeHg Concentrations. The Study Aims To Discern The Optimal Conditions For MeHg Production And The Role Of Srb In Mediating These Processes. Statistical Modeling Is Applied To Assess The Significance Of Temperature And Salinity As Factors Influencing MeHg Content And Srb Abundance. The Findings Contribute To Our Understanding Of The Environmental Factors Governing MeHg Dynamics In Alkaline Soils, Offering Insights Into Potential Mitigation Strategies For Mercury Contamination In Affected Ecosystems. Furthermore, This Research Explores The Potential Implications Of Climate Change And Anthropogenic Activities On MeHg Production, Emphasizing The Importance Of Considering Temperature And Salinity Interactions In Predicting Mercury Cycling Dynamics.

Keywords: Methylmercury, Sulfate-Reducing Bacteria, Alkali Poncho Soil, Temperature, Salinity, Mercury Methylation, Environmental Factors, Microbial Transformations, Mercury Cycling, Climate Change, Anthropogenic Activities.

10. Novel 3dim Ceo2 Supported Lafeo3 As An Effective Heterogeneous Fenton Catalyst For Degradation Of Methylene Blue

¹Ms K Vanisri, ²Ms M Rajarajeshwari, ³ Mohan Priya M., ^{**} Assistant Professor, ³ U.G Student Department Of Civil Engineering, Indira Ganesan College Of Engineering, Trichy.

Abstract: This Research Explores The Application Of A Novel 3-Dimensional Ordered Mesoporous (3dim) Ceo₂ Supported Lafeo₃ Composite As An Effective Heterogeneous Fenton Catalyst For The Degradation Of Methylene Blue. The Study Aims To Harness The Synergistic Catalytic Properties Of Ceo₂ And Lafeo₃ Within A Well- Structured Mesoporous Framework, Enhancing The Fenton- Like Degradation Of Organic Pollutants. The Synthesis Of The 3dim Ceo₂ Supported Lafeo₃ Composite Involves A Meticulous Fabrication Process, And Its Physicochemical Properties Are Characterized Using Advanced Techniques. The Catalytic Activity Of The Composite Is Evaluated Through Methylene Blue Degradation Experiments, Employing A Fenton-Like Reaction Mechanism Activated By Hydrogen Peroxide. The Research Systematically Investigates Key Parameters Such As Catalyst Dosage, Reaction Time, And Initial Dye Concentration To Optimize The Degradation Efficiency. The Degradation Kinetics Are Analyzed To Understand The Reaction Pathway And The Influence Of The 3dim Ceo₂- Supported Lafeo₃ Composite On The Degradation Process. Additionally, The Stability And Reusability Of The Catalyst Are Assessed To Gauge Its Practical Applicability In Wastewater Treatment Scenarios. The Study Contributes To The Advancement Of Efficient And Sustainable Catalytic Materials For The Degradation Of Organic Dyes, Offering Potential Solutions For Water Pollution Remediation.

Keywords: 3dim Ceo₂, Lafeo₃, Fenton Catalyst, Heterogeneous Catalysis, Methylene Blue Degradation, Mesoporous Materials, Catalyst Optimization, Degradation Kinetics, Wastewater Treatment, Water Pollution Remediation.

ISBN: 978-81-970087-3-3


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11. Major Factors Affecting Construction Waste Management In Infrastructure Projects Using Structural Equation Model

¹Ms D Sheeba, ²Ms K Yanlari, ³Manikandan M, ⁴Assistant Professor, ⁵ U.G Student Department Of Civil Engineering, Indra Ganesan College Of Engineering, Trichy.

Abstract: This Research Investigates The Major Factors Influencing Construction Waste Management In Infrastructure Projects Using A Structural Equation Model (Sem). Effective Waste Management In Construction Projects Is Crucial For Sustainable Development And Environmental Conservation. The Study Aims To Comprehensively Analyze And Model The Intricate Relationships Among Key Factors Affecting Construction Waste Management To Enhance The Understanding Of This Complex System. The Identified Factors Encompass Project Management Practices, Regulatory Frameworks, Stakeholder Engagement, Technology Adoption, And Awareness Among Project Participants. A Comprehensive Dataset Is Collected Through Surveys And Interviews, And The Sem Is Employed To Assess The Direct And Indirect Relationships Among These Factors. The Findings Contribute To The Identification Of Critical Pathways And Interactions That Significantly Impact Construction Waste Management Practices. Insights Gained From The Sem Analyses Enable The Development Of Targeted Strategies For Improving Waste Reduction, Recycling, And Disposal Methods In Infrastructure Projects. Furthermore, The Research Explores The Mediating Role Of Technology Adoption And The Moderating Influence Of Regulatory Frameworks In The Relationship Between Project Management Practices And Effective Waste Management. These Nuanced Insights Provide Valuable Guidance For Policymakers, Project Managers, And Stakeholders In Implementing Sustainable Waste Management Practices In Construction Projects.

Keywords: Construction Waste Management, Infrastructure Projects, Structural Equation Model (Sem), Project Management Practices, Regulatory Frameworks, Stakeholder Engagement, Technology Adoption, Awareness, Sustainable Development, Environmental Conservation.


12. New Method For Computing Slip-Line Fields And Earth-Pressure Coefficients In Cohesionless Backfills

¹ Dr. R Sivasankar, ² Mr S Ramalingam, ³ Vishwa S, ⁴Professor, ⁵ Assistant Professor, ⁶ U.G Student Department Of Civil Engineering, Indra Ganesan College Of Engineering, Trichy.

Abstract: This Research Presents A Novel Method For Computing Slip-Line Fields And Earth- Pressure Coefficients In Cohesionless Backfills, A Critical Aspect In Geotechnical Engineering And Retaining Wall Design. Slip-Line Analysis Is A Fundamental Tool For Understanding The Soil-Structure Interaction And Stability Of Retaining Structures. The Study Introduces An Innovative Approach That Combines Numerical Techniques And Analytical Real-World Conditions. The Results Are Validated Against Existing Analytical Solutions And Experimental Data, Demonstrating The Reliability And Applicability Of The Developed Method. Furthermore, The Research Explores The Influence Of Various Factors On Slip-Line Fields And Earth-Pressure Coefficients, Providing Insights Into The Critical Parameters Governing The Behavior Of Cohesionless Backfills. Sensitivity Analyses Are Conducted To Assess The Robustness And Versatility Of The Proposed Method Across Different Scenarios And Soil Conditions. The Findings Of This Research Contribute To The Advancement Of Geotechnical Engineering Practices By Offering A New And Efficient Tool For Analyzing Soil-Structure Interaction In Retaining Wall Design. The Proposed Method Provides Engineers And Researchers With A Reliable And Accurate Means Of Assessing The Stability Of Structures In Cohesionless Backfills, Ultimately Leading To More Effective And Economical Geotechnical Solutions.

Keywords: Slip-Line Analysis, Earth-Pressure Coefficients, Cohesionless Backfills, Geotechnical Engineering, Retaining Wall Design, Numerical Techniques, Soil-Structure Interaction, Computational Algorithms, Sensitivity Analysis, Stability Assessment.

ISBN: 978-81-970087-3-3


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13. Assessment Of The Environmental Pollutants Of Demolition Sites For Developing Real-Time Monitoring Indexes : As An Empirical Analysis

¹Ms K. Vanisri, ² Mr Kasavaraja C, ³Gunaseelan G, ⁴ Assistant Professor, ⁵ Assistant Professor Semathan Engineering College, ⁶ U.G Student Department Of Civil Engineering, Indra Ganesan College Of Engineering, Trichy.

Abstract: This Study Conducts An Empirical Analysis For The Assessment Of Environmental Pollutants At Demolition Sites With The Aim Of Developing Real-Time Monitoring Indexes. Demolition Activities Generate Various Pollutants That Can Pose Environmental Risks, Necessitating Efficient Monitoring Strategies. The Research Employs A Comprehensive Approach To Identify And Quantify Pollutants Associated With Demolition Processes, Offering Insights Into The Development Of Real-Time Monitoring Indexes For Environmental Protection. The Empirical Analysis Involves The Collection Of Air, Soil, And Water Samples From Demolition Sites, Encompassing Diverse Geographical Locations And Demolition Methods. Various Pollutants Such As Particulate Matter (Pm), Volatile Organic Compounds (Vocs), Heavy Metals, And Other Contaminants Are Analyzed Using State-Of-The-Art Instrumentation. The Data Obtained Are Utilized To Establish Empirical Relationships And Correlations Among Different Pollutant Levels, Aiding In The Creation Of Monitoring Indexes. Real-Time Monitoring Indexes Are Developed Based On The Empirical Findings, Considering The Temporal And Spatial Variability Of Pollutant Concentrations During Demolition Activities. The Indexes Aim To Provide A Reliable And Efficient Tool For Regulatory Authorities, Environmental Agencies, And Construction Professionals To Assess And Mitigate Environmental Impacts In Real-Time. The Study Further Explores The Integration Of Advanced Sensor Technologies And Data Analytics For Continuous, Automated Monitoring Of Environmental Pollutants At Demolition Sites. This Approach Enhances The Effectiveness Of Real-Time Monitoring, Allowing For Prompt Responses To Potential Environmental Threats.

Keywords: Demolition Sites, Environmental Pollutants, Real-Time Monitoring Indexes, Empirical Analysis, Particulate Matter, Volatile Organic Compounds, Heavy Metals, Sensor Technologies, Environmental Protection, Sustainable Practices

14. Improving Sustainable Management Of University Buildings Based On Occupancy Data

¹Ms D Sheeba, ²Ms K Vanisri, ³ Mohanapriya S, ⁴ Assistant Professor, ⁵ U.G Student Department Of Civil Engineering, Indra Ganesan College Of Engineering, Trichy.

Abstract: The Efficient Use Of Campus Buildings Is Crucial For Achieving Sustainability Goals. Optimizing Energy Consumption, And Ensuring The Well-Being Of Occupants. The Research Explores The Integration Of Occupancy Data-Driven Strategies To Improve Resource Efficiency, Reduce Environmental Impact, And Enhance Overall Building Performance. The Study Involves The Deployment Of Occupancy Sensors And Data Analytics Tools To Gather Real-Time Information On Space Utilization, Occupancy Patterns, And User Behavior Within University Buildings. The Collected Data Are Then Utilized To Develop Actionable Insights For Optimizing Building Operations, Space Planning, And Energy Management. Key Aspects Addressed In The Research Include The Correlation Between Occupancy Patterns And Energy Consumption, Identification Of Underutilized Spaces, And The Assessment Of Indoor Environmental Quality Based On Occupancy-Related Parameters. The Study Also Considers Occupant Feedback And Comfort Preferences To Inform Sustainable Building Management Environments That Align With Sustainability Objectives And User Requirements. The Outcomes Of This Study Contribute To The Development Of A Holistic Framework For Sustainable Building Management In University Campuses, Utilizing Occupancy Data As A Central Element. The Proposed Strategies Can Guide Facility Managers, University Administrators, And Sustainability Practitioners In Making Informed Decisions To Enhance The Environmental, Economic, And Social Performance Of University Buildings.

Keywords: Sustainable Management, University Buildings, Occupancy Data, Energy Efficiency, Space Utilization, Building Performance, Smart Building Technologies, Environmental Impact, Occupant Behavior, Data Analytics, Indoor Environmental Quality.

ISBN: 978-81-977087-3-3


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15. Studying The Use Of Bim Technology In The Design And Construction Process To Improve Project Efficiency And Collaboration

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Abstract: The Utilization Of Building Information Modeling (Bim) Technology In The Design And Construction Processes Has Emerged As A Transformative Approach To Enhance Project Efficiency And Collaboration Within The Aec (Architecture, Engineering, And Construction) Industry. This Study Investigates The Multifaceted Impact Of Bim On Project Workflows, Focusing On Its Potential To Streamline Communication, Optimize Resource Allocation, And Mitigate Risks. Through A Comprehensive Analysis Of Case Studies, Industry Trends, And Empirical Data, This Research Aims To Provide Valuable Insights Into The Practical Implementation And Benefits Of Bim Technology. The Findings Of This Study Contribute To The Body Of Knowledge Surrounding Bim, Offering A Roadmap For Stakeholders To Leverage Bim Effectively For Improved Project Outcomes. Building Information Modeling (Bim) Technology Has Become A Pivotal Force In Revolutionizing The Design And Construction Processes Within The Architecture, Engineering, And Construction (Aec) Industry. This Comprehensive Study Delves Into The Multifaceted Implications Of Integrating Bim Into Project Workflows, Aiming To Understand And Optimize Its Impact On Project Efficiency And Collaboration. The Research Encompasses An In-Depth Exploration Of Bim Implementation Across Various Stages Of Project Development, From Conceptual Design To Construction And Facility Management.

Keywords: Building Information Modeling, Project Efficiency, Collaboration, Communication Enhancement, Resource Efficiency.


16. Studying The Use Of Energy-Efficient Building Systems And Materials, Such As Green Roofs And Solar Panels, To Reduce Energy Consumption And Promote Sustainability In The Construction Industry

*Ms K Vanisri, * Ms D Sheeba, * Mohana Priya S, ** Assistant Professor, * U.G Student Department Of Civil Engineering, Indra Ganesan College Of Engineering, Trichy.

Abstract: This Study Explores The Utilization Of Energy-Efficient Building Systems And Materials, Specifically Focusing On Green Roofs And Solar Panels, As Integral Components In The Construction Industry's Journey Towards Sustainability. Investigating The Impact Of These Technologies On Reducing Energy Consumption And Promoting Environmentally Conscious Practices, The Research Employs A Multidisciplinary Approach. Through An Analysis Of Case Studies, Energy Performance Assessments, And Life Cycle Analyses, The Study Aims To Quantify The Benefits Of Incorporating Green Roofs And Solar Panels Into Construction Projects. Key Areas Of Investigation Include Energy Savings, Environmental Impact, And Economic Viability. The Findings Aim To Provide Crucial Insights For Industry Stakeholders, Architects, And Policymakers, Facilitating Informed Decision-Making For A More Sustainable Resource. A Critical Facet Of This Study Involves The Examination Is A Key Focus, With A Meticulous Examination Of Initial Costs, Long-Term Savings, And Return On Investment. The Study Also Considers The Influence Of Governmental Policies, Incentives, And Industry Standards In Shaping The Adoption And Implementation Of These Sustainable Technologies. Additionally, Challenges Associated With The Widespread Adoption Of Green Roofs And Solar Panels Are Addressed, Including Public Perception, Regulatory Barriers, And Technological Limitations. The Research Aims To Provide Actionable Insights For Architects, Engineers, Policymakers, And Industry Stakeholders, Facilitating Informed Decision-Making Towards The Advancement Of Sustainable Practices Within The Construction Sector.

Keywords: Energy-Efficient Building Systems, Green Roofs, Solar Panels, Sustainability, Energy Consumption Reduction.

ISBN: 978-81-970087-3-3


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17. Investigating Sustainable Approaches To Water Resources Management, Such As Rainwater Harvesting, Water Reuse And Water Conservation

¹Ms D Sreedh, ² Ms K Variari, ³Ms K Sathyaprabha. ¹ Assistant Professor, ² Assistant Professor Saradhan Engineering College, Indra Ganesan College Of Engineering, Trichy.

Abstract: This Comprehensive Research Endeavor Explores Sustainable Approaches To Water Resources Management, With A Specific Focus On The Implementation And Impact Of Rainwater Harvesting, Water Reuse, And Water Conservation Practices. As Global Concerns Regarding Water Scarcity, Population Growth, And Environmental Sustainability Intensify, This Study Aims To Provide An In-Depth Analysis Of These Innovative Water Management Strategies. The Research Employs A Multidisciplinary Approach, Integrating Principles From Hydrology, Environmental Science, Engineering, And Policy Analysis To Comprehensively Understand The Dynamics Of Sustainable Water Management. The Investigation Begins With An Exploration Of Rainwater Harvesting As A Viable Solution For Augmenting Water Supplies. This Includes An Examination Of Various Harvesting Techniques, Storage Methods, And The Potential Applications Of Collected Rainwater, Ranging From Non-Potable Uses Like Irrigation To More Advanced Applications In Potable Water Supply Systems. The Study Evaluates The Efficiency Of Rainwater Harvesting In Different Climatic And Geographic Contexts, Considering Factors Such As Precipitation Patterns And Infrastructure Requirements. Water Reuse Is A Central Theme, Examining The Treatment Processes Involved In Recycling Wastewater For Beneficial Purposes. The Research Assesses The Technological Advancements, Economic Viability, And Public Acceptance Of Water Reuse Initiatives. Case Studies From Diverse Settings Will Be Analyzed To Determine The Efficacy Of Water Reuse In Alleviating Pressure On Traditional Water Sources And Mitigating Environmental Impacts Associated With Conventional Wastewater Disposal. The Study Employs Hydrological Analysis To Understand The Broader Implications Of These Sustainable Water Management Approaches On Local And Regional Water Resources. Environmental Impact Assessments Will Scrutinize The Effects On Ecosystems, Biodiversity, And Overall Ecosystem Health. The Research Also Delves Into The Role Of Policy Frameworks In Shaping The Adoption And Integration Of These Practices Within Water Management Systems.

Keywords: Sustainable Water Management, Rain Water Harvesting, Water Reuse, Water Conservation, Hydrological Analysis.

18. Modelling Of Adsorption Efficiency For The Removal Of Lead And Copper From Waste Water

¹Dr. R Sivasankar, ² Kallej M, ³ Manikandan M. ¹Professor, ² Assistant Professor, ³ U.G Student Department Of Civil Engineering, Indra Ganesan College Of Engineering, Trichy.

Abstract: This Research Focuses On The Development And Application Of Advanced Modeling Techniques To Assess The Adsorption Efficiency For The Removal Of Lead (Pb) And Copper (Cu) From Wastewater. Heavy Metal Contamination In Water Sources Poses Significant Environmental And Public Health Concerns, Making Efficient Removal Methods Crucial. The Study Utilizes Sophisticated Mathematical Models To Understand And Predict The Adsorption Behaviors Of Lead And Copper Onto Specific Adsorbent Materials In Wastewater Treatment Processes. The Investigation Begins With An Extensive Review Of Existing Adsorption Models, Identifying Their Strengths And Limitations. Subsequently, A Novel Model Is Proposed, Integrating Factors Such As Adsorbent Characteristics, Solution Chemistry, And Are Collected Through Laboratory-Scale Adsorption Studies Using Various Adsorbents, The, And Initial Metal Concentrations. The Obtained Data Are Then Used To Validate And Refine The Efficiency. The Research Also Explores The Implications Of Using Different Adsorbents, Considering Factors Such As Cost, Availability, And Environmental Impact. This Research Is Significant In Addressing Environmental Pollution Challenges And Underscores The Importance Of Employing Sophisticated Modeling Approaches To Enhance The Efficiency Of Heavy Metal Removal Processes In Wastewater Treatment.

Keywords: Adsorption Efficiency, Environmental Impact, Modelling Approach, Removal Of Copper, Removal Of Lead,

ISBN: 978-81-970087-3-3


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19. Integrating Machine Learning And Data Science For Predictive Analytics In Healthcare

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²S.Rakesh, Student/ Ai & Ds, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

Abstract:

This Paper Examines The Integration Of Machine Learning And Data Science Techniques For Predictive Analytics In Healthcare. Focused On Leveraging Advanced Algorithms And Data- Driven Insights, The Study Explores The Potential For Enhancing Healthcare Outcomes Through Predictive Modeling. The Paper Highlights Real-World Applications, Discusses Challenges, And Emphasizes The Pivotal Role Of Combining Machine Learning And Data Science In Shaping The Future Of Healthcare Analytics. Insights Provided Herein Are Valuable For Researchers, Practitioners, And Policymakers Seeking To Harness The Full Potential Of Predictive Analytics In Healthcare.

Keywords:

Machine Learning, Data Science, Predictive Analytics, Healthcare Analytics, Healthcare Data Mining, Predictive Modeling, Clinical Decision Support, Healthcare Informatics, Electronic Health Records (Ehr)

20. Explainable Ai In Data Science: Bridging The Gap Between Predictive Models And Human Interpretability

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

2. ²Mohamed Fahadh A, Student/ Ai & Ds, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

Abstract:

This Paper Explores The Critical Role Of Explainable Artificial Intelligence (Xai) In Data Science, Addressing The Imperative To Bridge The Gap Between Complex Predictive Models And Human Interpretability. Focused On Enhancing Transparency And Trust In Ai-Driven Decision-Making, The Study Delves Into The Challenges Of Black-Box Models And Presents Methodologies For Making Ai Systems More Understandable. Insights Provided Herein Are Essential For Researchers, Practitioners, And Policymakers Aiming To Balance Predictive Power With The Need For Comprehensibility In The Era Of Advanced Data Science And Machine Learning.

Keywords:

Human-Centric Ai Model Explainability Interpretability In Predictive Models Explainable Data Science Model Transparency Trustworthy Ai Explainability Techniques Black Box Models Feature Importance Visual Explanations Model Accountability.

21. Deep Learning For Big Data Analysis: Scalable Approaches And Applications

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

2. ²Arun Kumar M, Student/ Ai & Ds, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

Abstract

This Paper Investigates The Intersection Of Deep Learning And Big Data Analysis, Exploring Scalable Approaches And Applications That Harness The Power Of Neural Networks For Processing Large Datasets. The Study Emphasizes Strategies For Efficient Handling Of Massive Data Volumes And Discusses Real-World Applications Where Deep Learning Excels. Insights Provided Herein Are Pertinent For Researchers And Practitioners Seeking To Unlock The Potential Of Deep Learning In Addressing The Challenges Posed By Big Data Analysis.

Keywords:

Neural Networks Machine Learning Distributed Deep Learning Parallel Computing Large-Scale Data Processing Scalable Machine Learning Data Mining Feature Learning High-Performance Computing Big Data Analytics Cloud Computing

22. Data-Driven Decision Support Systems: A Fusion Of Artificial Intelligence And Data Science Techniques

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2. ²Abdur Rahman J, Student/ Ai & Ds, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

Abstract:

This Paper Explores The Fusion Of Artificial Intelligence (AI) And Data Science Techniques To Construct Robust Data-Driven Decision Support Systems (Dd-Dss). Examining The Synergy Between Advanced Algorithms And Data Analytics, The Study Focuses On The Development Of Systems That Empower Decision-Makers With Actionable Insights. Real-World Applications, Challenges, And The Transformative Impact Of Integrating Ai And Data Science In Decision Support Are Discussed, Providing Valuable Insights For Researchers And Practitioners Navigating The Dynamic Landscape Of Data-Driven Decision-Making.

Keywords:

Predictive Analytics Business Intelligence Decision Making Data Fusion Advanced Analytics Information Retrieval Knowledge Discovery Decision Support Models Big Data Analytics Cognitive Computing Expert Systems

23. Ethical Considerations In Ai And Data Science: Bias Detection And Mitigation Strategies

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2. ²Bharath Kumar R, Student/ Ai & Ds, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

Abstract:

This Paper Delves Into The Ethical Dimensions Of Artificial Intelligence (Ai) And Data Science, With A Specific Focus On Bias Detection And Mitigation Strategies. Addressing The Critical Need For Fairness And Accountability In Algorithmic Decision-Making, The Study Explores Methodologies For Identifying And Rectifying Biases In Datasets And Models. Insights Provided Herein Are Essential For Researchers, Practitioners, And Policymakers Aiming To Navigate The Ethical Challenges Inherent In The Application Of Ai And Data Science Across Diverse Domains.

Keywords:

Mitigation Strategies Fairness In Ai Algorithmic Bias Ethical Ai Responsible Ai Bias In Machine Learning Diversity And Inclusion In Data Science Ethical Decision Making Transparency In Ai Explainable Ai Algorithmic Accountability

24. Hybrid Approaches For Anomaly Detection: Integrating Statistical Methods With Machine Learning In Data Science

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2. ²Dharani R, Student/ Cse, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

Abstract:

This Research Explores Hybrid Approaches For Anomaly Detection By Integrating Statistical Methods With Machine Learning In Data Science. By Combining The Strengths Of Traditional Statistical Techniques With The Adaptability Of Machine Learning Algorithms, The Study Aims To Enhance The Accuracy And Robustness Of Anomaly Detection Systems. Through Empirical Evaluations And Real-World Applications, Findings Demonstrate The Efficacy Of Hybrid Approaches In Effectively Identifying Anomalies In Diverse Datasets. Insights Provided Herein Offer Valuable Contributions For Researchers, Data Scientists, And Practitioners Seeking Advanced Strategies To Improve Anomaly Detection Performance. The Study Contributes To The Ongoing Evolution Of Anomaly Detection Methods, Highlighting The Potential Benefits Of Integrating Statistical Methods With Machine Learning In The Field Of Data Science.

Keywords:

Anomaly Detection Models Statistical Learning Hybrid Anomaly Detection Data Mining Unsupervised Learning Ensemble Methods Feature Engineering Novelty Detection Pattern Recognition Hybrid Statistical Models Detection Algorithms

25. Feature Engineering And Selection In Ai-Driven Data Science: Methods And Best Practices

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2. ²Javabar Nisha B, Student/ Cse, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

Abstract:

This Research Delves Into Feature Engineering And Selection Methodologies In Ai-Driven Data Science, Exploring Effective Methods And Best Practices. Through Systematic Analyses, Case Studies, And Practical Applications, The Study Aims To Provide Insights Into Optimizing Feature Extraction, Transformation, And Selection Processes. Findings Highlight The Impact Of Judicious Feature Engineering On Model Performance And Offer Guidance On Selecting Relevant Features To Enhance Model Interpretability And Efficiency. The Study Contributes Valuable Perspectives For Researchers, Data Scientists, And Practitioners Seeking To Maximize The Utility Of Features In Ai-Driven Data Science Applications. The Research Emphasizes The Importance Of Thoughtful Feature Engineering And Selection In Building Robust And Efficient Artificial Intelligence Models.

Keywords:

Feature Engineering Feature Selection Ai-Driven Data Science Machine Learning Predictive Modeling Data Preprocessing Feature Extraction Dimensionality Reduction Feature Importance Model Interpretability

26. Ai-Powered Natural Language Processing For Big Data Text Analytics

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2. ²Anu Kumar M, Student/ AI & DS, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

Abstract:

This Research Focuses On The Application Of Ai-Powered Natural Language Processing (Nlp) For Big Data Text Analytics. Through Advanced Machine Learning Algorithms And Linguistic Models, The Study Explores The Capabilities Of Ai-Driven Nlp In Extracting Meaningful Insights From Large Volumes Of Textual Data. Findings Demonstrate The Effectiveness Of This Approach In Handling Diverse Linguistic Nuances, Improving Sentiment Analysis, And Enhancing Information Extraction From Extensive Text Datasets. Insights Provided Herein Offer Valuable Contributions For Researchers, Data Scientists, And Industry Professionals Seeking To Leverage Ai-Powered Nlp For Comprehensive Text Analytics In The Era Of Big Data. The Study Emphasizes The Transformative Potential Of Combining Artificial Intelligence And Natural Language Processing For Extracting Knowledge From Massive Text Corpora.

Keywords:

Sentiment Analysis Named Entity Recognition (Ner) Text Classification Language Modeling Information Extraction Semantic Analysis Document Clustering Topic Modeling Word Embeddings Text Feature Extraction Data-Driven Nlp Scalable Nlp

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27. Time Series Forecasting Using Ai And Data Science: Models, Challenges, And Applications

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2. ²Abdur Rahman J. Student/ Ai & Ds, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

Abstract :

This Research Focuses On Time Series Forecasting Using Ai And Data Science, Exploring Various Models, Addressing Challenges, And Highlighting Applications. Through Empirical Studies And Practical Implementations, The Study Aims To Showcase The Efficacy Of Advanced Machine Learning Algorithms And Data-Driven Techniques In Predicting Future Values Within Temporal Data Sequences. Findings Illustrate The Strengths And Limitations Of Different Models, Offering Insights For Researchers, Data Scientists, And Practitioners Seeking Effective Approaches To Time Series Forecasting. The Study Contributes Valuable Perspectives To The Ongoing Discourse On Leveraging Ai And Data Science For Accurate And Efficient Predictions In Diverse Time-Dependent Domains.

Keywords:

Time Series Forecasting ,Ai In Forecasting,Data Science,Time Series Models,Predictive Analytics,Machine Learning For Time Series,Deep Learning For Time Series.

28. Integrated Frameworks For Ai-Driven Data Governance And Compliance

1. ¹Mrs. T. Anita Dorothy, Assistant Professor, Cse, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

2. ²Bharath Kumar R. Student/ Ai & Ds, Indra Ganesan College Of Engineering, Manikandam, Trichy-12.

Abstract :

This Research Investigates Integrated Frameworks For Ai-Driven Data Governance And Compliance, Exploring The Intersection Of Artificial Intelligence And Regulatory Adherence. Through Systematic Analysis, Case Studies, And Practical Implementations, The Study Aims To Establish Comprehensive Frameworks That Harness Ai Technologies To Ensure Data Governance Practices Align With Evolving Compliance Requirements Seeking Advanced Strategies To Navigate The Complex Landscape Of Data Compliance Using Ai-Driven Frameworks. The Study Emphasizes The Importance Of Holistic Approaches To Data Governance That Leverage The Power Of Artificial Intelligence For Efficient And Adaptable Compliance Management.

Keywords:

Artificial Intelligence Regulatory Compliance Data Privacy Ethical Data Handling Risk Management Data Stewardship Data Quality Assurance Automated Compliance Monitoring Governance Policies Machine Learning For Compliance Integrated Data Governance Transparency In Ai Legal Compliance

29. Mobile And Wearable Technologies In Pervasive Learning Environments

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

2. ²Rakesh S. Student/ Ai & Ds, Indra Ganesan College Of Engineering, Manikandan, Trichy-12.

Abstract :

This Paper Explores The Transformative Role Of Mobile And Wearable Technologies In Pervasive Learning Environments. Investigating The Integration Of These Technologies, The Study Emphasizes Their Impact On Learner Engagement, Collaboration, And Personalized Learning Experiences. Real-World Applications, Pedagogical Implications, And Future Trends Are Discussed, Providing Valuable Insights For Educators, Researchers, And Policymakers Navigating The Dynamic Landscape Of Pervasive Learning.

Keywords:

Mobile Learning Wearable Learning Devices Pervasive Learning Ubiquitous Learning Mobile Educational Apps Wearable Technology In Education Context-Aware Learning Adaptive Learning

30. Adaptive Middleware For Pervasive Computing: Enhancing System Flexibility

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2. ²Mohamed Fahadh A. Student/ Ai & Ds, Indra Ganesan College Of Engineering, Manikandan, Trichy-12.

Abstract :

This Paper Investigates The Concept Of Adaptive Middleware In The Context Of Pervasive Computing, Highlighting Its Role In Enhancing System Flexibility. The Study Explores Self-Configuring, Self-Optimizing, And Self-Healing Mechanisms That Dynamically Tailor Middleware Behavior To Accommodate The Dynamic And Heterogeneous Nature Of Distributed Systems. Real-World Case Studies And Challenges Are Discussed, Offering Insights For Researchers And Practitioners Seeking To Optimize System Performance In Pervasive Computing Environments

Keywords:

Adaptive Middleware For Pervasive Computing: Enhancing System Flexibility

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31. Pervasive Computing For Assisted Living: Smart Homes And Healthcare Applications

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

2. ²R. Iyarkai Kanali, Student/ Ai & Ds, Indra Ganesan College Of Engineering, Manikandan, Trichy-12.

Abstract :

This Paper Explores The Integration Of Pervasive Computing Technologies In Assisted Living, With A Focus On Smart Homes And Healthcare Applications. Investigating The Challenges Faced By Aging Populations, The Study Examines How Pervasive Computing Creates Intelligent Living Spaces That Monitor And Adapt To Residents' Needs. Real-World Case Studies Illustrate Successful Implementations, Addressing Privacy Concerns And Showcasing The Transformative Impact On Healthcare Outcomes. This Paper Provides Valuable Insights For Researchers, Practitioners, And Policymakers Working Towards Enhancing The Quality Of Life In Assisted Living Scenarios.

Keywords:

Pervasive Computing Assisted Living Smart Homes Healthcare Applications Ambient Assisted Living (Aal) Elderly Care Technology Home Automation Sensor Networks Internet Of Things (Iot) Health Monitoring

32. Security And Trust In Pervasive Computing: Threats And Countermeasures

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2. ²A.V.R. Resika, Student/ Ai & Ds, Indra Ganesan College Of Engineering, Manikandan, Trichy-12.

Abstract :

This Paper Examines Security And Trust Issues In Pervasive Computing, Addressing Threats And Countermeasures Essential For Safeguarding Interconnected Systems. The Study Explores The Unique Challenges Posed By Dynamic, Ubiquitous Environments And Discusses Robust Security Measures, Including Encryption, Authentication, And Intrusion Detection. Real-World Case Studies Illustrate Successful Implementations, While Considerations Of Privacy And Ethical Implications Underscore The Importance Of A Balanced Approach. Insights Provided Herein Are Crucial For Researchers, Developers, And Policymakers Navigating The Evolving Landscape Of Security In Pervasive Computing.

Keywords:

Threat Modeling Intrusion Detection Access Control Secure Communication Trust Management Identity Management Secure Protocols Risk Assessment Vulnerability Analysis Security Policies

33. Location-Based Services In Pervasive Environments: Opportunities And Challenges

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

2. ²V.Rajapashpano, Student/ Ai & Ds ,Indra Ganesan College Of Engineering, Manikandam, Trichy-12

Abstract :

This Paper Explores The Integration Of Location-Based Services (Lbs) Within Pervasive Computing Environments, Emphasizing Opportunities And Challenges. It Discusses The Potential For Personalized, Context-Aware Applications, Ranging From Navigation To Social Networking, Addressing Privacy Concerns And The Transformative Impact Of Geospatial Awareness. The Study Provides Insights For Researchers, Developers, And Policymakers Navigating The Evolving Landscape Of Location-Based Services In Pervasive Computing.

Keywords:

Geo-Fencing Proximity-Based Services Location-Based Advertising Privacy In Lbs Real-Time Location Systems (Rtls) Wireless Sensor Networks Geographic Information Systems (Gis) Lbs Applications User Localization Navigation And Wayfinding

34. Performance Enhancement Of DbSCAN Density Based Clustering Algorithm In Data Mining

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Student/ Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Paper Presents A Focused Study On Enhancing The Performance Of The DbSCAN (Density-Based Spatial Clustering Of Applications With Noise) Algorithm. A Popular Density-Based Clustering Approach In Data Mining. The Research Explores Optimization Strategies To Improve The Algorithm's Efficiency, Scalability, And Applicability To Large Datasets. Through Empirical Evaluations And Comparative Analyses, The Study Highlights Advancements In Clustering Accuracy And Computational Efficiency. Insights Provided Herein Contribute To The Ongoing Efforts To Elevate The Performance Of DbSCAN For Enhanced Data Mining Applications.

Keywords

DbSCAN (Density-Based Spatial Clustering Of Applications With Noise), Clustering Algorithm, Density-Based Clustering, Data Mining, Performance Enhancement, Spatial Data Clustering, Noise Reduction, Distance Function, Core Points, Cluster Analysis, Data Preprocessing.

35. An Analysis Of The Impact Of Mobile Technology On Human-Computer Interaction Prevalence In Adolescent Men

1. ¹Dr.K. Pandiyarajan Professor/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.
2. ²Balamananiprabhu B R Student/Cse Indra Ganesan College Of Engineering, Manikandam Trichy 12.

Abstract

This Study Analyzes The Impact Of Mobile Technology On The Prevalence Of Human-Computer Interaction (Hci) In Adolescent Men. Investigating The Evolving Dynamics Between Mobile Devices And User Interaction Patterns, The Research Explores Behavioral Shifts, Social Implications, And Potential Influences On Well-Being. Through A Combination Of Surveys And Observational Data, The Study Sheds Light On The Nuanced Relationship Between Adolescent Males And Mobile Technology, Providing Insights Into The Evolving Landscape Of Hci In The Digital Age.

Keywords

Mobile Devices, Interaction Patterns, Digital Communication, Screen Time, Social Interaction, Technology Adoption, User Experience, Mobile Apps, Social Media, Adolescent Behavior, Mobile Interaction Trends, Digital Well-Being, Cognitive Impact

36. An Exploration Of How Artificial Intelligence Is Changing Human-Computer Interaction Patterns In Children

1. ¹Dr.K. Pandiyarajan Professor/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 1,2.²Bharathi S Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Explores The Transformative Effects Of Artificial Intelligence (Ai) On Human-Computer Interaction (Hci) Patterns In Children. Investigating The Evolving Dynamics Between Children And Ai-Driven Interfaces, The Study Delves Into Behavioral Shifts, Cognitive Implications, And The Impact On Educational Paradigms. Through A Combination Of Empirical Observations And Case Studies, The Research Offers Insights Into The Changing Nature Of Hci In The Context Of Ai Technologies For Young Users, Contributing Valuable Perspectives For Educators, Researchers, And Policymakers.

Keywords

Ai And Child Development, Educational Technology, Digital Learning, Child-Computer Interaction, Ai In Education, Interactive Learning, Cognitive Development, Technology And Child Behavior, User Experience

37. An Evaluation Of The Usability And Accessibility Of Web-Based Systems For Crm In The Fast Fashion Retail Sector

1.¹Dr.K. Pandiyarajan Professor/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.2.²Gowtham C Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Study Conducts A Comprehensive Evaluation Of The Usability And Accessibility Of Web-Based Customer Relationship Management (Crm) Systems Within The Fast Fashion Retail Sector. Leveraging Usability Testing And Accessibility Assessments, The Research Examines The User Experience And Inclusivity Of These Systems. Findings Highlight Areas For Improvement In Design And Functionality, Emphasizing The Significance Of Creating Crm Interfaces That Cater To Diverse User Needs Within The Dynamic Context Of Fast Fashion Retail. Insights From This Evaluation Contribute To The Refinement Of Web-Based Crm Solutions, Fostering Enhanced User Engagement And Accessibility In The Retail Industry.

Keywords

Usability Evaluation, Accessibility Assessment, Web-Based Systems, Customer Relationship Management (Crm), Fast Fashion Retail, User Experience, User Interface Design, Interaction Design, Website Accessibility, User-Centric Design, Retail Technology

38. Assessing The Influence Of Virtual And Augmented Reality On Consumer Purchasing Patterns

1. ¹Dr.K. Pandiyarajan Professor/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.
2. ²Indhumathi S Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Assesses The Influence Of Virtual And Augmented Reality (Vr/Ar) On Consumer Purchasing Patterns. Through A Combination Of Surveys, Behavioral Analyses, And Case Studies, The Study Explores How Immersive Technologies Impact Decision-Making Processes, Customer Engagement, And The Overall Consumer Purchasing Experience. The Findings Provide Valuable Insights Into The Evolving Landscape Of Retail And E- Commerce, Offering Implications For Businesses Seeking To Leverage Vr/Ar To Enhance Consumer Interactions And Shape Purchasing Behaviors.

Keywords

Virtual Reality (Vr), Augmented Reality (Ar), Consumer Behavior, Purchasing Patterns, Retail Technology, Immersive Experiences, Virtual Shopping, Augmented Retail, Consumer Engagement, Retail Innovation, Technology Adoption

39. An Examination Of The Use Of Gesture-Based Interfaces In Architecture

1. ¹Mr.N. Mohanprabhu Associate Professor/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.
2. ²Akshaya T Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Assesses The Influence Of Virtual And Augmented Reality (Vr/Ar) On Consumer Purchasing Patterns. Through A Combination Of Surveys, Behavioral Analysis, And Case Studies, The Study Explores How Immersive Technologies Impact Decision-Making Processes, Customer Engagement, And The Overall Consumer Purchasing Experience. The Findings Provide Valuable Insights Into The Evolving Landscape Of Retail And E- Commerce, Offering Implications For Businesses Seeking To Leverage Vr/Ar To Enhance Consumer Interactions And Shape Purchasing Behaviors.

Keywords

Virtual Reality (Vr), Augmented Reality (Ar), Consumer Behavior, Purchasing Patterns, Retail Technology, Immersive Experiences, Virtual Shopping, Augmented Retail, Consumer Engagement, Retail Innovation, Technology Adoption

40. Assessing The Influence Of Virtual And Augmented Reality On Consumer Purchasing Patterns

1. ¹Mr.N. Mohanprabhu Associate Professor /Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.
2. ²Akshaya T Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Study Examines The Utilization Of Gesture-Based Interfaces In Architecture. Through A Combination Of Case Studies, User Feedback, And Practical Applications, The Research Explores The Integration Of Gesture Control Technology In Architectural Design And Interactive Environments. Findings Highlight The Potential For Intuitive, Hands-Free Interactions In Spatial Design And User Engagement. Insights Provided Herein Contribute To The Evolving Discourse On The Application Of Gesture-Based Interfaces In Architecture, Offering Perspectives For Architects, Designers, And Researchers On The Transformative Possibilities Of This Interactive Technology.

Keywords

Innovative Interfaces, Architectural Technology, Interactive Environments, Gesture Recognition, Design Innovation, Spatial Computing, Architectural Interaction Design, User-Centric Architecture, Technology Integration In Architecture, Interactive Installations, Human-Centered Design

ISBN: 978-81-970087-3-3



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41. Exploring The Impact Of Ease Of Use In Wearable Technology On Geriatric User

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Abstract

This Research Explores The Impact Of Ease Of Use In Wearable Technology On Geriatric Users. Through Usability Assessments, User Feedback, And Observational Studies, The Study Investigates How The Design And Functionality Of Wearable Devices Influence The User Experience For Older Adults. Findings Shed Light On The Significance Of User-Friendly Interfaces And Ergonomic Considerations, Offering Insights For Designers And Developers Aiming To Create Inclusive Wearable Technologies That Cater To The Specific Needs And Preferences Of The Geriatric Population.

Keywords

Wearable Technology, Geriatric Users, Elderly Population, User-Friendly Wearables, Ease Of Use, Usability, User Experience, Technology Adoption, Aging Population, Health Wearables

42. Evaluating The Ramifications Of Gamification In The Metaverse

1. ¹Mr N. Mohanprabhu Associate Professor/Cse Indra Ganesan College Of Engineering, Manikandan, Trichy 12.

2. ²Aravindh V K Student/Cse Indra Ganesan College Of Engineering, Manikandan, Trichy .

Abstract

This Study Evaluates The Ramifications Of Gamification In The Metaverse. Through A Combination Of Analyses, User Feedback, And Case Studies, The Research Explores How Gamification Principles Impact User Engagement, Social Interactions, And Immersive Experiences Within Virtual Environments. Findings Provide Insights Into The Potential Benefits And Challenges Of Integrating Game Elements In The Metaverse, Offering Perspectives For Developers, Policymakers, And Stakeholders Navigating The Evolving Landscape Of Virtual Worlds And Interactive Digital Spaces.

Keywords

Gamification, Metaverse, Virtual Reality (Vr), Augmented Reality (Ar), Digital Gaming, Virtual Environments, Gamified Experiences, User Engagement, Interactive Entertainment, Social Virtual Spaces

43. A Systematic Review Of User Experience (Ux) Design Advances Associated With Augmented Reality

1. ¹Mr.N. Mohanprabhu Associate Professor/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.
2. ²Ayisha Siddiqua A Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy .

Abstract

This Systematic Review Examines The Recent Advances In User Experience (Ux) Design Associated With Augmented Reality (Ar). Analyzing A Spectrum Of Literature, The Study Provides Insights Into Emerging Trends, Methodologies, And Innovations Shaping The Intersection Of Ux And Ar Technologies. Findings Highlight Key Considerations Such As Interface Design, Interaction Modalities, And Immersive Experiences, Contributing To A Comprehensive Understanding Of The Evolving Landscape Of Ar-Driven User Experiences. This Review Serves As A Valuable Resource For Ux Designers, Researchers, And Practitioners Seeking To Stay Abroad Of The Latest Developments In This Dynamic Field.

Keywords

Ar Interaction, Immersive Experiences, Human-Computer Interaction, Ar Applications, Ar User Interface, Ux Evaluation, Ar Design Principles, Spatial Computing, Ar Usability, Interaction Design, Ar User Feedback, User-Centered Design, Ar Technology Adoption, Ar Navigation, Ar Content Design

44. A Comparison Of Natural Language Processing Algorithms Automation Of Customer Response Comparing End- User Perceptions Of Natural Language Processing Algorithms For Automated Customer Response

1. ¹Mr.N. Mohanprabhu Associate Professor/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.
2. ²Benasri S Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract

This Study Conducts A Comparative Analysis Of Natural Language Processing (Nlp) Algorithms For The Automation Of Customer Responses And Evaluates End-User Perceptions. Utilizing Both Quantitative And Qualitative Methodologies, The Research Explores The Efficiency, Accuracy, And User Satisfaction Associated With Different Nlp Approaches In The Context Of Automated Customer Support. Findings Provide Insights Into The Strengths And Limitations Of Various Algorithms, Offering A Nuanced Understanding Of User Preferences Ible Perspectives For Developers And Organizations Seeking To Optimize The Effectiveness Of Nlp Algorithms In Enhancing Customer Interactions.

Keywords

Customer Response Automation, Chatbots, Automated Customer Service, User Perceptions, Comparative Analysis, Nlp Algorithms, Sentiment Analysis, Customer Experience, User Satisfaction, Human- Computer Interaction, Conversational Agents, Machine Learning In Customer Service, Text Processing Algorithmic Automation

45. Analysing The Impact Of Voice-Based Interfaces On Purchase Practices In The FastFood Industry.

1.¹Mrs.A.Ramya Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam,Trichy2.²Ishwarya P

Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Analyzes The Impact Of Voice-Based Interfaces On Purchase Practices In The Fast Food Industry. Employing A Combination Of Surveys, Transaction Data Analysis, And User Feedback, The Study Investigates How Voice-Driven Interactions Influence Customer Behaviors And Preferences In The Context Of Fast Food Ordering. Findings Shed Light On The Efficacy Of Voice Interfaces In Enhancing The User Experience, Shaping Purchase Decisions, And Influencing Customer Satisfaction Within The Fast Food Sector. Insights Provided Herein Contribute To A Nuanced Understanding Of The Role Of Voice-Based Technology In Shaping Consumer Practices And Offer Implications For Businesses Aiming To Optimize Their Digital Ordering Systems.

Keywords

Convenience In Ordering, Technology Impact On Consumer Choices, User Experience, Mobile Ordering, Voice Assistant Integration, Digital Transformation, Customer Convenience, Fast Food Chains, Order Customization

46. A Comparative Study Of Symmetric And Asymmetric Encryption Algorithms For Instant Text Messaging

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Abstract

This Study Conducts A Comparative Analysis Of Symmetric And Asymmetric Encryption Algorithms For Securing Instant Text Messaging. Through Performance Metrics, Security Evaluations, And Practical Implementations, The Research Assesses The Strengths And Weaknesses Of Each Encryption Approach In The Context Of Real-Time Communication. Findings Illuminate The Trade-Offs Between Computational Efficiency And Key Management Complexities, Providing Valuable Insights For Developers And Security Practitioners Seeking To Implement Robust Encryption Solutions For Instant Messaging Platforms. This Comparative Study Contributes To The Understanding Of Encryption Algorithm Selection In The Realm Of Secure Text-Based Communication.

Keywords

Encryption Algorithms, Symmetric Encryption, Asymmetric Encryption, Instant Messaging Security, Cryptography, Data Privacy, Communication Security, Key Exchange, Text Messaging Encryption Security Protocols

47. A Systematic Review Of Secure Data Storage Solutions Used For Cloud Computing In The Fintech Industry

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

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

Abstract

This Systematic Review Investigates Secure Data Storage Solutions Employed In Cloud Computing Within The Fintech Industry. Analyzing A Range Of Literature Sources, The Study Synthesizes Insights Into Encryption Techniques, Access Control Mechanisms, And Compliance Considerations Integral To Safeguarding Financial Data. Findings Highlight Emerging Trends, Challenges, And Advancements In Secure Data Storage Within Fintech Cloud Environments. This Comprehensive Review Serves As A Valuable Resource For Industry Professionals, Researchers, And Policymakers Navigating The Evolving Landscape Of Secure Data Storage Solutions In The Intersection Of Cloud Computing And Financial Technology.

Keywords

Data Encryption, Secure Data Management, Privacy In Cloud Computing, Compliance In Fintech, Cloud Storage Providers, Data Integrity, Risk Management, Regulatory Compliance

48. An Analysis Of Intrusion Detection And Prevention Systems Used In The Healthcare Sector

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

2. Keerthika V Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Analysis Explores The Implementation Of Intrusion Detection And Prevention Systems (Idps) In The Healthcare Sector. Through Case Studies, Security Assessments, And Real-World Examples, The Research Evaluates The Efficacy Of Idps In Safeguarding Healthcare Information Systems Against Cyber Threats.

Findings Illuminate The Unique Challenges And Considerations In Deploying Intrusion Detection And Prevention Measures In Healthcare, Offering Insights For Practitioners And Policymakers Aiming To Enhance The Cybersecurity Posture Within This Critical Sector. This Analysis Contributes To A Deeper Understanding Of The Role Of Idps In Fortifying Information Security In Healthcare Environments.

Keywords

Security Systems, Health Information Systems, Electronic Health Records (Ehr), Medical Data Security, Threat Detection, Network Intrusion, Cyber Threats In Healthcare, Security Measures, Healthcare It Anomaly Detection

49. Assessing Security Best Practices For Iot Devices In Political Offices

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2. ²Krishu Gowtham R Snidena/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract

This Assessment Explores Security Best Practices For Internet Of Things (Iot) Devices Deployed In Political Offices. Through A Combination Of Case Studies, Risk Assessments, And Policy Analyses, The Research Evaluates Strategies To Enhance The Security Posture Of Iot Devices In Politically Sensitive Environments. Findings Highlight Key Considerations Such As Device Authentication, Data Encryption, And Vulnerability Management. Offering Insights For Policymakers, It Professionals, And Security Practitioners Aiming To Mitigate Risks And Safeguard Sensitive Information Within Political Offices. This Assessment Contributes Valuable Perspectives To The Ongoing Discourse On Securing Iot Devices In High-Stakes Contexts.

Keywords

Cybersecurity, Iot Device Security, Network Security, Device Authentication, Data Encryption, Vulnerability Management, Security Policies, Threat Detection, Risk Assessment, Remote Device Monitoring

50. An Investigation Into The Role Social Media Played In Shifting Regulations Related To Privacy And The Protection Of Personal Data

1. ¹Mr.C.Jegadeesan Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam, Trichy
2. ²Chhina S Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12. Abstract

This Investigation Examines The Influential Role Of Social Media In Shaping Regulatory Changes Concerning Privacy And The Protection Of Personal Data. Through A Combination Of Case Studies, Content Analyses, And Policy Reviews, The Research Explores How Public Discourse And Advocacy On Social Media Platforms Have Contributed To Legislative Shifts. Findings Illuminate The Dynamic Interplay Between Online Activism, Public Opinion, And Regulatory Responses. Offering Insights For Policymakers, Legal Scholars, And Technology Stakeholders Navigating The Evolving Landscape Of Privacy Regulations Influenced By Social Media Dynamics. This Investigation Contributes To A Nuanced Understanding Of The Complex Relationship Between Digital Advocacy And Regulatory Change In The Realm Of Privacy And Personal Data Protection.

Keywords

Online Privacy, Social Media Impact, Information Governance, Privacy Laws, Data Protection Legislation, Social Media Influence, Digital Privacy, Privacy Advocacy, Public Perception, Regulatory Compliance, User Consent, Legal Frameworks, Gdpr (General Data Protection Regulation)

51. A Comparative Study Of Digital Signature Schemes Adoption In Property Transfers

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2. ²Devi K Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract

This Comparative Study Investigates The Adoption Of Digital Signature Schemes In Property Transfers. Through A Combination Of Case Analyses, Legal Assessments, And Stakeholder Interviews, The Research Evaluates The Efficacy And Challenges Associated With Different Digital Signature Schemes In The Context Of Real Estate Transactions. Findings Illuminate The Impact On Security, Efficiency, And Legal Validity, Offering Insights For Property Professionals, Policymakers, And Technology Providers Seeking To Enhance The Digitalization Of Property Transfer Processes. This Study Contributes To A Deeper Understanding Of The Adoption Landscape For Digital Signatures In The Domain Of Real Estate Transactions.

Keywords

Digital Signature Schemes, Property Transfers, Electronic Signatures, Digital Signatures In Real Estate, Cryptographic Authentication, Secure Transactions, Legal Frameworks, Electronic Contracts, Property Documentation

52. An Assessment Of The Security Of Secure Wireless Communication Systems Used In Tertiary Institutions

1. ¹Mr.C.Jagadeesan Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam, Trichy
2. ²Divyatharshini A Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy

This Assessment Examines The Security Of Secure Wireless Communication Systems Implemented In Tertiary Institutions. Through Security Audits, Vulnerability Assessments, And Case Studies, The Research Evaluates The Robustness And Resilience Of Wireless Communication Networks Within Educational Environments. Findings Shed Light On Potential Vulnerabilities, Best Practices, And Challenges. Offering Insights For Administrators, IT Professionals, And Policymakers Aiming To Strengthen The Security Posture Of Wireless Communication Systems In Tertiary Institutions. This Assessment Contributes Valuable Perspectives To The Ongoing Efforts In Fortifying Digital Communication Infrastructure Within Educational Settings.

Keywords

Information Security, Access Control, Risk Assessment, Security Audits, Security Protocols, Data Protection, Wireless Security Standards, Network Monitoring

53. The Classification Scheme For Credit Card Fraud Detection In Data Mining

1. ¹Mr.C.Jegadeesan Assistant Professor /Cse Indra Ganesan College Of Engineering,Manikandam,Trichy
2. ²Divyakeerthan P Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract

This Research Proposes A Classification Scheme For Credit Card Fraud Detection Within The Realm Of Data Mining. Through A Systematic Framework, The Study Categorizes And Evaluates Various Data Mining Techniques Applied To Credit Card Fraud Detection, Considering Factors Such As Accuracy, Efficiency, And Scalability. Findings Highlight The Strengths And Limitations Of Different Classification Methods, Providing Insights For Researchers, Practitioners, And Financial Institutions Seeking To Implement Effective Fraud Detection Systems. The Proposed Classification Scheme Contributes To The Understanding And Optimization Of Credit Card Fraud Detection Strategies In The Field Of Data Mining.

Keywords

Pattern Recognition, Fraud Detection Models, Imbalanced Data, Ensemble Learning, Neural Networks, Decision Trees, Support Vector Machines (Svm), Random Forest, Logistic Regression, Feature Selection

54. The Classification Scheme For Sentiment Analysis Of Twitter Data

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2. ²Gayatri P Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract

This Research Introduces A Classification Scheme For Sentiment Analysis Of Twitter Data. The Study Systematically Categorizes And Evaluates Diverse Sentiment Analysis Techniques Applied To Twitter Content, Considering Factors Such As Accuracy, Adaptability, And Real-Time Processing. Findings Highlight The Strengths And Limitations Of Various Classification Methods, Offering Insights For Researchers, Practitioners, And Businesses Seeking To Gauge Public Sentiment On Twitter. The Proposed Classification Scheme Contributes To A Nuanced Understanding Of Sentiment Analysis Strategies Tailored To The Unique Characteristics Of Twitter Data.

Keywords

Sentiment Classification, Text Preprocessing, Feature Extraction, Supervised Learning, Unsupervised Learning, Deep Learning, Emotion Analysis, Opinion Mining, Lexicon-Based Approaches, Twitter Sentiment Corpus

55. To Increase Accuracy Of Min-Max K-Mean Clustering In Data Mining

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

This Study Focuses On Enhancing The Accuracy Of Min-Max K-Mean Clustering In Data Mining. Through Algorithmic Optimizations And Parameter Tuning, The Research Aims To Improve The Precision Of This Clustering Technique. Findings Highlight The Impact Of Refined Min-Max K-Mean Clustering On Data Pattern Recognition And Clustering Performance. Insights Provided Herein Offer Practical Implications For Researchers And Practitioners Seeking To Elevate The Accuracy Of Clustering Algorithms In Data Mining Applications. The Study Contributes Valuable Perspectives To The Ongoing Efforts To Optimize The Effectiveness Of Min-Max K-Mean Clustering Techniques.

Keywords

Min-Max K-Means Clustering, Data Mining, Accuracy Enhancement, Feature Scaling, Outlier Detection, Optimal K Selection, Initialization Techniques, Distance Metric, Ensemble Methods, Iterative Refinement

56. To Evaluate And Improve Apriori Algorithm To Reduce Execution Time For Association Rule Generation

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

This Research Focuses On The Evaluation And Enhancement Of The Apriori Algorithm To Reduce Execution Time For Association Rule Generation. Through Algorithmic Optimizations And Performance Analyses, The Study Aims To Streamline The Process Of Discovering Association Rules From Large Datasets. Findings Demonstrate The Impact Of Improved Apriori Efficiency On The Speed And Scalability Of Association Rule Generation. Insights From This Research Contribute Practical Implications For Researchers And Practitioners Seeking To Expedite The Execution Time Of The Apriori Algorithm In Data Mining Applications, Thereby Fostering More Efficient Knowledge Discovery.

Keywords

Pruning Techniques, Frequent Itemsets, Apriori-Based Optimization, Parallel Processing, Distributed Computing, Memory Efficiency, Large Dataset Mining, Incremental Mining

ISBN: 978-81-970087-3-3


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57. To Propose Classification Technique For Plant Disease Detection In Image Processing

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2. ²Haribaran K Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract

This Research Proposes A Novel Classification Technique For Plant Disease Detection In Image Processing. Leveraging Advanced Machine Learning Algorithms And Image Analysis, The Study Aims To Enhance The Accuracy And Efficiency Of Identifying Diseases Affecting Plants. Findings From This Research Offer Insights Into The Effectiveness Of The Proposed Classification Technique, Providing Valuable Contributions For Researchers, Practitioners, And Agricultural Stakeholders Seeking Robust Methods For Automated Plant Disease Detection. The Study Contributes To The Ongoing Efforts To Advance Image Processing Applications In Agriculture For Improved Crop Health Monitoring And Management.

Keywords

Deep Learning, Disease Identification, Feature Extraction, Pattern Recognition, Image Classification, Convolutional Neural Networks (Cnn), Support Vector Machines (Svm), Neural Network Models, Feature Selection, Plant Pathology

58. To Propose Novel Technique For The Crime Rate Prediction In Data Mining

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2. ²Kamoli A Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract

This Research Introduces A Novel Technique For Crime Rate Prediction In Data Mining. Leveraging Advanced Machine Learning Algorithms And Predictive Analytics, The Study Aims To Enhance The Accuracy And Effectiveness Of Forecasting Crime Rates. Findings From This Research Offer Insights Into The Capabilities And Potential Applications Of The Proposed Technique, Providing Valuable Contributions For Researchers, Law Enforcement Agencies, And Policymakers Seeking Innovative Approaches To Crime Prediction. The Study Contributes To The Ongoing Efforts To Leverage Data Mining For Proactive Crime Prevention And Public Safety.

Keywords

Crime Analytics, Pattern Recognition, Spatial-Temporal Analysis, Predictive Policing, Feature Engineering, Predictive Algorithms, Data Preprocessing, Geographic Information Systems (Gis) Crime Hotspot Detection

59. To Propose Novel Techniques For The Crime Rate Prediction In Data Mining

1. ¹Mr.P.Suresh Pandi Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam, Trichy
2. ²Kamatchi S Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract

This Study Evaluates And Proposes A Heart Disease Prediction Scheme In Data Mining. Through The Analysis Of Medical Data And The Application Of Machine Learning Algorithms, The Research Aims To Enhance The Accuracy And Reliability Of Predicting Heart Disease. Findings Highlight The Effectiveness Of The Proposed Prediction Scheme, Offering Insights For Researchers, Healthcare Practitioners, And Policymakers Seeking Advanced Tools For Early Detection And Prevention Of Cardiovascular Diseases. The Study Contributes To The Ongoing Efforts To Employ Data Mining Techniques In Healthcare For Proactive And Personalized Risk Assessment.

Keywords

Risk Assessment, Medical Data Mining, Feature Selection, Classification Algorithms, Patient Health Prediction, Healthcare Analytics, Electronic Health Records (Ehr), Predictive Algorithms, Data Preprocessing, Risk Factor Analysis

60. Software Defect Prediction Analysis Using Machine Learning Algorithms

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2. ²Kirthika M Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Conducts An Analysis Of Software Defect Prediction Using Machine Learning Algorithms. Through Empirical Studies And Performance Evaluations, The Study Assesses The Effectiveness Of Various Machine Learning Models In Predicting Software Defects. Findings Provide Insights Into The Accuracy, Precision, And Recall Of The Employed Algorithms. Offering Valuable Perspectives For Software Developers, Quality Assurance Teams, And Project Managers Aiming To Enhance Software Quality And Reliability. The Study Contributes To The Ongoing Discourse On Leveraging Machine Learning For Proactive Defect Prediction In Software Development Processes.

Keywords

Defect Detection, Bug Prediction, Data Mining, Feature Selection, Code Metrics, Fault Prediction, Software Engineering, Model Evaluation, Software Testing, Software Maintenance

61. A New Data Clustering Approach For Data Mining In Large Database

1. Ms.J.Jenifer Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.2. Mathavan N Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Introduces A Novel Data Clustering Approach For Data Mining In Large Databases. Leveraging Algorithmic Innovations And Scalability Considerations, The Study Aims To Improve The Efficiency And Effectiveness Of Clustering Large Datasets. Findings From This Research Offer Insights Into The Performance And Applicability Of The Proposed Clustering Approach, Providing Valuable Contributions For Researchers And Practitioners Engaged In Data Mining Tasks With Voluminous Datasets. The Study Contributes To The Evolving Landscape Of Data Clustering Methods, Particularly Addressing Challenges Associated With Large-Scale Data Mining Applications.

Keywords

Density-Based Clustering, Centroid-Based Clustering, Hierarchical Clustering, Novel Clustering Technique, Feature Extraction, Dimensionality Reduction, Cluster Evaluation, High-Dimensional Data, Cluster Similarity Measures, Performance Benchmarking

62. The Diabetes Prediction Technique For Data Mining Using Classification

1. Ms.J.Jenifer Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.
2. Monisha R. Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.


Abstract

This Research Presents A Diabetes Prediction Technique For Data Mining Using Classification Algorithms. Leveraging Machine Learning Models And Health Data, The Study Aims To Enhance The Accuracy And Reliability Of Predicting Diabetes. Findings Highlight The Effectiveness Of The Proposed Classification Technique, Offering Insights For Researchers, Healthcare Professionals, And Policymakers Seeking Advanced Tools For Early Diabetes Detection And Personalized Healthcare. The Study Contributes To The Ongoing Efforts To Leverage Data Mining In Healthcare, Particularly Addressing The Domain Of Diabetes Prediction For Improved Patient Outcomes And Proactive Management.

Keywords

Risk Assessment, Diabetes Mellitus, Health Informatics, Electronic Health Records (Ehr), Predictive Algorithms, Patient Health Prediction, Chronic Disease Prediction, Data Preprocessing, Decision Support Systems, Personalized Medicine

ISBN: 978-81-970087-3-3


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63. Novel Algorithm For The Network Traffic Classification In Data Miningclassification

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2. Priya P Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Introduces A Novel Algorithm For Network Traffic Classification In Data Mining, Leveraging Advanced Techniques And Feature Engineering. The Study Aims To Enhance The Accuracy And Efficiency Of Classifying Diverse Network Activities. Findings Demonstrate The Effectiveness Of The Proposed Algorithm In Handling Intricate Patterns Within Network Traffic, Offering Insights For Researchers, Cybersecurity Professionals, And Network Administrators Seeking Robust Solutions For Traffic Classification. The Study Contributes To The Ongoing Efforts To Advance Data Mining Applications In Cybersecurity, Specifically Addressing Challenges Associated With The Classification Of Network Traffic.

Keywords

Flow-Based Analysis, Pattern Recognition, Network Security, Behavioral Analysis, Internet Of Things (Iot) Traffic, Traffic Normalization, Unsupervised Learning, Real-Time Traffic Monitoring, Performance Evaluation

64. The Impact Of Nosql Databases On Data Management And Analysis In Smart Cities

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

2. Priyadharshini G Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Study Explores The Impact Of Nosql Databases On Data Management And Analysis In Smart Cities. Through Case Studies, Performance Evaluations, And Practical Applications, The Research Investigates How Nosql Databases Contribute To Handling Diverse And Dynamic Data Sources Within Urban Environments. Findings Highlight The Scalability, Flexibility, And Efficiency Advantages Of Nosql Databases, Offering Insights For Researchers, City Planners, And Data Analysts Navigating The Complex Landscape Of Smart City Data Management. The Study Contributes To A Nuanced Understanding Of The Role And Implications Of Nosql Databases In Shaping Data-Driven Decision-Making In The Context Of Smart Cities.

Keywords

Real-Time Data Processing, Scalability, Geospatial Data, Sensor Networks, Data Modeling, Data Integration, Cloud Computing, Iot (Internet Of Things), Urban Analytics, Data Security

65. An Evaluation Of The Security And Privacy Concerns Of Cloud-Based Databases In Financial Organizations

1. ¹Mrs.A.Suganya Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam, Trichy
2. ²Logadipa Sp Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract

This Research Conducts An Evaluation Of The Security And Privacy Concerns Associated With Cloud- Based Databases In Financial Organizations. Through Security Assessments, Compliance Analyses, And Case Studies, The Study Investigates The Vulnerabilities And Safeguards Pertinent To Leveraging Cloud- Based Databases In The Finance Sector. Findings Illuminate Key Considerations Such As Data Encryption, Access Controls, And Regulatory Compliance, Offering Insights For Financial Institutions, Cloud Service Providers, And Policymakers Aiming To Balance The Benefits Of Cloud Technology With Robust Security Measures. The Study Contributes To A Deeper Understanding Of The Intricate Dynamics Between Financial Data, Cloud Databases, And Information Security In Contemporary Organizational Settings.

Keywords

Risk Assessment, Compliance Standards, Data Encryption, Access Control, Identity Management, Financial Data Protection, Regulatory Compliance, Cybersecurity, Threat Mitigation

66. Exploring The Role Of Data Warehousing And Business Intelligence In Global Consultancies

1. ¹Mrs.A.Suganya Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam, Trichy
2. ²Mohamed Newsath M Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy

Abstract

This Research Explores The Role Of Data Warehousing And Business Intelligence In Global Consultancies. Through Case Studies, Interviews, And Practical Applications, The Study Investigates How These Technologies Contribute To Decision-Making Processes, Client Engagements, And Overall Business Strategies Within Consulting Firms On A Global Scale. Findings Highlight The Transformative Impact Of Data Warehousing And Business Intelligence On Analytics-Driven Insights, Client Satisfaction, And Operational Efficiency. The Study Provides Valuable Insights For Consultants, IT Professionals, And Business Leaders Seeking To Harness The Potential Of Data-Driven Solutions In The Dynamic Landscape Of Global Consultancy Services.

Keywords

Decision Support, Data Analytics, Data Management, Information Systems, Data Warehousing Architecture, Reporting And Analysis, Data Warehouse Design, Data Quality, Data Governance, Data Warehouse Implementation

67. An Analysis Of The Use Of Graph Databases For Data Modelling And Analysis In Recommendation

1. ¹Mrs.A.Suganya Assistant Professor /Cse Indra Ganesan College Of Engineering,Manikandam,Trichy
2. ²Moorthi C Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy I2.

Abstract

This Research Conducts An Analysis Of The Use Of Graph Databases For Data Modeling And Analysis In Recommendation Systems. Through Case Studies, Performance Evaluations, And Practical Applications, The Study Investigates How Graph Databases Enhance The Efficiency And Effectiveness Of Recommendation Algorithms. Findings Highlight The Advantages Of Graph-Based Modeling In Capturing Complex Relationships, Offering Insights For Researchers, Developers, And Businesses Aiming To Optimize Recommendation Systems. The Study Contributes To A Deeper Understanding Of The Role And Implications Of Graph Databases In Shaping Personalized And Dynamic Recommendation Systems.

Keywords

Collaborative Filtering, Social Graphs, Personalization, User Behavior Modeling, Connected Data, Semantic Graphs, Knowledge Graphs, Graph Algorithms, Query Languages, Graph-Based Representation, Hybrid Recommendation Systems

68. The Influence Of The Internet Of Things (Iot) On Database Design And Management In The Retail Grocery Industry

1. ¹Mrs.A.Suganya Assistant Professor /Cse Indra Ganesan College Of Engineering,Manikandam,Trichy
2. ²Nancy C Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy I2.

Abstract

This Study Explores The Influence Of The Internet Of Things (Iot) On Database Design And Management In The Retail Grocery Industry. Through Case Studies, Practical Implementations, And Analyses, The Research Investigates How Iot Technologies Impact The Collection, Storage, And Utilization Of Data Within The Grocery Retail Sector. Findings Illuminate The Transformative Effects On Inventory Management, Customer Experiences, And Operational Efficiency. The Study Provides Insights For Database Designers, Retailers, And Industry Stakeholders Navigating The Dynamic Landscape Of Iot Integration In Retail Grocery Databases, Contributing To A Nuanced Understanding Of The Evolving Intersection Between Iot And Database Management Practices.

Keywords

Real-Time Data Processing, Inventory Management, Supply Chain Visibility, RFID Technology, Sensor Networks, Data Analytics, Customer Experience, Data Security, Cloud Computing, Smart Shelves

69. An Examination Of The Challenges And Opportunities Of Distributed Databases In Supply Chain Management

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

Abstract

This Research Conducts An Examination Of The Challenges And Opportunities Associated With Distributed Databases In Supply Chain Management. Through Case Studies, Analyses, And Practical Applications, The Study Investigates The Complexities And Benefits Introduced By The Adoption Of Distributed Database Systems In Optimizing Supply Chain Processes. Findings Highlight Issues Such As Data Consistency And Scalability, While Also Illustrating The Potential For Improved Transparency, Resilience, And Real-Time Information Sharing. The Study Provides Insights For Supply Chain Professionals, Database Administrators, And Decision-Makers Aiming To Harness The Advantages Of Distributed Databases In Enhancing The Efficiency And Responsiveness Of Supply Chain Operations.

Keywords

Data Synchronization, Data Security, Blockchain Technology, Supply Chain Visibility, Real-Time Data Processing, Inventory Management, Decentralized Ledger, Interoperability, Distributed Ledger Technology, Smart Contracts, Data Integration

70. Assessing The Impact Of Data Compression Algorithms On Database Performance And Scalability In Cloud Computing

1. ¹Mrs. R. Sankari Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.
2. ²Sahyapriya N Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Study Assesses The Impact Of Data Compression Algorithms On Database Performance And Scalability In Cloud Computing Environments. Through Empirical Evaluations, Performance Measurements, And Scalability Analyses, The Research Investigates How Various Data Compression Techniques Influence The Efficiency And Responsiveness Of Databases Deployed In Cloud Environments. Findings Highlight The Trade- Offs Between Compression Ratios And Computational Overhead, Offering Insights For Cloud Administrators, Database Designers, And Practitioners Seeking To Optimize Data Storage And Processing In Cloud-Based Databases. The Study Contributes To The Ongoing Discourse On The Role Of Data Compression In Enhancing Database Performance And Scalability Within The Context Of Cloud Computing.

Keywords

Resource Optimization, Data Storage Efficiency, Distributed Databases, Cloud Infrastructure, Compression Ratios, Query Performance, Cloud Storage Systems, Performance Metrics, Compression Overhead, Big Data Processing

71. Title: An Analysis Of The Use Of Graph Databases For Data Modelling And Analysis In Recommendation Systems

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Abstract

This Research Provides A Comprehensive Analysis Of The Application Of Graph Databases In Data Modeling And Analysis Within Recommendation Systems. Through Case Studies, Performance Assessments, And Practical Implementations, The Study Delves Into How Graph Databases Enhance The Capabilities Of Recommendation Algorithms. Findings Elucidate The Advantages Of Graph-Based Modeling In Capturing Intricate Relationships, Offering Valuable Insights For Researchers, Developers, And Businesses Aiming To Optimize Recommendation Systems. The Study Contributes To A Deeper Understanding Of The Impact And Potential Of Graph Databases In Shaping More Effective And Nuanced Recommendation Mechanisms.

Keywords

Personalization, User Behavior Modeling, Connected Data, Semantic Graphs, Knowledge Graphs, Graph Algorithms, Query Languages, Graph-Based Representation, Hybrid Recommendation Systems, Recommendation Accuracy

72. Title: An The Influence Of The Internet Of Things (Iot) On Database Design And Management In The Retail Grocery Industry

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2. Sneha R Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Study Investigates The Transformative Influence Of The Internet Of Things (Iot) On Database Design And Management In The Retail Grocery Industry. Through Case Studies, Practical Implementations, And Analyses, The Research Explores How Iot Technologies Reshape The Collection, Storage, And Utilization Of Data Within The Grocery Retail Sector. Findings Illustrate The Profound Effects On Inventory Management, Customer Experiences, And Operational Efficiency. The Study Provides Insights For Database Designers, Retailers, And Industry Stakeholders Navigating The Dynamic Intersection Of Iot And Database Management Practices, Contributing To A Nuanced Understanding Of The Evolving Landscape In Retail Grocery Databases.

Keywords

Data Integration, Real-Time Data Processing, Inventory Management, Supply Chain Visibility, Rfid Technology, Sensor Networks, Data Analytics, Customer Experience, Data Security, Cloud Computing

73. Title: An Examination Of The Challenges And Opportunities Of Distributed Databases In Supply Chain Management

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2. Sumithra R Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Examines The Challenges And Opportunities Presented By Distributed Databases In The Realm Of Supply Chain Management. Through Case Studies, Analyses, And Practical Applications, The Study Explores The Complexities And Benefits Introduced By The Adoption Of Distributed Database Systems In Optimizing Supply Chain Processes. Findings Underscore Issues Such As Data Consistency And Scalability, While Also Highlighting The Potential For Improved Transparency, Resilience, And Real-Time Information Sharing.-The Study Offers Insights For Supply Chain Professionals, Database Administrators, And Decision- Makers Aiming To Harness The Advantages Of Distributed Databases In Enhancing The Efficiency And Responsiveness Of Supply Chain Operations.

Keywords

Data Synchronization, Data Security, Blockchain Technology, Supply Chain Visibility, Real-Time Data Processing, Inventory Management, Decentralized Ledger, Interoperability, Distributed Ledger Technology, Smart Contracts, Data Integration

74. Title: Assessing The Impact Of Data Compression Algorithms On Database Performance And Scalability In Cloud Computing

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2. Swamambigai V Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Study Assesses The Impact Of Data Compression Algorithms On Database Performance And Scalability In Cloud Computing Environments. Through Empirical Evaluations, Performance Measurements, And Scalability Analyses, The Research Investigates How Various Data Compression Techniques Influence The Efficiency And Responsiveness Of Databases Deployed In Cloud Environments. Findings Highlight The Trade- Offs Between Compression Ratios And Computational Overhead, Offering Insights For Cloud Administrators, Database Designers, And Practitioners Seeking To Optimize Data Storage And Processing In Cloud-Based Databases. The Study Contributes To The Ongoing Discourse On The Role Of Data Compression In Enhancing Database Performance And Scalability Within The Context Of Cloud Computing.

Keyword

Resource Optimization, Data Storage Efficiency, Distributed Databases, Cloud Infrastructure, Compression Ratios, Query Performance, Cloud Storage Systems, Performance Metrics, Compression Overhead, Big Data Processing

75. Title: An Evaluation Of The Use Of In-Memory Databases For Real-Time Data Processing In Patient Monitoring

1. Mrs. M. Shanmuga Priya

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2. Vigneshwaran V Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Provides An Evaluation Of The Use Of In-Memory Databases For Real-Time Data Processing In Patient Monitoring. Through Empirical Assessments, Case Studies, And Practical Implementations, The Study Investigates How In-Memory Databases Enhance The Speed And Efficiency Of Processing Healthcare Data For Real-Time Patient Monitoring. Findings Highlight The Advantages Of In-Memory Technology In Handling Dynamic Medical Data, Offering Insights For Healthcare Practitioners, System Architects, And Technology Developers Aiming To Optimize Real-Time Patient Monitoring Systems. The Study Contributes To A Deeper Understanding Of The Impact And Potential Of In-Memory Databases In Improving The Responsiveness And Effectiveness Of Healthcare Data Processing.

Keywords

Database Performance, Data Ingestion, Health Information Systems, Stream Processing, Continuous Monitoring, Data Integration, Critical Care Systems, Data Retrieval Speed, Data Consistency, Predictive Analytics, Decision Support Systems, Electronic Health Records (Ehr)

76. Title: Comparing The Effects Of Database Tuning And Optimization Approaches In Improving Database Performance And Efficiency In Omnichannel Retailing

1. Mrs. M. Shanmuga Priya Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam,

2. Vijayalakshmi B Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Compares The Effects Of Database Tuning And Optimization Approaches In Enhancing Database Performance And Efficiency Within The Context Of Omnichannel Retailing. Through Performance Evaluations, Case Studies, And Practical Implementations, The Study Investigates The Impact Of Various Tuning Strategies On Database Responsiveness In Handling The Complexities Of Omnichannel Retail Data. Findings Illuminate The Trade-Offs, Challenges, And Benefits Associated With Different Optimization Techniques, Providing Insights For Retailers, Database Administrators, And Technology Professionals Seeking To Maximize The Efficiency Of Databases In The Dynamic Environment Of Omnichannel Retail. The Study Contributes To The Ongoing Discourse On Database Optimization In The Realm Of Modern Retailing.

Keywords

Query Optimization, Indexing Strategies, Data Compression, Database Caching, Data Partitioning, In-Memory Databases, Multichannel Retail, E-Commerce Database, Big Data Analytics, Scalability, Response Time

77. Title: Integration Of 5g With Analytics And Artificial Intelligence

1. Mrs. M. Shanmuga Priya Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam,
2. Vinay Sharzalla K Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Explores The Integration Of 5g Technology With Analytics And Artificial Intelligence (Ai). Through Case Studies, Technical Analyses, And Practical Applications, The Study Investigates How The Convergence Of 5g, Analytics, And Ai Synergistically Enhances Data Processing, Connectivity, And Intelligent Decision-Making. Findings Highlight The Transformative Impact On Diverse Sectors, Including Telecommunications, Healthcare, And Smart Cities. Insights Provided Herein Offer Valuable Perspectives For Researchers, Industry Professionals, And Policymakers Navigating The Dynamic Landscape Of Advanced Technologies, Emphasizing The Collaborative Potential Of 5g, Analytics, And Ai Integration. The Study Contributes To The Evolving Discourse On The Intersection Of Cutting-Edge Technologies, Fostering A Holistic Understanding Of Their Collective Impact On Diverse Domains.

Keywords

Predictive Analytics, Real-Time Processing, Cognitive Computing, Network Optimization, Data-Driven Decision Making, Smart Connectivity, Internet Of Things (Iot), Advanced Analytics, Network Slicing Data Analytics In 5g

78. Title: Leveraging Asynchronous Fpgas For Crypto Acceleration

1. Mrs. M. Shanmuga Priya Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam,
2. Yathesh M Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Investigates The Utilization Of Asynchronous Field-Programmable Gate Arrays (Fpgas) For Cryptographic Acceleration. Through Technical Analyses, Performance Evaluations, And Practical Implementations, The Study Explores The Benefits Of Leveraging Asynchronous Designs To Enhance The Speed And Efficiency Of Cryptographic Operations. Findings Highlight The Potential Advantages Of Asynchronous Fpgas In Achieving Cryptographic Acceleration, Offering Insights For Researchers, Hardware Designers, And Cybersecurity Professionals Aiming To Optimize Cryptographic Processes. The Study Contributes To The Ongoing Discourse On The Application Of Asynchronous Fpgas In The Domain Of Cryptographic Acceleration, Emphasizing Their Potential Impact On Enhancing Security Protocols And Data Protection.

Keywords

Field-Programmable Gate Arrays, Asynchronous Design, Cryptographic Algorithms, Fpga-Based Crypto Processing, High-Performance Computing, Parallel Processing, Hardware Security, Crypto Co-Processors, Secure Communication, Data Encryption, Hardware Optimization, Synchronous Vs. Asynchronous Design

79. Title: Develop And Apply Algorithms And Machine Learning Models To Analyze And Understand Biological Data.

1. Mrs. M. Sbanmuga Priya Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandan,
2. Yuva Sri S Student/Cse Indra Ganesan College Of Engineering, Manikandan, Trichy 12.

Abstract

This Research Focuses On The Development And Application Of Algorithms And Machine Learning Models To Analyze And Understand Biological Data. Through Computational Approaches, Empirical Validations, And Practical Implementations, The Study Aims To Enhance The Comprehension Of Complex Biological Datasets. Findings Demonstrate The Efficacy Of Algorithmic Solutions And Machine Learning Techniques In Uncovering Patterns, Relationships, And Predictive Insights Within Diverse Biological Data Sources. Insights Provided Herein Offer Valuable Contributions For Researchers, Bioinformaticians, And Biotechnologists Seeking Advanced Computational Tools To Unravel The Intricacies Of Biological Systems. The Study Contributes To The Ongoing Efforts To Leverage Computational Intelligence In The Pursuit Of Deeper Biological Understanding And Discovery.

Keywords

Feature Extraction, Predictive Modeling, Pattern Recognition, Genomic Data Analysis, Proteomics, Transcriptomics, Biomarker Discovery, Data Integration, High-Throughput Technologies, Computational Genomics

80. Title: Analysis Of Provenance From Large Scale Distributed Software To Identify Security Threats

1. Dr. G. Balakrishnan Professor /Cse Indra Ganesan College Of Engineering, Manikandan, Trichy 12.
2. Mathuramathi K Student/Cse Indra Ganesan College Of Engineering, Manikandan, Trichy 12.

Abstract

This Research Focuses On The Analysis Of Provenance Data From Large-Scale Distributed Software Systems To Identify Security Threats. Through Extensive Data Analysis, Anomaly Detection, And Correlation Techniques, The Study Aims To Unveil Potential Security Vulnerabilities And Malicious Activities Within Complex Software Ecosystems. Findings Highlight The Effectiveness Of Leveraging Provenance Information For Threat Identification And Mitigation In Distributed Environments. Insights Provided Herein Offer Valuable Contributions For Cybersecurity Professionals, Software Developers, And System Administrators Seeking Advanced Tools To Enhance The Security Posture Of Large-Scale Distributed Software Systems. The Study Contributes To The Ongoing Discourse On Leveraging Provenance Data For Proactive Threat Detection In Contemporary Software Architectures.

Keyword

Cybersecurity, Attack Detection, Forensic Analysis, Trace Analysis, Software Integrity, Distributed, Computing Security, Trustworthy Computing, Behavioral Analysis, Intrusion Detection, Security Incident Response

81. Title: Evaluate And Propose Scheme For The Link Recovery In Mobile Ad Hoc Networks

1. Dr. G. Balakrishnan Professor /Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.
2. Vinithe Devi P Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Conducts An Evaluation And Proposes A Scheme For Link Recovery In Mobile Ad Hoc Networks (Manets). Through Performance Assessments, Simulations, And Practical Considerations, The Study Aims To Enhance The Robustness And Reliability Of Link Recovery Mechanisms In Dynamically Changing Network Conditions. Findings Highlight The Effectiveness Of The Proposed Scheme In Improving Connectivity And Reducing Disruptions In Mobile Ad Hoc Communication. The Study Provides Insights For Researchers, Network Engineers, And Policymakers Seeking Advanced Solutions To Address Link Failures And Optimize The Performance Of Mobile Ad Hoc Networks. The Proposed Scheme Contributes To The Ongoing Efforts To Enhance The Resilience And Adaptability Of Communication Links In Dynamic And Mobile Network Environments.

Keywords

Network Resilience, Routing Protocols, Fault Tolerance, Connectivity Restoration, Wireless Communication, Dynamic Network Topology, Self-Healing Networks, Recovery Strategies, Proactive Link Recovery

82. Title: To Propose Hybrid Technique For Path Establishment Using Bio-Inspired Techniques In Manets

1. Dr. G. Balakrishnan Professor /Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.
2. Thirumalevan K Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Proposes A Hybrid Technique For Path Establishment In Mobile Ad Hoc Networks (Manets) By Integrating Bio-Inspired Techniques. Through The Fusion Of Nature-Inspired Algorithms And Conventional Networking Protocols, The Study Aims To Enhance The Efficiency And Adaptability Of Path Establishment Processes In Manets. Findings Demonstrate The Efficacy Of The Hybrid Technique In Improving The Robustness And Performance Of Communication Paths In Dynamic And Self-Organizing Network Scenarios. Insights Provided Herein Offer Valuable Contributions For Researchers, Network Designers, And Practitioners Seeking Innovative Approaches To Optimize Path Establishment In Manets. The Proposed Hybrid Technique Contributes To The Ongoing Evolution Of Bio-Inspired Solutions In The Realm Of Mobile And Dynamic Network Environments.

Keywords

Swarm Intelligence, Ant Colony Optimization (Aco), Particle Swarm Optimization (Pso), Nature-Inspired Algorithms, Bio-Inspired Routing, Pathfinding Strategies, Network Optimization, Hybridization Approaches, Self-Organization, Dynamic Network Topology, Energy Efficiency, Adaptive Routing

83. Title: To Propose Secure Scheme For The Isolation Of BlackHole Attack In Mobile Ad Hoc Networks

1. Dr. G. Balakrishnan Professor /Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.
2. Vinith Roshan A Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Proposes A Secure Scheme For The Isolation Of Black Hole Attacks In Mobile Ad Hoc Networks (Manets). Through Cryptographic Protocols, Anomaly Detection Mechanisms, And Dynamic Routing Strategies, The Study Aims To Enhance The Security And Resilience Of Manets Against Malicious Entities Orchestrating Black Hole Attacks. Findings Demonstrate The Effectiveness Of The Proposed Scheme In Isolating And Mitigating The Impact Of Black Hole Attacks On Network Communication. Insights Provided Herein Offer Valuable Contributions For Researchers, Network Security Professionals, And Policymakers Seeking Advanced Solutions To Fortify The Security Posture Of Manets. The Proposed Secure Scheme Contributes To The Ongoing Efforts To Develop Robust Mechanisms For Safeguarding Manets From Evolving Security Threats.

Keywords

Network Security, Intrusion Detection, Isolation Mechanisms, Secure Routing Protocols, Trust Management, Anomaly Detection, Node Authentication, Secure Data Transmission, Reactive Security Measures, Proactive Security Measures, Self-Healing Networks

84. Title: Develop Deep Learning Models To Comprehend Various Dimensional Data (1d Sequences, 2d Images, And 3d Volumes).

1. Dr. G. Balakrishnan Professor /Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.
2. Yuvaraj M Student/Cse Indra Ganesan College Of Engineering, Manikandam, Trichy 12.

Abstract

This Research Focuses On Developing Deep Learning Models To Comprehend Various Dimensional Data, Including 1d Sequences, 2d Images, And 3d Volumes. Through Advanced Neural Network Architectures And Training Strategies, The Study Aims To Create Versatile Models Capable Of Understanding Diverse Types Of Data Structures. Findings Demonstrate The Efficacy Of The Developed Deep Learning Models In Capturing Complex Patterns And Representations Across Different Dimensions. Insights Provided Herein Offer Valuable Contributions For Researchers, Data Scientists, And Practitioners Seeking Advanced Tools To Analyze And Interpret Multi-Dimensional Data. The Study Contributes To The Evolving Field Of Deep Learning By Addressing The Challenges Associated With Comprehending Diverse Data Structures In Various Dimensions.

Keywords

Dimensional Data Comprehension, 1d Sequences, 2d Images, 3d Volumes, Convolutional Neural Networks (Cnn), Recurrent Neural Networks (Rnn), Multidimensional Data Analysis, Multiscale Learning, Feature Extraction, Spatial-Temporal Representations

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65. Title: To Propose Localization Scheme Which Reduce Faults In Mobile Ad Hoc Network

1. Mrs.D.B.Rena Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam,Trichy 12.
2. Rangana S Student/Cse Indra Ganesan College Of Engineering, Manikandam, Tricky 12.

Abstract

This Research Proposes A Localization Scheme Designed To Reduce Faults In Mobile Ad Hoc Networks (Manets). Through Advanced Localization Algorithms, Fault-Tolerant Mechanisms, And Adaptive Protocols, The Study Aims To Enhance The Accuracy And Reliability Of Node Localization In Dynamic And Self- Organizing Network Environments. Findings Demonstrate The Effectiveness Of The Proposed Scheme In Mitigating Localization Errors And Improving Overall Network Performance. Insights Provided Herein Offer Valuable Contributions For Researchers, Network Designers, And Practitioners Seeking Innovative Approaches To Optimize Localization And Minimize Faults In Manets. The Proposed Localization Scheme Contributes To The Ongoing Efforts To Develop Robust And Fault-Tolerant Solutions For Location-Aware Applications In Mobile Ad Hoc Networks.

Keywords

Geographic Routing, Location-Based Services, Fault Detection, Error Mitigation, Node Mobility, Beacon- Based Localization, Anchor Nodes, Range-Free Localization, Gps-Free Localization, Energy-Efficient Localization, Self-Localization, Cross-Layer Design

66 Title: The Energy Efficient Scheme For Multicasting Routing In Wireless Ad Hoc Network

1. Mrs.D.B.Rena Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam,Trichy 12.
2. Ravinya K Student/Cse Indra Ganesan College Of Engineering, Manikandam, Tricky 12.

Abstract

This Research Presents An Energy-Efficient Scheme For Multicasting Routing In Wireless Ad Hoc Networks (Wahns). Through The Integration Of Optimized Routing Algorithms, Energy-Aware Protocols, And Adaptive Communication Strategies, The Study Aims To Enhance The Overall Energy Efficiency Of Multicast Communication Within Ad Hoc Network Environments. Findings Demonstrate The Effectiveness Of The Proposed Scheme In Reducing Energy Consumption While Maintaining Reliable And Efficient Multicast Communication. The Insights Provided Offer Valuable Contributions For Researchers, Network Designers,And Practitioners Seeking Innovative Approaches To Enhance Energy Efficiency In Wireless Ad Hoc Networks, Contributing To Sustainable And Prolonged Network Operation.

Keywords

Multicast Tree, Energy-Aware Routing, Network Lifetime, Power Consumption, Energy-Efficient Algorithms, Quality Of Service (Qos), Dynamic Network Topology, Load Balancing, Routing Metrics, Cross-Layer Optimization, Energy-Efficient Topology Control, Transmission Power Management, Sleep, Wake Scheduling, Node Energy Models

87 Title: The Scheme For Secure Localization Aided Routing In Wireless Ad Hoc Networks

1. Mrs.D.B.Rena Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandan, Trichy 12.
2. Saranya P Student/Cse Indra Ganesan College Of Engineering, Manikandan, Trichy 12.

Abstract

This Research Introduces A Scheme For Secure Localization-Aided Routing In Wireless Ad Hoc Networks (Wahns). Through The Integration Of Secure Localization Techniques, Cryptographic Protocols, And Robust Routing Algorithms, The Study Aims To Enhance The Security And Accuracy Of Node Localization, Consequently Fortifying The Overall Security Of Routing Protocols In Ad Hoc Network Environments.

Findings Demonstrate The Effectiveness Of The Proposed Scheme In Mitigating Security Threats And Ensuring Reliable Localization-Aided Routing. Insights Provided Herein Offer Valuable Contributions For Researchers, Network Designers, And Practitioners Seeking Innovative Approaches To Bolster Security In Wireless Ad Hoc Networks. The Proposed Scheme Contributes To The Ongoing Efforts To Develop Secure And Resilient Routing Solutions For Ad Hoc Network Scenarios.

Keywords

Secure Communication, Cryptographic Techniques, Key Management, Location-Based Services, Adversarial Models, Intrusion Detection, Secure Data Transmission, Secure Localization Protocols Privacy-Preserving Localization

88 Title: The Cross-Layer Scheme For Opportunistic Routing In Mobile Ad Hoc Networks

1. Mrs.D.B.Rena Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandan, Trichy 12.
2. Suvakshani P Student/Cse Indra Ganesan College Of Engineering, Manikandan, Trichy 12.

Abstract

This Research Presents A Cross-Layer Scheme For Opportunistic Routing In Mobile Ad Hoc Networks (Manets). By Integrating Information From Multiple Protocol Layers, Including Physical, Data-Link, And Network Layers, The Study Aims To Optimize Opportunistic Routing Strategies In Dynamic And Self-Organizing Network Scenarios.

Findings Demonstrate The Effectiveness Of The Proposed Cross-Layer

Scheme In Improving Packet Delivery Rates And Overall Network Performance. Insights Provided Herein Offer Valuable Contributions For Researchers, Network Designers, And Practitioners Seeking Innovative Approaches To Enhance Opportunistic Routing In Manets. The Cross-Layer Scheme Contributes To The Ongoing Efforts To Develop Efficient And Adaptive Routing Solutions For Mobile Ad Hoc Networks.

Keywords

Multi-Hop Communication, Network Performance, Cooperative Communication, Node Cooperation, Transmission Opportunities, Energy Efficiency, Quality Of Service (QoS), Route Discovery Network Coding

89 Title: Enhancing Network Security Through Machine Learning- Based Intrusion Detection Systems

1. Mrs.D.B.Rena Assistant Professor /Cse Indra Ganesan College Of Engineering, Manikandam,Trichy 12.

2. Sweetha B Student/Cse Indra Ganesan College Of Engineering, Manikandam, Tricky 12.

Abstract

This Research Focuses On Enhancing Network Security Through Machine Learning-Based Intrusion Detection Systems (MI-Ids). By Leveraging Advanced Machine Learning Algorithms. The Study Aims To Develop Robust And Adaptive Intrusion Detection Systems Capable Of Identifying And Mitigating Diverse Cyber Threats. Through Empirical Evaluations And Real-World Application Scenarios, Findings Demonstrate The Efficacy Of MI-Ids In Improving The Accuracy And Responsiveness Of Intrusion Detection, Ultimately Fortifying Network Security. Insights Provided Herein Offer Valuable Contributions For Researchers, Cybersecurity Professionals. And Network Administrators Seeking Innovative Approaches To Strengthen Defense Mechanisms Against Evolving Cyber Threats. The Study Contributes To The Ongoing Efforts To Employ Machine Learning For Proactive And Intelligent Network Security Measures.

Keywords

Classification Algorithms, Supervised Learning, Unsupervised Learning, Deep Learning, Model Training, Real-Time Monitoring, Threat Intelligence, Pattern Recognition, False Positive Reduction

90 A Concurrent Bist Scheme Based On Input Vector Monitoring Using Static Cells Dr.N.Valjayanmal

.K.Sarathi Abstract:

Input Vector Monitoring Concurrent Bist Performs Two Modes Of Operation, Normal Mode And Test Mode During Test Mode The Test Generator Value Is Compared With Higher Order Bits And The Output Is Given To Comparator Circuit. During Normal Mode The Inputs To The Cut Are Driven From The Normal Inputs. The Modified Sram Is Used To Reduce The Switching Activity Hence The Dynamic Power Dissipation Can Be Reduced. The Output Is Verified By Response Verifier (RV) And The Fault Is Identified Using Testing. The Operating Speed Is Faster Since The Operation Is Carried Out As Parallel Process And It Is Suitable For All The Type Of Ie's

Keywords- Comparator, Test Generator Enable, Concurrent Bist Unit, Modified Sram, Logic Module, Concurrent Test, Response Verifier.

ISBN: 978-81-970087-3-3

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91 An Experimental Analysis On Self Driving Car Using CnnDr.N.Valjaysanthi

Abstract:

For The Past Decade, There Has Been A Surge Of Interest In Self-Driving Cars. This Can Be Because Of Breakthroughs Within The Field Of Deep Learning. Wherever Deep Neural Networks SquareMeasure Trained To Perform Tasks That Generally Need Human Intervention. Cnn's Apply Models To Spot Patterns And Options In Pictures, Creating Them Helpful Within The Field Of Pe Vision. Samples Of These Square Measure Object Detection, Image Classification, Image Captioning, Etc. During This Project, We've Trained A Cnn To Recognize Pictures Captured By A Simulated Automotive To Drive The Automotive Autonomously. The Cnn_Learns Distinctive Options From The Pictures And Generates Steering Predictions Permitting The Automotive To Drive While Not Somebody's. For Testing Functions And Getting Ready The Dataset The Unity Based Mostly Machine Provided By Udacity Was Used.

Key Words: Autonomous Driving, Convolutional Neural Network (Cnn), Deep Learning, End- To-End Learning, Nvidia, Steering Commands.

92 A Comprehensive Review Of Cyber Security, Threats And Cyber AttacksDr.N.Valjaysanthi

Abstract:

Today, Cyberspace Hosts The Majority Of Economic, Commercial, Cultural, Social, And Governmental Activity And Relationships At All Levels, Including People, Nongovernmental Organizations, And Government Entities. In The World Of Information Technology, Cyber Security Is Critical. The First Thing That Springs To Mind When We Think Of Cyber Security Is "Cyber-Crime."

Which Is On The Rise. To Tackle Cybercrime, Several Governments And Corporations Are Using Several Measures. Despite Several Efforts, Cyber Security Continues To Be A Major Concern For Many Individuals. Cyberattacks Are An Issue For Governments All Around The World, And Protecting Sensitive Information From Them Is Tough. A Variety Of Companies Use A Variety Of Ways To Scale Back The Results Of Cyberattacks So As To Realize This Goal. Cyber Security Monitors Real-Time Data On The Most Recent It Data. This Article Will Examine The Challenges, Weaknesses, And Strengths OfThe Proposed Methods That Have Been Proposed By Researchers Around The Globe To Prevent Cyber- Attacks Or Reduce The Damage Caused, As Well As The Complexities, Weak Points, And Strengths OF The Proposed Techniques That Have Been Proposed By Researchers All Over The World To Prevent Cyber-Attacks Or Minimize The Damage.

Key Words: Cyber-Crimes, Cyber-Attacks, Cyber Security, Cyberspace

93 Design Of A Multimode Turbo And Ldpc Decoder Architecture Dr.M.Bhuvaneshwari,S.Johann

Abstract:

Low-Density Parity-Check (Ldpc) Codes And Convolutional Turbo Codes Are Two Of The Most Powerful Error Correcting Codes That Are Widely Used In Modern Communication Systems. In A Multi-Mode Baseband Receiver, Both Ldpc And Turbo Decoders May Be Required. However, The Different Decoding Approaches For Ldpc And Turbo Codes Usually Lead To Different Hardware Architectures. In This Paper We Propose A Unified Message Passing Algorithm For Ldpc And Turbo Codes And Introduce A Flexible Soft-Input Soft-Output (Siso) Module To Handle Ldpc/Turbo Decoding. We Employ The Trellis-Based Maximum A Posteriori (Map) Algorithm As A Bridge Between Ldpc And Turbo Codes Decoding. We View The Ldpc Code As A Concatenation Of N Super-Codes Where Each Super-Code Has A Simpler Trellis Structure So That The Map Algorithm Can Be Easily Applied To It. We Propose A Flexible Functional Unit (Ffu) For Map Processing Of Ldpc And Turbo Codes With A Low Hardware Overhead (About 15% Area And Timing Overhead). Based On The Ffu, We Propose An Area-Efficient Flexible Siso Decoder Architecture To Support Ldpc/Turbo Codes Decoding. Multiple Such Siso Modules Can Be Embedded Into A Parallel Decoder For Higher Decoding Throughput. As A Case Study, A Flexible Ldpc/Turbo Decoder Has Been Synthesized On A Tsmc 90 Nm Cmos Technology With A Core Area Of 3.2 Mm². The Decoder Can Support IEEE 802.16e Ldpc Codes, IEEE 802.11n Ldpc Codes, And 3gpp Lte Turbo Codes. Running At 500 Mhz Clock Frequency, The Decoder Can Sustain Up To 600 Mbps Ldpc Decoding Or 450 Mbps Turbo Decoding.

Keywords: Siso Decoder, Ldpc Decoder, Turbo Decoder, Error Correcting Codes, Map Algorithm, Reconfigurable Architecture

94 Micro-Grid Protection And Load Management Dr.M.Bhuvaneshwari

Abstract:

Load Control And Management Is A Key Component Of A Microgrid. It Is Essential At All Times To Maintain The Balance Of Generation Vs. Load. The Microgrid Control System Needs To Continuously Evaluate And Prioritize Loads In Order To Maintain This Balance. We Examine Methodologies For Measuring, Evaluating Prioritizing And Controlling Loads Under All Conditions To Maximize The Performance Of The Microgrid. Strategies Are Presented For The Classification Of Loads By Criticality, Identifying Active Vs. Inactive Loads And For Maintaining Near Real Time Quantitative Data For Matching Loads To Generation. We Discuss The Need For Active Load Control When The Microgrid Is In Grid Paralleled Operation, As Well As When Islanded. The Need For High Speed Control Operation Is Explained. The Role Of The Load Management System In Control Of Generation Dispatch Is Also Discussed. The Relationship Between Active Load Management And Energy Storage Is Also Examined.

Keywords -Power System Control, Load Flow Control, Scada Systems, Load Management, Energy Storage, Power Generation Dispatch, Microgrids, Power System Measurements

Dr.M.Bhuvaneshwari Abstract:

Smart Voice Assistants Are Devices That Connect To The Internet, Listen To Their Location And Respond To The Instructions Of Spoken Users To Extract Information Online, Manage In-Appliances, Or Notify The User With Incoming Messages, Reminders, And The Like. With Their Growing Visibility In Smart Homes, Their App Seems To Be Limited Only By The Imagination Of Developers, Who Connect These Off-The-Shelf Devices To Existing Applications, Online Services, Or Electronics. However, Since Their Environment Is User-Friendly In Their Home, Their Environment Also Raises Concerns About User Safety And Privacy. In Order To Justify The Trust Placed On Devices, Devices Must Be Protected From Unauthorized Access And The Back-End Infrastructure Provided For Speech And Text Analysis, Command Interpretation, And Connectivity For Other Services And Electronic Devices Must Maintain Data Privacy. In Order To Investigate The Current Risks, Mitigation Measures, And Common Assumptions In This Emerging Field, Add Recent Research Findings To The Results Of Systematic Reviews. We Were Able To Compile A List Of Six Main Types Of User Privacy Risks, Which Slightly Confirm Previous Findings, But Also Find Additional Problems. We Discuss These Risks, Their Associated Attack Vectors, And The Limitations That Users May Take To Protect Themselves.

Key Words: Intelligent Voice Assistants, Virtual Assistants, Smart Home, Privacy, Security, Systematic Literature Review, Alexa

96 Predicting Heart Disease Using Machine Learning Algorithms.

Dr. S. Vasanthi Suresh Natham, M. Mahalakshmi Abstract:

As We All Know Heart Is The Most Important Part Of Our Body Other Than Brain. For Having A Healthy Heart, There Are Many Solutions Available In Market. Exercise Can Also Play An Important Role For Maintaining Heart Healthy. Apart From Medical Treatments, Technology Can Also Prove To Be Very Useful In Treating Any Heart Disease. Any Heart Disease Is Predicted Beforehand. Then Curing It Would Be Not Much Complex. But Predicting It Would Be A Tough Task. According To The Survey By WHO (World Health Organization), Cardiovascular Diseases Are The Leading Cause Of Death Globally. Estimate Deaths Per Year Are 17.9 Million. The Datasets Used Are Classified In Terms Of Medical Parameters. This System Evaluates Those Parameters Using Data Mining Classification Technique. The Datasets Are Processed In Python Programming Using Machine Learning Algorithm That Is Logistic Regression Algorithm Which Shows The Best Algorithm In Terms Of Accuracy Level Of Heart Disease.

Key Words: Heart Diseases, Machine Learning Algorithms, Logistic Regression, Random Forest, Decision Tree.

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97 **Pneumonia Detection System Using AI** Dr. S. Vasantha Swami Narayan Abstract:

Pneumonia Is Known As One Of The Most Life Threatening Diseases In The World Which Affects The Lung(S) Of Humans And Is Known As One Of The Leading Causes Of Death In India. Roughly 33% Of The Deaths In India Are Caused As A Result Of Pneumonia And As Reported By The World Health Organization (Who). Currently Pneumonia Is Diagnosed Using A Chest X-Ray Image Which Is Then Evaluated By An Expert Radiologist. This Process Is Quite Exerting And Trivial And It Often Leads To A Difference In Opinion Among The Experts. Thus Developing A Solitary System Would Be Beneficial For Identification, Preventing Further Transmission And Treatment In Remote Areas. This System Proposes A Cnn Model Which Has Been Trained From Scratch And That Will Classify And Also Detect The Presence Of Pneumonia From A Dataset Of Chest X-Ray Images. For This System The Cnn Model Would Extract Features From A Given Dataset Of Chest X-Ray Image And Then Classify It To Work It Out If An Individual Is Infected With Pneumonia Or Not.

Keywords—Pneumonia, Chest X-Ray Images, Deep Learning, Convolution Neural Network.

98 **Performance Of Electric Vehicle Dynamic Charging With Reduced Ripple Voltage** Dr. S. Vasantha Swami Narayan

Abstract:

The Aim Of The Paper Is To Present An Overview Of Ac To Dc Battery Charger With Various Types Of Filters Like C Filter And Pi Filter. Due To Depletion Of Natural Resources (E.G. Oil And Gas) And Air Pollution, Governments, Automakers And Consumers Worldwide Have Been Working Together To Adapt A Shift To Green Transportation. Electric Vehicles Have Become A Very Important Part Of The Automotive Industry As We Try To Look For A Future Less Dependent On Fossil Fuels And Alternative To The Internal Combustion Engine (Ice) Vehicles With Better Efficiency And Lower Co₂ Emissions. Chargers Are Required For Charging The Batteries Of The Electric Vehicles. Input Ac Is Converted Into Dc Using An Uncontrolled Rectifier. The Dc Is Converted Into High Frequency Ac Using An Inverter. The Output Of Inverter Is Stepped Down To 100v Ac And It Is Converted Into Dc Using A Rectifier. The Ripple In The Output Is Filtered Using Pi Filter. Whenever Dc Voltage Is Greater Than The Rated Voltage, The Charging Circuit Is Disconnected.

Keywords: Dc Voltage, Ice, Co₂, Batteries

99 Accurate Testing Of Linearity In High Resolution Dac With Low Precision Dac Using Bist

Mrs.P.Santhanasevi,A.Arulselvi

Abstract:

This Work Proposed A Built-In Self-Test (Bist) Strategy For Dac Linearity Test By Utilizing The Deterministic Dynamic Element Matching (Ddem) Technique In A Common Flash Dac. Ddem Technique Allows Low-Resolution And Low- Accuracy Dacs Work As Test Devices. In Order To Provide High Resolution/Accuracy Test Abilities, A Fine Quantization Stage And An Input Dithering Dac Are Incorporated.In This Paper, The Architecture Of The Test System And The Test Procedure Are Described. The Test Performance Is Analyzed Theoretically And Verified By Numerical Simulation. Simulation Results Show That A Two-Step Flash Dac Composed Of A 6-Bit Coarse Ddem Stage And A 6-Bit Fine Stage, Plus An Incorporated 5-Bit Dithering Dac, With Linearity Of All The Blocks No More Than 6 Bits, Is Capable Of Testing 14-Bit Dacs.

Keywords: Bist, Ddem, 6-Bit, Dithering, Dac.

100 Prepaid Energy Meter With Theft Alert Using Gsm Mrs.P.Santhanasevi

Abstract:

Electricity Theft Remains A Huge Loss Incurred By Electricity Distribution Companies. This Theft Arises Majorly Because Of Activities Carried Out By Consumers Such As Energy-Meter By-Passing, Energy-Meter Tampering Etc. This Research Study Offers An Approach For Handling Energy Meter By-Passing And Tampering. The System Design Is Based On The Monitoring Of The Readings Of Two Current Sensors By A Programmed Microcontroller. While One Of The Current Sensors Monitors The Current Drawn By The User's Load, The Other Installed Before The Meter Monitors Current Drawn By All Loads. Any Discrepancy Between The Values Read, Indicates Theft. A Momentary Switch Is Also Installed In The Meter To Trigger The Meter Once It Is Tampered With. Furthermore, The User Is Provided With A Remote Access To The Energy Meter For Recharging Energy Units And For Monitoring Energy Consumption. It Was Observed That The System Accurately Measured Load Consumption And Detects Any Attempt To By-Pass Or Tamper With The Energy Meter. Lastly, All Unscrupulous Attempts Were Reported Using Gsm Technology.

Keywords: Advanced Meter Infrastructure , Electricity Theft, Energy Management, Microcontroller, Smart-Meter

101 A Compact Low Profile Wideband Circular Ring Patch Antenna With Slotted Partial GroundPlane

Mrs.P.SaithanasekhiAbstract:

A Compact Circular Ring Antenna With Defected Ground Structure (Dgs) Has Been Design For Ultra-Wide Band (Uwb) Applications. Initially, A Circular Patch Antenna Is Design By Introducing A Rectangular Dgs Structure. Further, Slot Has Been Inserted In Circular Patch To Improve The Impedance Bandwidth. The Proposed Design Covers The Frequency Range Of 2.4- 10.4ghz Below -10db. Proposed Antenna Has Design And Fabricated On Fr-4 Substrate Having 1.5mm, 4.3 Thickness And Dielectric Constant, Respectively. The Performance Of The Designed Antenna Is Analyzing With Optimized Dimensions In Terms Of Return Loss, VSWR, Radiation Pattern, Gain Characteristics, Group Delay And Surface Current Distributions. Further, Performance Analysis Of The Proposed Antenna Has Also Been Compared With Existing Suggested-Antennas-In-Literature With Compact In Size. The Fabricated Antenna Shows A Good Result With Simulators Software.

Keywords: Circular Ring, Defected Ground Structure, Fractional Bandwidth, Micro-Strip,Ultra-Wideband

102 Asynchronous Fine Grain Power Gated Logic For Deep Submicron Circuits

Mrsn.Ramya,M.Rajabhakarathl

Abstract:

With The Increasing Popularity Of Batterydriven Portable Electronics, There Is A Growing Demand For Lowpower Circuit Designs. In A Typical Cmos Digital Circuit, Power Dissipation Can Be Categorized Into The Dynamic Power Dissipation, Leakage Power Dissipation, And Short-Circuit Power Dissipation. While Dynamic Power Dissipation Remains To Be The Most Dominant In Many Digital Circuits, Leakage Power Dissipation Has Become Increasingly More Significant Especially When The Fabrication Process Enters Into Deep-Sub-Micro- Or Nano-Meter-Scaled Ranges. Asynchronous Circuits Are Wellknown For Their Benefits In Terms Of Dynamic Power Savings, Because Asynchronous Logic Does Not Switch When Inactive. Nevertheless, In Deep Submicron Technologies, Leakage Currents Have Become An Increasing Issue, And Thus Asynchronous Circuits Need To Focus On Reducing Power Consumption. The Project Proposed Method Is An Innovative Way To Reduce Power Consumption By Low-Power Logic Family, Called Asynchronous Fine-Grain Power-Gated Logic (Afgpl). Here The Comparison Of Power Consumption Of The Proposed System With Conventional System Was Also Done

Keywords: Asynchronous Circuits, Logic Gates, Lowpower Electronics, Power Gating

103 A Review On Homogeneous Approach For An Active Transradial Upper Limb Prosthetics

Mrs. Ranaya

Abstract:

Upper Limb Research Is Currently Lacking Detailed Clinical Guidance On The Provision Of Unilateral Transradial Prostheses. Clinical Practice Guidelines Are Meant To Serve As Assistance For The Decision-Making Process, And Delphi Surveys Have Been Used With Increasing Frequency Within Orthotics And Prosthetics To Create These Guidelines For Clinical Practice. A Three Round Delphi Survey Was Used To Gain Consensus On Clinical Statements Regarding Unilateral Transradial Prostheses. We Achieved Consensus (> 80% Agreement) On A Total Of 40 Statements By Surveying 22 Experts On Upper Limb Prosthetics Over Three Rounds Of Surveys. Response Rate Ranged From 81.8-86.4% With A Total Of 55 Total Statements Under Consideration Throughout The Duration Of The Survey. The Delphi Technique Allowed For The Creation Of A Set Of Clinical Practice Guidelines For The Unilateral Transradial Patient In The Absence Of Conclusive Empirical Evidence.

Keywords: Upper Limb Prosthetics, Prosthetic Control, Amputation, Amputees, Tasks

104 Aggregator Application For Tailoring With Integration Of Geofencing To Analyze Customers & Fashion Designers

Mrs. Ranaya Abstract:

The Fashion Aggregator Is An Android Application That Connects The Tailor And The User From Their Remote Location. This Application Plays A Major Role In Reducing Time Consumption By Letting The User Sketch Their Clothing Design Through The Developed Interface Designed Using Interactive Genetic Algorithms. Also, The Geofencing Feature With Proactive Fast Low Resource Algorithm Helps The User To Locate Tailors Within A Radius Of Three Kilometers. The Tailor Application Displays The Orders Placed By The Users. The Tailors Are Listed Based On Ratings Given By The Previous User. Once The Request Is Accepted By The Dressmaker, The Tailor Updates The Days Required To Complete The Task. Simultaneously The Cost Calculations Are Made Through The Application And Displayed To The User. The User Can Track Their Order Through The Application. This Application Is Developed With The Help Of Java Programming Language And Google Maps Api Along With The Android Studio.

Keywords: Geofencing, Interactive Genetic Algorithm, Proactive Fast Low Resource Algorithm, Design Interface, Tailor Application.

105 Location Based Offers Using Android Application Mr.S.Balakrishnan,K.Kartick

Abstract:

As The Android Market Holds Over 85% Of The Entire Application Market, It Continues To Dominate The Mobile Platform With 2.8 Billion+ Active Users Across The Globe. It's Ability To Customize Seamlessly, Deploy Much Faster, Improvement In Scalability, And Reaching Out Over A Massive Customer Is What Makes It The Preferred Platform For Companies. One Of The Major Invention Of The 21st Century Is The Smartphones. Today, One Cannot Imagine His/Her Life Without A Smartphone. But, What Really Makes A Mobile Phone A Smartphone Is The Mobile Application That We Use In Our Daily Life. In This Paper, We Have Developed An Android Application With Lbs (Location Based Services) In Which The Users Will Get Notified If He/She Is Nearby A Store Which Has Live Offer Going On. The Application Continuously Tracks The User's Location Through Gps(Global Positioning System) And If The User's Location Is Within The 500m Of The Store, The Application Sends A Notification To The User. After Receiving The Notification, The User Can Click On The Notification Which Will Redirect To The Google Maps And Will Start The Route. This Application Is Still In Its Early Stage And Thus, Lot Of Advancement Can Be Done. For Example, Implementing Machine Learning Algorithm To Study The User's Shopping Pattern And Show Them The Results Accordingly. The Application Does Not Specify The Type Of Offer Or The Product

Key Words: Android Application, Location Based Offers, Location Based Notification, Location Based Services, Firebase Database.

106 Analysis Of Stock Market From Investment Perspective Mr.S. Balakrishnan

Abstract:

Forecasting The Stock Market Has Become Very Important In Planning Business Activities. The Prediction Of Stock Price Has Driven Many Researches In A Variety Of Disciplines, Including Computer Science, Statistics, Economics, Finance, And Operations Research. Recent Studies Have Shown That The Enormous Amount Of Online Information That Is Available In The Public Domain, Such As Wikipedia, The Social Forums, News From Media, Have A Significant Impact On The Investor's Opinion Towards The Financial Markets. The Reliability Of The Computational Models On Prediction Of The Stock Market Is Very Important, Because It Is Highly Responsive To The Economy And May Result In Financial Losses. In This Paper, We Have Made An Extensive Analysis On Various Stocks. First, We Have Performed Stock Volatility Analysis On 1000 Stock Dataset Of Nyse. The Main Contributions In This Paper Include The Development Of A Dictionary-Based Sentiment Analysis Model For The Financial Sector, And The Evaluation Of The Model For Scaling The Effects Of News Sentiments On Stocks For Other Markets. By Using Only The News Sentiments, We Have Achieved A Good Accuracy Of 70.59% In Predicting The Trends In Short-Term Stock Price Movement.

Keywords: Dictionary Comparison, Financial Market , News Articles , Sentiment Analysis , Stock Price Prediction.

ISBN: 978-81-970087-3-3


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107 Design For Testability Using Scanpath Techniques For Path Delay Test And Measurement
Mr.K.Kumar,S.Kandasamy

Abstract:

Integrated Circuits (Ics) Are Reaching Complexity That Was Hard To Imagine. Ics Incorporating Hundreds Of Millions Of Transistors, Mega-Bit Memories, Complicated Pipelined Structures, Etc., Are In High Demand. Obviously, Designing Such Complex Circuits Poses Real Challenges To Engineers. Certainly, No Relief Comes From The Competitive Marketplace, With Increasing Demands For A Very Narrow Window Of Time (Time-To- Market) In Engineering A Ready Product. Therefore, A Systematic And Well-Structured Approach To Designing Ics To Be Testable Is A Must. With The Growth In Complexity Of Very Large Scale Integration (Vlsi) Circuits, Test Generation For Circuits Is Becoming Increasingly Difficult And Time Consuming. Even Though The Computing Power And Resources Have Multiplied Dramatically Over Last Few Decades, An Increasing Number Of Memory Elements In Vlsi Circuits Requires More Effective And Powerful Sequential Test Generators. This Paper Is Represented To Review Concepts And Techniques For Testing Electronic Circuits And Systems As Part Of A Lecture Review. This Covers Various Testing And Design-For-Test (Dft) Techniques Starting From (Automatic Test Equipment) Ate Basics (Definition, Construction And Types). Exploring Testing Strategies For Digital Combinational And Sequential Circuits, And Introduces A Comparative Study Between The Common Fault Models. Finally The Paper Ends With Design For Testability Guiding Rules And Possible Challenges And Difficulties That Need Development And Research In The Testing Problem.

Keywords: Design-For-Test (Dft), Automatic Test Equipment, Testing Of Electronic Circuits

108 Blind People's Smart Stick
Mr.K.Kumar

Abstract:

Blindness Is The Lack Smart Of Vision Caused Due To Physiological Or Neurological Factors Resulting Into Visual Disability. Blindness Can Be Temporary Or Permanent And Partial Or Complete Blindness Causing A Person To Become Dependent On Others For Help. In Today's World Even The Disable People Want To Be Independent And Do Not Want To Seek Help From Others. Smart Blind Stick Is An Innovative Device, Which Is An Initiative To Help Blind People To Resolve The Problems Faced By Them In Their Daily Life. Smart Blind Stick Is A System Device Which Incorporates Several Features Namely- Obstacle Detection, Navigation, Panic Button And Moisture Detector. The Main Objective Of The Device Is To Help Blind People To Walk With Complete Relieve And Self- Dependency. The Blind Stick Is Integrated With Three Ultrasonic Sensors, Panic Switch, Navigation Switch, And Bluetooth And Soil Moisture Detector Along With Arduino Uno. The Smart Blind Stick Automatically Detects The Obstacle In Front Of The Person By Use Of Sensors Present In The System; It Also Incorporates Moisture Detection At Its Bottom In Order To Detect The Moisture Of The Soil Or Ground So That The Person Will Be Aware If It's Feasible To Walk On That Particular Ground.

Keywords: Smart Blind Stick, Arduino uno, Ultra Sonic Sensor, Infrared Sensor, Soil Moisture Detector, Buzzer, Microphone, Gps, Android App

109 An Efficient Vlsi Implementation Of Dual-Clog Method For Pseudorandom Bit Generation

Mrs.B.Saraswathi,K.Shanmug

Abstract:

Pseudorandom Bit Generator (Prbg) Is An Essential Component For Securing Data During Transmission And Storage In Various Cryptography Applications. Among Popular Existing Prbg Methods Such As Linear Feedback Shift Register (Lfsr), Linear Congruential Generator (Lcg), Coupled Leg (Clog), And Dual-Coupled Leg (Dual-Clog), The Latter Proves To Be More Secure.This Method Relies On The Inequality Comparisons That Lead To Generating Pseudorandom Bit At A Non-Uniform Time Interval. Hence, A New Architecture Of The Existing Dualclog Method Is Developed That Generates Pseudo-Random Bit At Uniform Clock Rate. However, This Architecture Experiences Several Drawbacks Such As Excessive Memory Usage And High-Initial Clock Latency, And Fails To Achieve The Maximum-Length-Sequence. Therefore, A New Prbg Method Called As "Modified Dual-Clog" And Its Very Large-Scale Integration (Vlsi) Architecture Are Proposed In This Paper To Mitigate The Aforesaid Problems. The Novel Contribution Of The Proposed Prbg Method Is To Generate Pseudorandom Bit At Uniform Clock Rate With One Initial Clock Delay And Minimum Hardware Complexity. Moreover, The Proposed Prbg Method Passes All The 15 Benchmark Tests Of Nist Standard And Achieves The Maximal Period Of $2^n - 1$. The Proposed Architecture Is Implemented Using Verilog-Hdl And Prototyped On The Commercially Available Fpga Device.

Keywords: Pseudorandom Bit Generator (Prbg), Vlsi Architecture, Fpga Prototype.

110 Music Genre Classification Using Machine LearningMrs.B.Saraswathi

Abstract:

Music Is Divided Into Different Genres And Sub-Genres. This Is Done By Evaluating Different Characteristic Of The Music And Putting Them Into Categories/Genre. Music Genre Classification Is Valuable Not Only For Music Journalist But Also For Artists, Repertoire Department And Artists But The Major Reason For Categorizing Music Is On An Individual Level To Improve The Listening Experience. As The Amount Of Music On The Internet Goes On Increasing, It Becomes Very Difficult To Classify Each And Every Song Into A Particular Genre. Classifying Music Into Genre Helps In Filtering Through The Songs Or While Giving Suggestions And Thus Helps In Music Management. Machine Learning Can Help With This By Classifying The Music Into Different Genres Using A Trained Machine Learning Model.

Key Words: Machine Learning, Accuracy, Music Genre Prediction, Algorithms, Precision

III Low Area Boundary Bist Architecture Using Auto Bypass Routing Mrs.V.Elakkiya, T.Christal

Journal

Abstract:

We Have Introduced A Low-Cost At-Speed Bist Architecture That Enables Conventional Microprocessors And Dsp Cores To Test Their Functional Blocks And Embedded Srams In System-On-A-Chip Architectures Using Their Existing Hardware And Software Resources. To Accommodate Our Proposed New Test Methodology, Minor Modifications Should Be Applied To Base Processor Within Its Test Phase. That Is, We Modify The Controller To Interpret Some Of The Instructions Differently Only Within The Initial Test Mode. In This Paper, We Have Proposed A Functional Self-Test Methodology That Is Deterministic In Nature. In Our Proposed Architecture, A Self Test Program Called Bist Program Is Stored In An Embedded Rom As A Vehicle For Applying Tests. We First Start With Testing Processor Core Using Our Proposed Architecture. Once The Testing Of The Processor Core Is Completed, This Core Is Used To Test The Embedded Srams. A Test Algorithm Which Utilizes A Mixture Of Existing Memory Testing Techniques And Covers All Important Memory Faults Is Presented In This Paper. The Proposed Memory Test Algorithm Covers 100% Of The Faults Under The Fault Model Plus A Data Retention Test. The Hardware Overhead In The Proposed

Architecture Is Shown To Be Negligible. This Architecture Is Implemented On Uts-Dsp (University Of Tehran And Iran Communication Industries (Sama)) Ic Which Has Been Designed In Vlsi Circuits And Systems Laboratory

Keywords: Bist Architecture, Dsp/Microprocessor, Uts-Dsp, Bit/Word-Oriented Memory, Memory Testing, March Test

III Dc To Dc Boost Converter Adjustable By Potentiometer Mrs.V.Elakkiya

Abstract:

In This Paper Converter Use Innovative Technique, The Loads Power Can Be Flexibly Distributed Between Input Sources. Also, Charging Or Discharging Of Energy Storages By Other Input Sources Can Be Controlled Properly. The Purpose Of This Project Is To Design And Test A Functional Proof Dc To Dc Boost Converter. A Microcontroller Provides The Necessary Control Signal To The Switching Circuit And It Also Monitors The Input And Output Voltage Levels. The Input And Output Voltages Are Displayed On An Led. Based On The Input From A Potentiometer, The Microcontroller Adjusts The Duty Cycle Of The Control Signal Thereby Controlling The Output Voltage. An Input Voltage Between 6-10.5 Volts Can Be Given And The Device Can Produce A Maximum Voltage Of 25v. This Device Is Particularly Useful In Situations Where Standard Voltage Requirements Do Not Match User's Application.

Keywords: Dc Power Supply, Adc 0809, Microcontroller At89s52, Led Display

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113 Design With Conditional Pulse Enhancement Scheme By Using Pulse Triggered Flip Flop

Mrs.S.Rahamathulha.R.Laveya

Abstract:

In This Paper, A Novel Low-Power Pulse-Triggered Flip-Flop (FF) Design Is Presented. First, The Pulse Generation Control Logic, An And Function, Is Removed From The Critical Path To Facilitate A Faster Discharge Operation. A Simple Two-Transistor And Gate Design Is Used To Reduce The Circuit Complexity. Second, A Conditional Pulse-Enhancement Technique Is Devised To Speed Up The Discharge Along The Critical Path Only When Needed. As A Result, Transistor Sizes In Delay Inverter And Pulse-Generation Circuit Can Be Reduced For Power Saving. Various Postlayout Simulation Results Based On Umc Cmos 90- Nm Technology Reveal That The Proposed Design Features The Best Power-Delay-Product Performance In Seven Ff Designs Under Comparison. Its Maximum Power Saving Against Rival Designs Is Up To 38.4%. Compared With The Conventional Transmission Gate-Based Ff Design, The Average Leakage Power Consumption Is Also Reduced By A Factor Of 3.52.

Keywords: Flip-Flop, Low Power, Pulse-Triggered.

114 Messenger: Android Messenger With End To End Encryption Mrs.S.Rahamathulha

Abstract:

The Involvement Of Generation In Our Existence Makes It More Boost And Affords Get Right Of Entry To Our Fingertip. It Provides Us With The Capability To Get Connected With Human Beings And Discover The Data On The Topics Which Could Be Very Useful For The Ease Of Existence. Hence Our Lives Are Dependent On Numerous Mobile Chatting Applications Which Offer Exclusive Protection To User And Chatting Information But Leads To Boom In Vulnerabilities And Threat Of Attack On Facts. As In Sensitive Enterprise And Prison Conversation Records Safety Is Maximum Important For Stopping From Undesirable Hacking Activities. To Overcome This Form Of State Of Affairs, It's Miles Proposed An Encrypted Messaging Protocol For Secure Conversation. Inside The International Messaging, There Is Lots Of Encrypted Messaging Applications, However All Those Are Based Totally On A Software Generated Encryption Key In Conjunction With Sqlite Database Which Is Used To Keep The Message Of Respective Customers Which Are Now Not Comfy And The Messages Of Any Consumer Can Be Obtained By A 3rd Party. The Proposed Software Used The Elliptic Curve Diffie Hellman Key Change (Ecdh) Set Of Rules To Generate The Important Thing Pair And Alternate To Supply The Shared Key To Be Able To Be Used For The Encryption Of Statistics By Symmetric Algorithms. The Proposed Utility Lets In The Customers To Talk Via Textual Content Messages, Voice Messages And Snap Shots. For The Text Message Protection The Same Old Aes Algorithm With A 128 Bit Key Are Used. The Generated Key (160 Bit) Minimized To 128 Bit Period Via Deciding On The Primary 128 Little Bit Of The Generated Key In Order To Be Used By The Aes Set Of Rules. For The Voice And Photo Protection Procedures The Proposed Utility Used The Symmetric Set Of Rules Rc4 For This Purpose.

Keyword: Android, Chatting Application, Ecdh (Elliptic Curve Diffie Hellman Key Exchange), Aes (Advanced Encryption Standard), Rc4 (Rivest Cipher 4).

ISBN: 978-81-970087-3-3


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115 Resource Efficient Memory Repair Architecture For Base Band And Ofdm

System Mrs. P. Jeyyleena, M. Sivanathi

Abstract:

The Growing Density Of Integration And The Increasing Percentage Of System-On-Chip Area Occupied By Embedded Memories Has Led To An Increase In The Expected Number Of Memory Faults. The Soft Memory Repair Strategy Proposed In This Paper Employs Existing Forward Error Correction At The System Level And Mitigates The Impact Of Memory Faults Through Permutation Of High-Sensitivity Regions. The Effectiveness Of The Proposed Repair Technique Is Evaluated On A Multi-Megabit De-Interleaver Static Random Access Memory Of An Icdt-T Digital Baseband Orthogonal Frequency-Division Multiplexing Receiver In 65-Nm Cmos. The Proposed Technique Introduces A Single Multiplexer Delay Overhead And A Configurable Area Overhead Of M/J Bits, Where M Is The Number Of Memory Rows And J Is An Integer From 1 To M , Inclusive. The Repair Strategy Achieves A Measured 0.15 Db Gain Improvement At 2×10^{-4} Quasi-Error-Free Bit Error Rate In The Presence Of Stuck-At Memory Faults For An Additive White Gaussian Noise Channel.

Keyword: Embedded Sram Memory, Fault Tolerance, Forward Error Correction (Fec), Interleaver, Orthogonal Frequency-Division Multiplexing (Ofdm) Receiver, Soft Memory Repair, System-On-Chip (Soc), Yield.

116 Pedal Operated Hacksaw Machine

Mrs. P. Jeyyleena Abstract:

In This Pedal Operated Hacksaw Machine Which Can Be Used For Industrial Applications And Household Needs In Which No Specific Input Energy Or Power Is Needed. This Project Consists Of A Crank And Slider Mechanism. In The Mechanism Pedal Is Directly Connected To The Hacksaw Through Crank And Slider Mechanism For The Processing Of Cutting The Wooden Blocks, Metal Bars, Pvc Materials. The Objective Of The Model Is Using The Conventional Mechanical Process Which Plays A Vital Role. The Main Aim Is To Reduce The Human Effort For Machining Various Materials Such As Wooden Blocks, Steel, Pvc Etc. The Power Hacksaw Machine, Which Runs On Human Power, Works On The Principle Of The Conversion Of Rotational Motion To Oscillatory Motion. Importance Of This Project Lies In The Very Fact That It Is Green Project And Helps Us To Reduce Our Electricity Need. Secondly, This Cutter Can Be Used And Transferred To Our Working Place Easily. Moreover, If We Want We Can Generate Electricity With Our Project By Connecting It To Dynamo, Diode And Battery.

Keyword: Hacksaw Machine, Wooden Blocks, Oscillatory, Dynamo, Diode And Battery. Eeg

117 Signal Denoising Based On Ensemble Empirical Mode Decomposition And Dwt

Mrs.G.Keerthana,M.Sathya

Abstract:

The Electrocardiogram (Ecg) Shows The Electrical Activity Of The Heart And Is Used By Physicians To Inspect The Heart's Condition. Analysis Of Ecg Becomes Difficult If Noise Is Embedded With Signal During Acquisition. In This Paper, A Denoising Technique For Ecg Signals Based On Empirical Mode Decomposition (Emd) Is Proposed. The Noisy Ecg Signal Is Initially Decomposed Into A Set Of Intrinsic Mode Functions (Imfs) Using Emd Method. In The Proposed Technique, The Imfs Which Are Dominated By Noise Are Automatically Determined Using Spectral Flatness (Sf) Measure And Then Filtered Using Butterworth Filters To Remove Noise. This Method Is Evaluated On Ecg Signals Available In Mit-Bih Arrhythmia Database. The Experiment Results Show That The Proposed Technique Performs With Better Signal To Noise Ratio (Snr) And Lower Root Mean Square Error (Rmse) Than The Commonly Used Wavelet Transform Based Denoising Technique.

Keywords: Ecg, Denoising, Emd, Mit-Bih Database, Wavelet Transform.

118 Phonocardiography Based Classification Of Normal And Abnormal Heart Sounds And Their Correlation Analysis

Mrs.G.Keerthana Abstract:

An Intelligent Support System Is Needed To Assist In The Identification Of Abnormalities Of Human Heart. The Integration Of Signal Processing With Machine Learning Techniques Is A New Research Trend In The Studies Of Heart Sound Analysis. This Paper Proposes A Heart Sound Feature Dimension Reduction And Classification Methods Using Supervised Machine Learning Algorithms, By Utilising The First (S1) And The Second (S2) Heart Sounds, Produced Due To Vibrations During The Closure Of Heart Valves. The Features Of S1 And S2 Heart Sounds Are Extracted In Both Time And Frequency Domains. Time Domain Features Are Based On S1 And S2 Sound Distance, Amplitude, Sound Peak Area, Sound Peak Cycle Duration And Intensity, Whilst 20 Mel Frequency Cepstral Coefficients (Mfccs) Filter-Bank Energy For 12 Coefficients Represent The Frequency Domain Features. Statistical Values Of The Selected Features Are Further Used To Increase The Number Of Heart Sound Features. Due To The Size Of The Extracted Features, Linear Discriminant Analysis (Lda) Dimensionality Reduction Technique Has Been Used To Select The Best Features For Normal And Abnormal Heart Sound Classification Using An Artificial Neural Network (Ann) Model. It Has Been Shown That The Proposed Lda/Ann Heart Sound Classification Model Achieved 90%, 83.33%, And 93.33% Classification Accuracies Using The Time Domain, Frequency Domain And Combined Time-Frequency Domain Features, Respectively. The Results Using The Proposed Method Are Significantly Better Than Previous Classification Methods By Other Researchers. With Minimal Complexity. This Work Provides A Step Forward In Providing Clinical Informatics Tool To Assist Clinician In Providing Early Detections Of Abnormal Heart Conditions.

Keywords: Abnormal Heart, Classification, Mel Frequency Cepstral Coefficients (Mfcc), LinearDiscriminant Analysis (Lda), Artificial Neural Network (Ann)

ISBN: 978-81-970087-3-3

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119 Fingerprint Minutiae Extraction For Recognition Using Similarity Score And Improved Image Matching Algorithm

Dr.R.Rajamohamed,T.KannuAbstract:

The Popular Biometric Used To Authenticate A Person Is Fingerprint Which Is Unique And Permanent Throughout A Person's Life. A Minutia Matching Is Widely Used For Fingerprint Recognition And Can Be Classified As Ridge Ending And Ridge Bifurcation. In This Paper We Projected Fingerprint Recognition Using Minutia Score Matching Method (Fmsm). For Fingerprint Thinning, The Block Filter Is Used, Which Scans The Image At The Boundary To Preserves The Quality Of The Image And Extract The Minutiae From The Thinned Image. The False Matching Ratios Better Compared To The Existing Algorithms.

Key-Words: Fingerprint Recognition, Binarization, Block Filter Method, Matching Score And Minutia.

120 Sliding Mode Speed Control Of Induction Motor Using Svm Technique For Hybrid Electric Vehicles

Dr.R.RajamohamedAbstract:

In This Paper, Sliding Mode Control (Smc) With Space Vector Modulation (Svm) Is Presented For Speed Control Of Induction Motor (Im) Drive. The Im Is An Attractive Option For Variable Speed Drive Applications Which Are Required For Electric Vehicles. The Speed And Flux Responses Are Enhanced In Smc With Svm. Im Control Using Smc With Svm And Svm Based Proportional Integral (Pi) Control Are Compared. Smc With Svm Method Is Developed To Design A System Which Has The Desired Dynamic Behavior And Is Robust With Respect To Perturbations. Lyapunov Stability Analysis Is Used For Stable Performance Of The System. Matlab/Simulink Platform Is Used For Simulations To Validate The Proposed System.

Keywords— Sliding Mode Control, Inverter, Induction Motor, Space Vector Modulation.

121 A Novel Selective Harmonic Elimination For Sixpulse Voltage Boosting Inverter With Fewer Switch Count

Dr.R.RajamohamedAbstract:

A Multilevel Inverter Plays A Predominant Role In Improving The Performance As Well As Efficiency Of The Inverter. In This Study, The Proposed Idea Of The Selective Harmonic Elimination (She) For Duple Voltage Boosting Nine-Level Inverter Topology With Fewer Switching Components Possesses Two Times Better Voltage Boosting Capability Than The Considered Conventional Models. The Proposed Inverter Comprises 12 Power Control Are Then Compared With Other ted In Dollars, Which Is Compared With The Other Similar Nine-Level Inverters.

Keywords : Pwm Technique, She Pwm, Voltage Boosting Ability, Switched Capacitor, MLI, The

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Mrs.M.Nandhini, V.Nikhya Abstract:

One Of The Most Important Parts Of Business, Especially In The Coal Mining Sector, Is Industrial Safety. Suffocation, Gas Poisoning, Object Falls, Roof Collapses, And Gas Explosions Are Among The Risks Associated With Underground Mining. Therefore, Air Quality And The Detection Of Hazardous Events Are Crucial In The Mining Business. This Technology Offers A Wireless Sensor Network So That Base Stations Can Keep An Eye On The Situation In Underground Mines In Real Time. It Offers Temperature And Dangerous Gases Including Co, CH4, And Lpg Real-Time Monitoring. The Main Cause Of Mining Deaths Is That When They Fall And Lose Consciousness For Whatever Reason, Medical Attention Is Not Given To Them In A Timely Manner. In Order To Solve This Issue, The System Sends An Emergency Notice To The Supervisor In The Event That A Person Falls Down For Any Cause. Some Employees Are Negligent When It Comes To Safety And Don't Wear Helmets. Then, A Miner's Helmet Removal Status Was Successfully Determined Using A Limit Switch.

Keywords— Industrial Safety, Helmet, Miners, And Real Time Monitoring.

123 Automatic Irrigation System Mrs.M.Nandhini

Abstract:

Watering The Plant Is The Most Important Cultural Practice And One Of The Labor Intensive Tasks In Daily Greenhouse Operation. Watering Systems Ease The Burden Of Getting Water To Plants When They Need It. Knowing When And How Much To Water Is Two Important Aspects Of Watering Process. To Make The Gardener Works Easy, The Automatic Plant Watering System Is Created. There Have A Various Type Using Automatic Watering System That Are By Using Sprinkler System, Tube, Nozzles And Other. This System Uses Watering Sprinkler System Because It Can Water The Plants Located In The Pots. This Project Uses Arduino Board, Which Consists Of Atmega328 Microcontroller. It Is Programmed In Such A Way That It Will Sense The Moisture Level Of The Plants And Supply The Water When Required. This Type Of System Is Often Used For General Plant Care, As Part Of Caring For Small And Large Gardens. Normally, The Plants Need To Be Watered Twice Daily, Morning And Evening. So, The Microcontroller Has To Be Coded To Water The Plants In The Garden Or Farms About Two Times Per Day. People Enjoy Plants, Their Benefits And The Feeling Related To Nurturing Them. However For Most People It Becomes Challenging To Keep Them Healthy And Alive. To Accommodate This Challenge We Have Developed A Prototype, Which Makes A Plant More Self-Sufficient, Watering Itself From A Large Water Tank And Providing Itself With Artificial Sunlight. The Pro-To Type Reports Status Of Its Current Conditions And Also Reminds The User To Refill The Water Tank. The System Automation Is Designed To Be Assistive To The User. We Hope That Through This Prototype People Will Enjoy Having Plants Without The Challenges Related To Absent Or Forgetfulness.

Keywords :Arduino, 16x2 Led Display, Moisture Sensor, Water-Pump, Relay-Module

I24 Android Based Voice Operated Mobile Robot For Military

Applications Mrs.D.Kokila,D.Kimotrashmyar

Abstract:

This Project Was Developed In A Way That The Robot Is Controlled By Voice Commands. An Android Application With A Microcontroller Is Used For Required Tasks. The Connection Between The Android App And The Vehicle Is Facilitated With Bluetooth Technology. The Robot Is Controlled By Buttons On The Application Or By Spoken Commands Of The User. The Movement Of The Robot Is Facilitated By The Two Dc Servo Motors Connected With Microcontroller At The Receiver Side. The Commands From The Application Is Converted In To Digital Signals By The Bluetooth RF Transmitter For An Appropriate Range (About 100 Meters) To The Robot. At The Receiver End The Data Gets Decoded By The Receiver And Is Fed To The Microcontroller Which Drives The Dc Motors For The Necessary Work. The Aim Of Voice Controlled Robotic Vehicle Is To Perform The Required Task By Listening To The Commands Of The User. A Prior Preparatory Session Is Needed For The Smooth Operation The Robot By The User. For The Same A Code Is Used For Giving Instruction To The Controller.

Keywords: Robot, Design, Fabrication, Sensor, Automation Low

I25 Light Image Enhancement Using Zero-Dce Algorithm Mrs.D.Kokila

Abstract:

In Modern World Image Enhancement Is One Of The Complex Task. The Proposed Low Light Image Enhancement Using Zero Dce (Zero Reference Deep Curve Estimation) Algorithm Improves The Quality, Color Correction And Accuracy Of The Image. It Is Useful In Many Of The Applications Such As Military Applications, Object Detection, Recognition, And Also In 3d Reconstruction Of Images. When Image Is Captured In Low Light Objects Are Not Clearly Visible. Lot Of Noise And Image Disturbances Present Because Of That Image Is Not Clearly Visible. Normally An Image Contains Light Over Specific Range Of Wavelength Corresponding To The Visible Portion Of The Spectrum. By Using Zero Dce (Zero Reference Deep Curve Estimation) We Improved The Image Quality And Accuracy Via Dce-Net (Deep Curve Estimate Network) And Le (Light Enhancement) Curve.

Keywords: Low Light Image Enhancement, Zero Dce, Dce-Net, Le (Light Enhancement)

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126 A Novel Approach Of 5-Level Inverter Fed With Pv For Residential Load

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Renewable Energy Systems Are Presently Recognized As The Primary Alternative Power Source Due To Increased Electricity Demand And The Depletion Of Fossil Resources. The Photovoltaic (Pv) System Is A Rapidly Growing Renewable Energy System. Inverters Are Used To Integrate Pv Systems To The Utility Grid. Multilevel Inverters Are The Most Popular Option For Pv Application Due To Reduced Total Harmonic Distortion (THD), Switching Stress, And Electromagnetic Interference. This Work Presents A 5-Level Grid-Connected Inverter While Minimizing The Cost. The Proposed Inverter Uses Six Unidirectional Switches And One Diode With A Single Switched Capacitor. Furthermore, It Removes The Requirement Of Multiple Isolated Dc Sources. A Simple Modulation Technique Generates A Suitable Switching Pulse For The Inverter. Additionally, The Comparison Of The Proposed Inverter With The Other Topologies Existing In The Literature Shows That It Has Reduced Power Devices, Total Standing Voltage (TSV), And Cost Penalty. The Pv Connected Grid System Is Investigated With Specified Controlling And Implemented In Matlab/Simulink And Validated Through Hardware-In-The-Loop (HIL) Real-Time Simulation In Opal-RT. In Addition, The Laboratory Setup Of The Proposed Structure Is Built And Tested To Verify Its Effectiveness.

Keywords: Inverter, Resistive Load

127 Multi-Level Inverter With Sliding Mode Control Strategy For Distributed Energy Resource Integration With Distribution

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Microgrids Have Emerged As A Solution To Address New Challenges In Power Systems With The Integration Of Distributed Energy Generation On IbmG. This Paper Presents A Review Of The Different Approaches That Have Been Proposed By Several Authors Of Multi-Objective Control. This Work Describes The Main Features Of The Inverter As A Key Component Of Microgrids. Details Related To Accomplishing Efficient Generation From A Control Systems' View Have Been Observed. This Study Addresses The Potential Of Multi-Objective Control To Overcome Conflicting Objectives With Balanced Results. Finally, This Paper Shows Future Trends In Control Objectives And Discussion Of The Different Multi-Objective Approaches.

Keywords: Distributed Energy Resources; Inverter; Microgrid; Multi-Objective Control; Renewable Energy

128 Simulation Of Time Dependent 2D Generator Model Using Coupled Multiphysics

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The Results Of Time-Dependent One-Dimensional Modelling Of A Dielectric Barrier Discharge (DBD) In A Nitrogen-Oxygen-Water Vapour Mixture At Atmospheric Pressure Are Presented. The Voltage-Current Characteristics Curves To Be Copper And Quartz, Respectively. The Current Discharge Consists Of An Electrical Breakdown That Occurs In Each Half-Period. A Detailed Description Of The Electron Attachment And Detachment Processes, Surface Charge Accumulation And Dissociations Of Molecules Are Taken Into Account. Time-Dependent One-Dimensional Electron Density, Electric Field, Electric Potential, Electron Temperature, Densities Of Reactive Oxygen Species

Keywords: Generator, Time Dependent Dimension

ISBN: 978-81-970087-3-3


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129 Optimal Placement Approach Of Phasor Measuring Unit By Gps

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This Paper Presents A Study On Optimal Placement Of Phasor Measurement Units (Pmu) With Global Positioning System (Gps) Receivers For More Accurate Monitoring Of A Power System. The Optimal Pmu Placement (Opp) Problem Is, In General, Expressed As A Combinatorial Optimization Problem Subjected To The Observability Constraints Of The Studied Power System, Which Consumes Much Time To Solve. Three Approaches, In This Paper, Are Proposed Aiming At Reducing Computational Burden In Opp Problems. First, A Modified Simulated Annealing (Msa) Method Is Proposed. The Conventional Simulated Annealing Method Is Slightly Modified In Setting The Initial Temperature And In Cooling Procedure To Consider The Current State Of Solution Sets. Second, A Direct Combination (Dc) Method Is Suggested Using A Simple But Very Effective Heuristic Rule.

Keyword: Phasor Measurement, Gps, Optimal Placement

130 Economic Load Dispatch With Multiple Fuel Options Using Ga Toolbox In Matlab

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This Paper Presents The Solution Of Economic Load Dispatch With Multiple Fuel Options (Eldmfo) Using Genetic Algorithm (Ga). Finding The Global Optimum Solution For Economic Load Dispatch (Eld) Problem With Nonlinear Cost Function Is Cumbersome Using Traditional Approaches. Few Generators Utilizes Multiple Fuels, There Arises A Problem Of Determining Economic Fuel Among The Number Of Available Fuels. Many Evolutionary Algorithms Were Proposed To Solve Eld Problem. In This Paper A More Heuristic Approach Known As Genetic Algorithm (Ga) Is Proposed To Solve Eldmfo. This Method Is Applicable For Solving Non Smooth And Non Linear Functions Like Cost Characteristics Of Fossil Fuel Fired Plants. A Test System Of Four Generating Units With Three Fuel Options Has Been Considered And Applied Ga. The Simulation Is Carried Out With Matlab Software And The Obtained Results Are Compared With The Conventional Equal Incremental Cost Criteria And Also With Psu.

Keyword: Economic Load Dispatch, Fuel Option, Matlab Toolbox

131 Development And Demonstration Of Distributed Power Connected Intelligent Ups Algorithm

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In The Last Years, The Use Of Distributed Uninterruptible Power Supply (Ups) Systems Has Been Growing Into The Market, Becoming An Alternative To Large Conventional Ups Systems. In Addition, With The Increasing Interest In Renewable Energy Integration And Distributed Generation, Distributed Ups Systems Can Be A Suitable Solution For Storage Energy In Micro Grids. This Paper Depicts The Most Important Control Schemes For The Parallel Operation Of Ups Systems. Active Load-Sharing Techniques And Droop Control Approaches Are Described. The Recent Improvements And Variants Of These Control Techniques Are Presented.

Keyword: Distributed Power, Ups Algorithm

132 Microgrid Energy Management System For SmartHome Using Multi-Agent System

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This Paper Proposes A Multi-Agent System For Energy Management In A Microgrid For Smart Home Applications. The Microgrid Comprises A Photovoltaic Source, Battery Energy Storage, Electrical Loads, And An Energy Management System (Ems) Based On Smart Agents. The Microgrid Can Be Connected To The Grid Or Operating In Island Mode. All Distributed Sources Are Implemented Using Matlab/Simulink To Simulate A Dynamic Model Of Each Electrical Component. The Agent Proposed Can Interact With Each Other To Find The Best Strategy For Energy Management Using The Java Agent Development Framework (Jade) Simulator. Furthermore, The Proposed Agent Framework Is Also Validated Through A Different Case Study, The Efficiency Of The Proposed Approach To Schedule Local Resources And Energy Management For The Microgrid Is Analyzed. The Simulation Results Verify The Efficacy Of The Proposed Approach Using Simulink/Jade Co- Simulation.

Keyword: Energy Management System, Java Agent Development Framework

133 Analysis Of Voltage Rise Phenomena In Electrical Power Network With HighConcentration Of Renewable Distributed

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The Increasing Penetration Levels Of Renewable Distributed Generation (Rdg) Into A Power System Have Proven To Bring Both Positive And Negative Impacts. The Occurrence Of Under Voltage At The Far End Of A Conventional Electrical Distribution Network (Dn) May Not Raise Concern Anymore With Rdgs Integration Into A Power System. However, A Penetration Of Rdgs Into Power System May Cause Problems Such As Voltage Rise Or Over-Voltage And Reverse Power Flows At The Point Of Common Coupling (Pcc) Between Rdg And Dn. This Research Paper Presents The Impact Of Voltage Rise Effect And Reverse Power Flow Constraint In Power System With High Concentration Of Rdg. The Analysis Is Conducted On A Sample Dn, I.E., IEEE 13-Bus Test System, With Rdg Penetration By Considering The Most Critical Scenario Such As Low Power Demand In Dn And A Peak Power Injection By Rdg. For Studying The Impact Of Voltage Rise And Reverse Power Flow, A Mathematical Model Of A Dn Integrating Rdg Is Developed. Furthermore, A Controller Incorporating An Advance Control-Algorithm Is Proposed To Be Installed At Pcc Between Dn And Rdg To Regulate The Voltage Rise Effects And To Mitigate The Reverse Power Flow When Operating At A Worst Critical Scenario Of Minimum Load And Maximum Generation From Rdg.

Keyword: Distribution Network, Renewable Distributed Generation, Power Demand

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134 Integrating The Flexibility Of Household-Based Distributed Energy Resources In Electricity Markets

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In Many Electric Systems Worldwide The Penetration Of Distributed Energy Resources (DER) At The Distribution Levels Is Increasing. This Penetration Brings In Different Challenges For Electricity System Management; However If The Flexibility Of These DER Is Well Managed Opportunities Arise For Coordination. At High Voltage Levels Under Responsibility Of The System Operator, Trading Mechanisms Like Contracts For Ancillary Services And Balancing Markets Provide Opportunities For Economic Efficient Supply Of System Flexibility Services. In A Situation With Smart Metering And Real-Time Management Of Distribution Networks, Similar Arrangements Could Be Enabled For Medium- And Low-Voltage Levels. This Paper Presents A Review And Classification Of Existing DER As Flexibility Providers And A Breakdown Of Trading Platforms For DER Flexibility In Electricity Markets.

Keywords: Demand Side Management, Power Markets, Demand Response

135 Design And Implementation Of Automated System For Measuring Car Battery Capacity

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The Purpose Of This Article Is To Design Hardware For An Automated System For Measuring The Parameters Of The Car Battery And The Subsequent Approximation Of Its Capacity And Other Parameters Necessary To Determine Its Condition. Originality: The Paper Deals With The Research On The Car Batteries And Measuring Instruments To Detect Their Parameters In Order To Determine A Suitable Software Solution For Automated Measuring System To Measure The Car Battery Capacity. Methodology: The Paper Proposes One Of The Possibilities For Development An Automated System For Measuring Car Battery Capacity Using Microcontrollers System Using Prototyping, Designing, Simulation And Testing Techniques. Authors Described The Whole Development Process Starting From Computer Design Of The Proposed Device, Chose The Elements For Hardware Unit, Prototyping Using Development Boards And Tools, Developing Program Algorithms And Implementing Related Applied Software With The Final Results Verification. Result.

Keyword: Battery Management, Measurement Of Car Battery

136 Design And Optimization Of An Electric Car Chassis And Body Using Structural Analysis And Cfd

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The Transition From Traditional Gasoline-Powered Automobiles To Electric Vehicles (Evs) Has Taken Time. Two Major Challenges Of Engine- Powered Vehicles Are Greenhouse Gas Emissions And Fuel Economy. Electric Cars Require Less Maintenance. A Lot Of Money Can Be Saved While Also Helping The Environment. In Today's World, Workings With Lightweight Materials Have Emerged As A Key Area For Improvement In The Automotive Industry. The Most Efficient Method For Increasing Power Output Is To Reduce The Weight Of Vehicle Components. Composite Materials Have Benefited Greatly From Research And Development Because They Are Stronger, More Recyclable, And Easier To Integrate Into Vehicles. The Primary Goal Of This Research Is To Design The Body And Chassis Frame Of A Two-Seater Electric Car. A Cfd Analysis Was Performed..To Determine The Drag Coefficient Of The Body Along With Structural Analysis To Obtain The Frontal Impact And Tensional Rigidity Of The Chassis To Develop An Effective Electric Car Design.

Keyword: Electric Car Chassis, Structural Analysis

137 D.C. Operated Portable Vehicle Lifting Jack

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Tire Puncture Can Be Commonly Observed Now-A-Days. Car Jack Comes With Vehicles Requires Users To Apply Manual Force To Lift A Vehicle. This Paper Is Targeted To Analyze The Development In Existing Scissor Car Jack In Order To Make Load Lifting Easier By Utilizing Car Battery (12v) Which Can Be Used In Emergency Situations. In This Design, The Cigarette Lighter Receptacle Point Is Connected In Car, Which Drives The Power From The Car Battery (12v), This Will Run The Dc Motor And Thus Connected Power Screw Is Rotated. By This, The Car Jack Will Lift The Vehicle. The Contractions Or Expansion Movement Of Car Jack Can Be Controlled By A Joystick As Per Requirements. This Modified Car Jack Can Be Easily Operated By Any Person And It Saves Time, Hence Reduce Wastage Of Human Efforts And Time. The Design Of This Car Jack Is Being Developed In Solid Works 2010 Software. Manufacturing And Fabrication Work Have Been Done Using Milling, Drilling, Grinding And Threading Machines. The Modified Car Jack Is Tested And Implementing Of Design Can Solve Ergonomics Problems.

Keyword: D.C Machine, Vehicle Lifting Jack

138 Reducing New Mining For Electric Vehicle Battery Metals: Responsible Sourcing Through Demand Reduction Strategies

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The Rapid Uptake Of Electric Vehicles (Evs) Will Be Vital To Decarbonise The Transport Sector And Achieve Climate Change Targets. However, This Transition Is Leading To An Increased Demand For Key Battery Materials And Associated Resource Challenges And Supply-Chain Risk. On The Other Hand, Discarded Ev Batteries Create Business Opportunities For Second Life And Recycling. This Study Presents Scenario- Driven Material Flow Analysis (Mfa) To Estimate The Future Volume Of Ev Battery Wastes To Be Potentially Generated In Sweden And Future Demand For Key Battery Materials, Considering Potential Ev Fleet, Battery Chemistry Developments, And End-Of-Life Strategies Of Ev Batteries. Further, We Combine Mfa With A Socio-Technical Approach To Explore How Different Socio-Technical Developments Will Affect Both Ev Battery Flows And The Underlying Systems In The Future.


Keyword: Electric Vehicle, Material Flow Analysis, Demand Reduction

139 Smart Solar Urban Furniture: Design, Application, Limits And Potentials Mr.D.Praveen Sangeeth

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Smart Urban Street Furniture Is A Growing Reality With Several Projects And Companies Producing Objects Integrated With Photovoltaic Technologies. Smart Bus Stops, Pergolas, Canopies, Carports, Solar Trees, Solar Benches Are Just Some Examples Of The Objects Available Today. Some Of The Opportunities Offered By Smart Urban Street Furniture Are Self-Powered Rechargeable Docks For Smartphones Or Other Devices, Information Screens, Public Lighting, Free Wi-Fi, Rechargeable Stations For Electric Vehicles. They Can Be Used To Collect Big Data, Offering Opportunities For Our Daily Lives, Also After The Covid-19 Pandemic. The Aim Of This Research Is To Provide A Classification Of The Most Important Solar Urban Street Furniture, To Understand The Strategies Adopted In Case Studies And To Understand The Main Problems Related To The Adoption Of These Devices And Where Future Research Should Focus. The Methodology Involved A Selection Of International Case Studies In Important Urban Contexts To Gather Information As: Architectural Integration, Context Sensitivity, System Visibility. The Preliminary Results Indicate That Potential Limits To The Application Of These Technologies Are Urban Morphology And Lack Of Design Of Some Solutions. This Study Can Be Useful To Understand The Potential Use Of These Products In Our Territory.

Keywords: Smart Street Furniture; Smart City; Photovoltaic; Sustainable Design.


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140 A New Multilevel Inverter Topology Based On Switched-Capacitor Technique Mr.D.Praveen Sangeeth

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This Paper Presents A New Multilevel Inverter Based On The Switched-Capacitor Technique. The Topology Aims For Renewable Energy And Fuel Cell Applications That Demand High Magnitude Output Ac Voltage. This Configuration Of The Inverter Can Produce A Total Of Thirteen Voltage Levels Using A Single Dc Source. The Topology Features Voltage Boosting With A Triple Gain Of The Input Voltage Source Without Utilizing A Boost Dc-Dc Converter. Furthermore, The Voltages Of The Capacitors Are Self-Balanced At Any Desired Voltage Level During Each Cycle. Therefore, Auxiliary Circuits Are No Longer Needed. A Comparative Study Of The Presented Inverter With The Classical Topologies And Recently Introduced Topologies Has Been Done In Power Switches, Driver Circuits, Blocking Voltage Of The Switches, And Boosting The Input Voltage. A Simple Fundamental Switching Scheme Is Applied To The Proposed Topology To Validate The Viability Of The Topology.

Keywords: Fundamental Switching Frequency, Multilevel Inverters, Switched Capacitor, Self-Balancing, Total Blocking Voltage

141 New Low-Power Switch-Count Structure For Medium/High Power Multilevel Inverter

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Multilevel Inverters Play A Vital Role In The Industrial And Renewable Energy Sectors Due To Their Flexibility In Synthesizing Sinusoidal Waveforms Using A Low-Pass Filter With A Medium Voltage Range. It Has Several Drawbacks, Such As A Higher Number Of Power Component Requirements And Voltage Balancing Problems. In This Study, A New Structure For Multilevel Inverters Has Been Developed To Offer Good Power Quality With Minimum Number Of Switching Devices And Gate Driver Circuits. The Proposed Structure Is Configured To Operate In Symmetrical And Asymmetrical Configurations For Single/Three- Phase Versions. A Simulation Study Using Matlab/Simulink Has Been Utilized To Study The Operating Characteristics Under Both Configurations. A Laboratory Prototype Has Been Built To Check The Feasibility Of The Proposed Structure For Real-Time Applications.

Keywords: Low Power Switching, Power Inverter, Matlab, Switching Devices

142 Design A Switched Dc Sources Based Multilevel Inverter For Pv System Mr.K.Seetharaman ¹

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Integration Of The Renewable Energy Sources Into The Ac Power Grid Is The Most Challenging Task For The Researchers And Because Of The Limited Resources Of Fossil Fuels, It Is The Necessity Of The Modern Time Period To Integrate The Nonconventional Sources Into The Ac Power Grid For The Reliable Future Of The Power System. The Usage Of Photovoltaic (Pv) Cells Is Dramatically Increasing Very Rapidly In Each Department Of Life Because Of Their Small Environmental Impacts, Pollution-Free Benefits, Require Little Maintenance, And Zero Noise Capacity. The Research Work Focuses On The Integration Of The Pv System With The Newly Proposed Topology Called The Switched Dc Sources Based Multilevel Inverter For Low, Medium, And High Power Applications. The Output Of Both Pv Panels Is Used As Input Dc Voltage Sources To The Proposed Inverter. The Phase Opposition Disposition (Pod) Switching Technique Of Pulse Width Modulation (Pwm) Is Employed For The Switching Of The Power Switches Of The New Topology Inverter.

Keywords Mppt, Mli, P&O, Pod, Pwna, Pv, Switched Dc Sources Based Multilevel Inverter, Thd.

143 An Overview Of Switching Scheme Used In Multilevel Inverter Mr.K.Seetharaman ¹

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There Is Always A Need To Create Efficient And Optimized Converters To Deliver The Best Possible Results To Achieve A Better Thd Profile In The Waveform Output. One Way Is By Controlling The Switching Of The Power Switches Of The Converters Using Appropriate Modulation Schemes. While Numerous Works Have Been Done In Proposing New Switching Modulation Strategies For Multilevel Inverters, This Work Will Compare Multicarrier Pwm And Near-To-Level Control (Nlc) Modulation Schemes. In This Paper, Multicarrier Pwm Variants, Namely Pd-Pwm, Pod-Pwm, And Apod-Pwm, Are Designed And Simulated. Their Voltage Thd And Spectrum Performance Are Discussed When Applied To Single-Phase 7, 9, And 11-Level Cascaded Multilevel Inverters. Then Nlc Modulation Will Be Designed And Applied To Similar Multilevel Inverter Circuits. It Will Be Shown That The Nlc Exhibits Some Superior Performances Compared To Pwm-Based But With Several Drawbacks That Can Be Optimized.

Keywords Mppt, Mli, P&O, Pod, Pwm, Pv, Switched Dc Sources Based Multilevel Inverter, Thd

144 Power Quality Improvement Using Shunt Active Filters With Multilevel Inverter

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This Paper Presents A Cascaded H-Bridge Multilevel Inverter Based Series Active Filter Intended For Installation On Industrial And Utility Power Distribution Systems. The Control Strategy Based On Synchronous Reference Frame Theory Is Designed So That The Voltage Injected By Active Filter Is Able To Mitigate The Voltage Sag, Imbalance In The Source Voltage And Reduce The Harmonic Content. The Active Power Filter Which Can Be Used Under The Condition Of Unbalanced Or Distorted Source Voltages Can Compensate The Harmonics, Reactive And Negative Sequence Components. Simulations Have Been Carried Out On Matlab/Simulink Platform With Two Types Of Loads. The Analysis And Simulation Results Under Balanced Three Phase Fault And Dynamic Load Are Presented In This Paper.

Keywords: Power Quality, Shunt Filters, Multilevel Inverter

145 An Advanced Control Technique For Power Quality Improvement Of Grid-Tied Multilevel Inverter

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The Use Of Different Control Techniques Has Become Very Popular For Controlling The Performance Of Grid-Connected Photovoltaic (Pv) Systems. Although The Proportional-Integral (Pi) Control Technique Is Very Popular, There Are Some Difficulties Such As Less Stability, Slow Dynamic Response, Low Reference Tracking Capability, And Lower Output Power Quality In Solar Pv Applications. In This Paper, A Robust, Fast, And Dynamic Proportional-Integral Resonance Controller With A Harmonic And Lead Compensator ($Pir + Hc + Lc$) Is Proposed To Control The Current Of A 15-Level Neutral-Point-Clamped (Npc) Multilevel Inverter. The Proposed Controller Is Basically A Proportional-Integral Resonance (Plr) Controller With The Feedback Of A Harmonic Compensator And A Lead Compensator. The Performance Of The Proposed Controller Is Analyzed In A Matlab/Simulink Environment. The Simulation Results Represents Admirable Performance In Terms Of Stability, Sudden Load Change Response, Fault Handling Capability, Reference Tracking Capability, And Total Harmonic Distortion (Thd) Than Those Of The Existing Controllers. The Responses Of The Inverter And Grid Outlets Under Different Conditions Are Also Analyzed. The Harmonic Compensator Decreases The Lower Order Harmonics Of Grid Voltage And Current, And The Lead Compensator Provides The Phase Lead. It Is Expected That The Proposed Controller Is A Dynamic Aspirant In The Grid-Connected Pv System.

Keywords: Total Harmonic Distortion; Controller; Power Quality; Lead Compensator; Harmonic Compensator; Phase-Locked Loop; Multilevel Inverter; Grid Synchronization

146 Distribution Static Compensator Based On Cascaded H-Bridge Multilevel Inverter

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This Paper Proposes A Distribution Static Compensator Based On Cascaded H-Bridge Multilevel Inverter. The Designed Controller Aims At Achieving Voltage Compensation During Load Conditions. The Voltage Sag And Voltage Swell Causes Damage For The Entire System. The Proposed System Consists Of Five Levels Cascaded H-Bridge Multilevel Inverter Which Uses A Battery As A Dc Sources. If The Voltage Sag Or Voltage Swell Is Present In The Circuit, Then The Cascaded H-Bridge Multilevel Inverter Compensates The Voltage. Usually, The Dstatcom Is Connected To The Power Networks At A Point Of Common Coupling Through A Transformer Where The Voltage Quality Problem Is A Concern.

Keyword: Distribution Line, Static Compensator, H Bridge Inverter

147 Experimental Analysis Of Hybrid Multilevel Inverter Based Pv System With Sepic Converter

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This Paper Presents A Binary Hybrid Multilevel Inverter (Bhml) Based Grid-Connected Solar Energy Conversion System (Secs). Controlled By Damped Second-Order Generalized Integral (Dsogi). The Bhml Architecture Has A Cascaded Half-Bridge Array, Which Modifies The Dc-Link. Of The H-Bridge Of The Voltage Source Inverter, And Results In Approximate Reference Waveform. It Reduces The dV/dt Of The H- Bridge Switches And Improves Output Waveform Quality. The Dsogi Control Damps The Oscillations And Overshoots And Provides Longer Service Period Of Low Power Switches At Transient Conditions. It Is Implemented In The Multilevel Inverter Application For The First Time In Literature. The Secs Is Designed To Inject Active Power To The Grid, And Also Mitigates The Harmonic And Reactive Power Demands Of The Load. Moreover, The Shunt Active Filter Functionality Of The System At Various Load Conditions Are Verified And Maintained The Grid Power Quality Within The IEEE-519 Standard Throughout The Operation.

Keyword: Binary Hybrid, Multilevel Inverter-Based Grid, Integrated Solar Energy Conversion

148 Modern On-Line Monitoring For High Voltage Circuit Breakers Mr. G. Palanisamy¹

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The Principle Of An Online Monitoring And Diagnosis System Suitable For Various Kinds Of High-Voltage Circuit Breakers (Hvcb) Is Presented In The Paper. The System Consists Of Distributed Data Acquisition Devices, A Communication System Based On Field Bus, And A Host Based On B/S Structure. The Research Presents The Methods To Select The Main Monitoring Signals Of High-Voltage Circuit Breakers, To Acquire Data, And To Calculate Operational Feature Values, As Well As Realizes High-Speed Process To Monitoring Signals. Valid Online Monitor To High-Voltage Circuit Breakers, And Fault Diagnosis.

Keywords: Monitoring System, High Voltage Circuit Breakers, Online Monitoring System

149 Test Result Utilization In The Development Process Of High Voltage SF6 Circuit-Breaker

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Its High Cost To Design And Manufacture High Voltage Substation That May Be Fail Service At Any Small Fault Or Problem In The Equipments, The Protective Equipment Will Operate To Restrict Danger To Human Life And High Voltage Equipment. High-Voltage Circuit Breakers Are Mechanical Switching Devices Which Connect And Break Current Circuits (Operating Currents And Fault Currents) And Carry The Nominal Current In Closed Position, In This Paper Will Show And Discuss The Circuit Breaker, SF6 Circuit Breaker Type And The Optimal Tests For The High Voltage Circuit Breaker (Timing Test, Contact Resistance Test, Gas SF6 Analyzer Test, Gas Leakage Test And High Voltage Test).

Keywords: High Voltage, Test Circuit Breaker, Timing Test, Contact Resistance Test, Gas SF6 Analyzer Test, Gas Leakage Test And High Voltage Test

150 Research On Influence Of Transformer's Input Capacitance On Switching Transitional Voltages

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The Article Presents Results Of Research Dedicated To Study Dependence Of Transitional Voltages At Switching- Off Unloaded Transformer On Its Input Capacitance Being One Of The Most Important Parameters Which Determine Nature Of The Transition Process And Its Physical And Computational Features. Very Small Values Of The Input Capacitance Of Transformers And Autotransformers Causes, On The One Hand, High Free Frequencies Of Transition Process And Considerably High Stiffness Of Differential Equations That Mathematically Formalize The Process Under Consideration, On The Other. The Dependences Of Voltages Across The Transformer's Terminals And Recovery Voltages Across The Circuit-Breakers' Contacts Obtained For One Type Of Transformer Are Presented And Discussed In The Present Article.

Keywords: Transitional Voltages, Input Capacitance, Arc's Repeated Re-Ignitions, Unloaded Transformer, Free Frequency.

151 **A Functional Retro-Fitting Robotic Smart Lock Manipulator** Mrs. J. Beley Jennifer¹ Salamon A²

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This Paper Presents An Optimized Design For A Robotic Smart Lock Actuator And Its Implementation In An Integrated Device Named Simsim. The Smart Device Is Installed On Top Of An Existing Deadbolt Lock And Responds To Secure Wireless Commands From A Smartphone. It Is Optimized For Ease Of Installation, Various Deadbolt Thumbturn Geometries, And Simplicity Of Design (Which Reduces Cost And Quantity Of Failure Points). It Leverages Several Unconventional Designs To Implement Various Features Without Significantly Increasing Complexity, Including A Retreating Clutch To Prevent Back Driving, A Sliding Gripper That Takes Advantage Of Common Lock Geometry, And A Rotating Body To Simplify Mechatronics Design. Simsim Is Manufactured Using Fdm 3d Printing Techniques And Houses A Custom Pcb And Firmware.

Keywords: Smart Locks, Robotic Actuators, Robotic Manipulators, Design For Manufacturing, Mechatronics, Internet Of Things

152 **A Smart Home Automation System Controlled By Android Device** Mrs. J. Beley Jennifer¹

Saravananakumar² ¹Assistant Professor, ²Ug Students ¹²Indra Ganesan College Of Engineering, Manikandam, Trichy

Smart Android Applications To Improve The Security Of The Home With Ultra Panic Mode. Where One Can Control The Home Appliances, Using The Simple Gsm-Based Phone Like Nokia Old Model Keypad Mobiles, Just By Sending At Commands Through His Phone. In This Project, No Smartphones Are Needed But Here Smartphones To Improve The Security So This Project Needs It (Lower Api's Smartphones Are Enough). These Applications Can Control Your Entire Home's Appliances And The Special Function Is Ultra Panic Mode. When The Panic Mode Is "Enabled", The User's Data Will Be Sent To The Local Police Stations And Neighbours User's Data Like Location, And User Profile Data.

Keyword: Smart Home Automation, Gsm, At Commands, Android Device

153 **Sat Based Partial Attack On Compound Logic Locking**

Mrs. Kurchiga M, It, Associate Professor Chitra Bharathy M, It, Ug Student

Abstract:

This Research Introduces A Sat-Based Partial Attack On Compound Logic Locking Schemes. Logic Locking Is A Security Mechanism Applied To Protect Integrated Circuits From Intellectual Property Theft And Unauthorized Access. Compound Logic Locking Involves The Use Of Multiple Logic Locking Techniques To Enhance Security. The Proposed Sat-Based Partial Attack Focuses On Identifying Vulnerabilities In Specific Parts Of The Circuit, Potentially Compromising The Overall Security Of The Compound Logic Locking Scheme. The Study Employs Sat Solvers To Analyze And Exploit Weaknesses In The Logic Locking Mechanisms, Providing Insight Into Potential Vulnerabilities And Contributing To The Understanding Of Security Challenges In The Field Of Hardware Security.

Keywords: Set-Based Attack, Partial Attack, Compound Logic Locking, Integrated Circuits,

154 Multivariate Time Series Classification With An Attention-Based Multivariate Convolutional Neural Network

Mrs. Nivetha R, It, Assistant Professor Jeeritha M, It, Ug Student

Abstract:

This research presents an attention-based multivariate convolutional neural network (CNN) for the classification of multivariate time series data. Multivariate time series classification is a challenging task in various domains, including finance, healthcare, and signal processing. The proposed approach integrates attention mechanisms into a multivariate CNN to automatically highlight relevant features in the input time series. This attention-based architecture aims to improve the model's ability to capture important patterns and dependencies in multivariate time series, enhancing classification accuracy. Experimental evaluations demonstrate the effectiveness of the proposed approach in comparison to traditional methods, showcasing its potential for accurate and robust multivariate time series classification.

Keywords: Multivariate Time Series Classification, Convolutional Neural Network, Attention Mechanism, Deep Learning, Pattern Recognition, Signal Processing.

155 An Artificial Intelligence-Based Approach Towards Segregation Of Folk Songs

Mr. Devan D P, IT, Associate Professor

Kaviya K, IT, UG Student

Abstract:

This research presents an artificial intelligence-based approach for the segregation of folk songs. Folk songs often exhibit diverse cultural and regional characteristics, making their segregation a challenging task. The proposed approach leverages artificial intelligence techniques, including machine learning and signal processing, to automatically categorize and segregate folk songs based on their distinctive features. The system aims to recognize and differentiate various genres and styles within folk songs, contributing to the automated analysis and organization of cultural

156 Swapping Face Images Based On Augmented Facial Landmarks And Its Detection Dr. Kaubha D, It,
Professor Libla Pajithasiya C, It, Ug Student

Abstract:

This research addresses the issue of face image swapping, a deceptive practice where facial images are manipulated to replace one person's face with another. The proposed approach utilizes augmented facial landmarks to enhance the precision of face image swapping. By incorporating additional facial landmarks and leveraging advanced image processing techniques, the method aims to create more realistic and challenging manipulations that may go undetected by traditional detection methods. Furthermore, the research includes the development of a detection mechanism specifically tailored to identify face image swapping attempts. Experimental results demonstrate the effectiveness of the proposed approach in both image swapping and its detection, contributing to the ongoing efforts in preventing deceptive image manipulations.

Keywords: Face Image Swapping, Augmented Facial Landmarks, Image Manipulation Detection, Deceptive Practices, Image Processing, Facial Recognition.

157 Predicting Emotion Dynamics Sequence On Twitter Via Deep Learning Approach Dr. Uthra Devi K,
It, Associate Professor AkBandaswari J, It, Ug Student

Abstract:

This research focuses on predicting emotion dynamics sequences on Twitter using a deep learning approach. Analyzing and understanding emotional dynamics on social media platforms, such as Twitter, is crucial for various applications, including sentiment analysis and trend prediction. The proposed deep learning model is designed to capture the temporal evolution of emotions in user-generated content on Twitter. By considering the sequential nature of emotional expressions, the model aims to predict how emotions evolve over time in response to different events or topics. Experimental evaluations demonstrate the efficacy of the deep learning approach in accurately predicting emotion dynamics sequences, contributing to a better understanding of emotional patterns on social media.

Keywords: Emotion Dynamics, Twitter, Deep Learning, Sentiment Analysis, Social Media, Temporal Evolution, Emotional Patterns.

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158 Sentiment Analysis Of Tweets Using Heterogeneous Multi-Layer Network Representation And Embedding

Dr. Nancy V, It, Assistant Professor Shobana K, It, UG Student

Abstract:

This Research Introduces A Sentiment Analysis Approach For Tweets Using Heterogeneous Multi-Layer Network Representation And Embedding. Sentiment Analysis On Social Media, Particularly Twitter, Is Challenging Due To The Informal Language, Short Texts, And Dynamic Nature Of The Content. The Proposed Method Represents The Complex Relationships Between Users, Tweets, And Sentiments Using A Heterogeneous Multi-Layer Network Model. Embedding Techniques Are Then Applied To Capture The Contextual Information And Relationships Enabling Effective Sentiment Analysis. Experimental Evaluations Demonstrate The Effectiveness Of The Proposed Approach In Accurately Capturing Sentiment Information From Tweets, Considering The Intricate Network Structures Present In Social Media Platforms.

Keywords: Sentiment Analysis, Twitter, Heterogeneous Multi-Layer Network, Network Representation Learning, Embedding, Social Media.

159 Scan: Smart Collaborative Attack In Named Data Networking Dr.M.Senthil Kumar Professor, CSE,

M.A.M School of Engineering

Abstract:

This Research Introduces Scan (Smart Collaborative Attack In Named Data Networking), Focusing On A Collaborative Attack Strategy In Named Data Networking (Ndn). Ndn Is An Information-Centric Networking Paradigm Where Data Is Named And Retrieved Based On Content Rather Than Location. The Proposed Scan Approach Involves A Smart And Coordinated Attack Strategy Aiming To Exploit Vulnerabilities In The Ndn Architecture. The Collaboration Aspect Enables Attackers To Pool Resources And Maximize The Impact Of The Attack. The Research Aims To Highlight Potential Security Risks And Vulnerabilities In Ndn Under Coordinated Attack Scenarios, Contributing To The Development Of Robust Security Mechanisms In Information-Centric Networking Environments.

Keywords: Scan, Named Data Networking, Collaborative Attack, Security Risks, Information-Centric Networking, Attack Strategy.

160 Automatic Concurrent Arrhythmia Classification Using Deep Residual Neural Networks

Mr. Vivek Ignatius, IT, Assistant Professor

Shareen Banu M R, IT, UG Student

This research presents an automatic concurrent arrhythmia classification system utilizing Deep Residual Neural Networks (ResNets). Arrhythmias, irregular heart rhythms, require accurate and timely classification for effective medical intervention. The proposed system employs ResNets to

automatically classify multiple types of arrhythmias concurrently, enabling a comprehensive assessment of cardiac health. The deep learning model leverages the residual learning architecture to effectively capture complex patterns in electrocardiogram (ECG) signals. Experimental evaluations demonstrate the efficacy of the proposed approach in achieving accurate and concurrent arrhythmia classification, showcasing its potential for aiding medical professionals in diagnosing cardiac conditions.

Keywords: Arrhythmia Classification, Deep Learning, Residual Neural Networks, Concurrent Classification, Electrocardiogram, Medical Diagnosis.

161 Sector: Secure NoC Using Trojan Aware Routing Mrs. Surya S, It, Assistant Professor Akash V, It,

Ug Student

Abstract:

This research introduces SECTAR (Secure NoC using Trojan Aware Routing), a novel approach to enhance the security of Networks-on-Chip (NoCs) by incorporating Trojan-aware routing mechanisms. NoCs are vulnerable to hardware Trojans that can compromise the integrity and confidentiality of communication within the chip. SECTAR addresses this challenge by integrating routing algorithms that are aware of potential Trojan threats. The proposed approach dynamically adjusts routing paths to avoid or mitigate the impact of Trojans on data transmission. Experimental validations demonstrate the effectiveness of SECTAR in enhancing the security of NoCs by thwarting potential Trojan-based attacks on communication infrastructure.

Keywords: SECTAR, Networks-on-Chip, Trojan Aware Routing, NoC Security, Hardware Trojans, Routing Algorithms, Chip Security.

162 Malgam: Distributed Network Control With Scalable Service Chaining Mr. Devan D P, It, Assistant

Professor Sivaranjan P, It, UG Student

Abstract:

This Research Presents Malgam, A System For Distributed Network Control With Scalable Service Chaining In Contemporary Networks. Effective Service Chaining Is Essential For Routing Traffic Through Diverse Network Functions. The Malgam System Introduces A Distributed Approach To Network Control, Enhancing Scalability And Flexibility In Service Chaining. It Leverages Distributed Control Points To Dynamically Adapt To Changing Network Conditions And Requirements. The System's Architecture Allows For Efficient And Scalable Service Chaining, Enabling Optimal Dullzation Chaining In Diverse Network Environments.

Keywords: Malgam, Distributed Network Control, Scalable Service Chaining, Network


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163 Towards Implementing Fast And Scalable Network Intrusion Detection System Using Entropy Based Discretization Technique

Mrs. Jenith S, It, Assistant Professor Magisthwaran M, It, Ug Student

Abstract:

This research aims to implement a fast and scalable Network Intrusion Detection System (NIDS) using an entropy-based discretization technique. Network security is a critical concern, and intrusion detection plays a pivotal role in identifying and mitigating threats. The proposed approach employs entropy-based discretization to efficiently process network data, reducing the dimensionality of features while preserving important information. This contributes to a faster and more scalable NIDS. Experimental evaluations demonstrate the effectiveness of the proposed system in detecting intrusions with reduced computational overhead, showcasing its potential for real-time and large-scale network security applications.

Keywords: Network Intrusion Detection System, Entropy-based Discretization, Network Security, Fast and Scalable, Intrusion Detection, Feature Dimensionality Reduction.

164 Acoustic Event Detection Using Fuzzy Integral Ensemble And Oriented Fuzzy Local Binary Pattern Encoded Cnn

Mrs. Vaidya U Asst Professor CSE Mahalakshmi College Of Engineering

Abstract:

This Research Addresses Acoustic Event Detection Using A Novel Approach That Combines A Fuzzy Integral Ensemble And An Oriented Fuzzy Local Binary Pattern (Oflop) Encoded Convolutional Neural Network (Cnn). Acoustic Event Detection Is Crucial In Various Applications, Including Surveillance And Audio Analysis. The Proposed Ensemble Method Integrates Information From Multiple Sources Using Fuzzy Integrals, Enhancing The Robustness Of Event Detection. Additionally, The Cnn Is Enriched With Oflop Encoding To Capture Spatial Information Effectively. Experimental Evaluations Demonstrate The Efficacy Of The Combined Approach In Achieving Accurate And Robust Acoustic Event Detection, Showcasing Its Potential For Real-World Applications.

Keywords: Acoustic Event Detection, Fuzzy Integral Ensemble, Oriented Fuzzy Local Binary Pattern, Convolutional Neural Network, Audio Analysis, Ensemble Learning.

165 Towards Implementing Fast And Scalable Network Intrusion Detection System Using Entropy Based Discretization Technique

Mrs. Nivetha R, It, Assistant Professor

Ranjith Kumar A, It, Ug Student

Abstract:

This Research Focuses On The Implementation Of A Fast And Scalable Network Intrusion Detection System (Nids) Utilizing An Entropy-Based Discretization Technique. Network Security Is A Critical Concern, And Intrusion Detection Systems Play A Pivotal Role In Identifying And Mitigating Potential Threats. The Proposed Approach Employs Entropy-Based Discretization To Efficiently

Process Network Data, Reducing Feature Dimensionality While Retaining Crucial Information. This Contributes To A Faster And More Scalable Nids. Experimental Evaluations Demonstrate The Effectiveness Of The Proposed System In Detecting Intrusions With Reduced Computational Overhead, Showcasing Its Potential For Real-Time An Large-Scale Network Security Applications.

Keywords: Network Intrusion Detection System, Entropy-Based Discretization, Network Security, Fast And Scalable, Intrusion Detection, Feature Dimensionality Reduction.

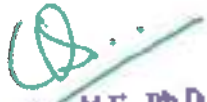
166 Privacy Enhanced Digilocker Using Ciphertext Based Attribute Based Encryption

Mrs. Swaya S, It, Assistant Professor
Sowmya P, It, Ug Student

Abstract:

This Research Introduces A Privacy-Enhanced Digilocker System Employing Ciphertext-Based Attribute-Based Encryption (Cp-Abec). Digilocker Is A Digital Document Storage And Sharing Platform, And Privacy Concerns Are Paramount When Dealing With Sensitive Information. The Proposed System Utilizes Cp-Abec To Enhance Privacy By Encrypting Documents Based On Specific Attributes, Allowing Only Authorized Users With Matching Attributes To Decrypt And Access The Documents. This Attribute-Based Encryption Scheme Provides A Fine-Grained Access Control Mechanism, Ensuring That Only Users With The Required Attributes Can Access The Stored Documents. Experimental Evaluations Demonstrate The Efficacy Of The Proposed Privacy-Enhanced Digilocker System, Emphasizing Its Potential For Secure And Privacy-Preserving Document Storage.

Keywords: Digilocker, Privacy Enhancement, Ciphertext-Based Attribute-Based Encryption, Document Security, Fine-Grained Access Control, Digital Document Storage


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167 Improving Inference Latency And Energy Of Network-On-Chip Based Convolutional Neural Networks Through Weights Compression

Mr. Vivek Ignatius, B, Assistant Professor

Surya A, B, UG Student

Abstract:

This Research Focuses On Improving The Inference Latency And Energy Efficiency Of Convolutional Neural Networks (Cnn) Implemented On Network-On-Chip (Noc) Architectures Through Weights Compression. Cnn Are Widely Used For Various Applications. And Optimizing Their Performance On Noc Platforms Is Crucial. The Proposed Approach Explores Weight Compression Techniques To Reduce The Memory Footprint And Transmission Requirements Of Weights In The Noc, Consequently Decreasing Inference Latency And Energy Consumption. Experimental Evaluations Demonstrate The Effectiveness Of Weights Compression In Enhancing The Efficiency Of Cnn On Noc Platforms, Showcasing Its Potential For Resource-Constrained And Energy-Efficient Deep Learning Implementations.

Keywords: Convolutional Neural Networks, Network-On-Chip, Weights Compression, Inference Latency, Energy Efficiency, Deep Learning Optimization.

168 Contextual Anomaly Detection In Time Series Using Dynamic Bayesian Network

Mr. Devan D P, B, Assistant Professor

Karthick A, B, UG Student

Abstract:

This research proposes a method for contextual anomaly detection in time series data using Dynamic Bayesian Networks (DBN). Anomalies in time series can have varying contextual dependencies, making their detection challenging. The proposed DBN-based approach captures dynamic dependencies and contextual information in the time series data, allowing for effective anomaly detection. The model adapts to changing patterns and learns the contextual relationships between different data points. Experimental evaluations demonstrate the effectiveness of the proposed method in detecting contextual anomalies, showcasing its potential for applications in various domains, including cybersecurity, finance, and industrial monitoring.

Keywords: Contextual Anomaly Detection, Time Series, Dynamic Bayesian Network, Anomaly Detection, Contextual Relationships, Machine Learning.

169 **Attention-Based Cross-Modal Unification Of Visualized Text And Image Features: Understanding The Influence Of Interface And User Idiosyncrasies On Unification For Free-Viewing**
Dr. Kancha B, It, Professor Vijaya Kumar M, It, UG Student

Abstract:

This research explores an attention-based cross-modal unification approach for visualized text and image features, specifically examining the influence of interface design and user idiosyncrasies during free-viewing. The goal is to enhance the understanding of how users interact with visual and textual information in a free-viewing context. The attention-based model considers both textual and visual features, providing insights into the cognitive processes involved in cross-modal integration during unconstrained viewing. Experimental evaluations analyze the impact of different interfaces and individual user tendencies on the effectiveness of the proposed unification approach, contributing to a better understanding of user behavior in free-viewing scenarios.

Keywords: Cross-Modal Unification, Attention-based Model, Visualized Text, Image Features, Free-Viewing, Interface Design, User Idiosyncrasies.

170 **Designing A Blockchain Based Framework For Iot Data Trade**
Mrs. Jenila S, IT, Ast Professor Tamil selvi T, IT, UG Student

Abstract:

This research focuses on designing a blockchain-based framework for facilitating secure and transparent IoT data trade. The Internet of Things (IoT) generates vast amounts of data, and a decentralized and secure framework is essential for managing data transactions. The proposed blockchain-based solution employs smart contracts to automate and ensure the integrity of data

trade agreements. The decentralized nature of the blockchain enhances transparency, traceability, and security in IoT data transactions. Experimental validations and case studies demonstrate the feasibility and effectiveness of the proposed framework, showcasing its potential for enabling secure and efficient IoT data trade.

Keywords: Blockchain, Internet of Things, IoT Data Trade, Smart Contracts, Decentralized Framework, Data Security, Data Transactions.

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171 Refit: Reliability Challenges And Failure Rate Mitigation Techniques For Iot Systems Dr. Nancy V,
It, Assistant Professor Visalini P, It, Ug Student

Abstract:

This Research Investigates The Reliability Challenges In Internet Of Things (Iot) Systems And Proposes Mitigation Techniques Under The Umbrella Of "Refit" (Reliability Challenges And Failure Rate Mitigation Techniques). Iot Systems Often Operate In Diverse And Challenging Environments, Leading To Increased Failure Rates An Reliability Concerns. The Refit Framework Addresses These Challenges By Identifying Potential Failure Modes An Presenting Mitigation Strategies. Techniques Such As Redundancy, Error Detection And Correction, And Adaptive Fault Tolerance Are Explored To Enhance The Reliability Of Iot Systems. The Research Contributes Insights In Building Robust And Dependable Iot Deployments, Considering The Unique Challenges Posed By The Iot Ecosystem.

Keywords: Refit, Reliability Challenges, Failure Rate Mitigation, Iot Systems, Fault Tolerance, Redundancy, Error Detection, Adaptive Techniques.

172 Deep Learning Based Prediction Model For Adaptive Video Streaming Mr. Virech Ignatius, It,
Assistant Professor Thameem Begam Y, It, Ug Student

Abstract:

This research presents a deep learning-based prediction model designed for adaptive video streaming. Adaptive video streaming aims to optimize video quality based on varying network conditions. The proposed model leverages deep learning techniques to predict future network states and viewer behaviors, enabling proactive adjustments in video streaming parameters. The model utilizes historical data to learn complex patterns and relationships, providing an adaptive approach to video streaming. Experimental evaluations demonstrate the effectiveness of the deep learning-based prediction model in improving the quality of adaptive video streaming under diverse network scenarios.

Keywords: Deep Learning, Adaptive Video Streaming, Prediction Model, Network Conditions, Viewer Behavior, Quality Optimization.

173 Transfer Learning In Smart Home Scenario

Dr.M.Scethi Kumar, It, Professor

Swerba S, It, Ug Student

Abstract:

This Research Explores The Application Of Transfer Learning In The Context Of A Smart Home Scenario. Smart Homes Involve A Multitude Of Sensors And Devices, Generating Diverse Data Types. Transfer Learning, A Machine Learning Technique, Allows Models Trained On One Task To Be Adapted For A Related Task With Limited Data. The Research Investigates How Transfer Learning Can Be Applied To Smart Home Data, Facilitating The Development Of Predictive Models Or Decision-Making Systems With Improved Efficiency And Performance. Experimental Evaluations Demonstrate The Effectiveness Of Transfer Learning In Enhancing The Capabilities Of Machine Learning Models Within The Smart Home Environment.

Keywords: Transfer Learning, Smart Home, Machine Learning, Predictive Models, Sensor Data, Adaptation.

174 Does Employer Branding Give A Competitive Advantage In Attracting High-Quality Employees?

Ms. Minipriya N, Assistant Professor, Department Of Management Studies, Indra Ganesan College Of Engineering, Trichy.

Ms. Thazhali B, Assistant Professor, Department Of Management Studies, Indra Ganesan College Of Engineering, Trichy.

Ebinasar Paul A, II Year-Mba, Indra Ganesan College Of Engineering, Trichy.

Abstract

The Purpose Of The Study Is To Explore The Influence Of Employer Branding On The Recruiting And Retention Of Employees. The Word Employer Branding Is The Modern Word For Human Resource Management And Marketers. Employer Branding Deals With The Concept Of Impact On Attracting Expert Employee Performance, Organizational Culture, And Achieving Competitive Lead Within The Market. Organizations Have Begun To Invest In Employer Branding As Employees Are The Internal Customers Of The Firm. It's The Smoother Recruitment Process, Employee Satisfaction, Employee Retention, And Competitive Advantage. Employees Of All Hierarchy Levels Need To Join Hands To Achieve Employer Branding. Employer Branding Is A Strategy Employed By A Company. It Helps To Form An Employer Value Proposition (Evp) That Conveys Desired Current And Prospective Employees Why The Organization Is An Exclusive And Fantastic Place To Figure In Currently. The Overall Focus Of Employer Branding Research Is Especially Targeted Towards The Recruiting. However, Employer Branding Also Necessitates Branding Activities For Existing Employees And Former Employees. The Analysis Of The Conceptual Framework Is To Formulate The Strategy And Organize A Structure And Communication Of The Desired Image And Brand Values. The Aim Of This Thesis Is To Analyze How The Attractive Stage Of Employer Branding Could Be Improved And Formulate Suggestions For Improvement.

Keywords: Employer Branding, Talent Acquisition

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175 A Study On The Impact Of Exchange Rate Volatility On International Trade

Dr. Soundar Rajan C, Professor, Department Of Management Studies, Indra Ganesan College Of Engineering, Trichy.

Gayathri K, B Year-Mba, Indra Ganesan College Of Engineering, Trichy. Jeevitha R, B Year-Mba, Indra Ganesan College Of Engineering, Trichy.

Abstract

Despite The Best Efforts Of Economists, A Basic Paradox As To The Impact Of Exchange Rate Volatility On Trade Flows Remains Unresolved At Both The Theoretical And Empirical Level. This Paper Surveys The Vast Literature In The Area In An Attempt To Identify Major Issues Which Have Contributed To The Development Of The Debate And Examine Whether Any General Direction For Consensus May Be Found.

Keywords: Exchange Rates, International Trade, Volatility, Equality

176 Employer Branding: How Relevant It Is In The Indian Job Market?

Mr. Velu Jy. Assistant Professor, Department Of Management Studies, Indra Ganesan College Of Engineering, Trichy.

Gayathri K, B Year-Mba, Indra Ganesan College Of Engineering, Trichy. Jeevitha R, B Year-Mba, Indra Ganesan College Of Engineering, Trichy.

Abstract

Employer Branding Is A Strategy Of Human Resource Management To Attract, Satisfy And Retain The Existing And Prospective Employees In The Organization. Employees Are The Most Valuable Assets Of The Organization In This Competitive Era. So, It Is A Big Challenge For Pharmaceutical Companies To Attract Talented Employees, Provide Them Job Satisfaction And Retain Them. So, Now A Day's Human Resource Managers Practices The Concept Of Employer Branding. The Prime Objective Of This Study Is To Investigate How Employer Branding Increases The Level Of Attractiveness, Satisfaction And Encourages Retention By Indian And Multinational Pharmaceutical Companies In India. This Study Is Descriptive In Nature. The Study Was Conducted On 40 Employees Of Indian Organizations & Multinational Corporations, 20 From Each Group. Data Has Been Collected Through Questionnaire From Executives And Area Business Managers Working In Indian And Multinational Pharmaceutical Companies. Information Collected On The Basis Of Compensation, Working Conditions, Career Growth Opportunities, Job Security And Level Of Belongingness. Data Collected Through Questionnaires Have Been Classified, Interpreted And Conclusions Were Drawn Which Enumerated Clearly That Employers Branding Is Very Fruitful For Employer In This Competitive Era. **Keywords:** Employer Branding, Recruitment, Employee Attraction, Social Media

Keywords: Unemployment, Policy, Satisfaction, Job Security

ISBN: 978-81-970087-3-3


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177 The Role Of Financial Institutions In Promoting Microfinance In Developing Countries

Dr. Soundar Rajan C, Professor, Department Of Management Studies, Indra Ganesan College Of Engineering, Trichy.

Ms. Sangeetha T, Assistant Professor, Department Of Management Studies, Indra Ganesan College Of Engineering, Trichy.

Anitha S, I Year-Mba, Indra Ganesan College Of Engineering, Trichy.

Abstract

This Study Aims To Examine The Role Of Microfinance Institutions (Mfis) In Promoting Financial Inclusion And Driving Economic Development. Financial Inclusion, Characterized By Access To And Usage Of Financial Services, Has Emerged As A Critical Component In Addressing Poverty And Fostering Sustainable Development. Mfis, With Their Focus On Serving Low-Income Individuals And Underserved Populations, Play A Pivotal Role In Expanding Financial Access And Empowering Marginalized Communities. This Study Uses Exploratory Research Design To Find The Role Of Microfinance Institutions In Promoting Financial Inclusion And Economic Development. Secondary Data Is Used From Published Articles And Journals. The Main Objective Of On The Role Of Mfis In Promoting Financial Inclusion And Their Impact On Economic Development. The Results Will Inform Policymakers, Practitioners, And Stakeholders In Designing And Implementing Effective Strategies To Leverage Microfinance For Inclusive And Sustainable Economic Growth.

Keywords: Financial Services, Microloans, Women's Empowerment, Gender Equality, Social Impact, Technology-Driven Approaches, Policy Recommendations.

178 A Report On Exit Interviews As An Employer Branding Tool

Ms. Sangeetha T, Assistant Professor, Department Of Management Studies, Indra Ganesan College Of Engineering, Trichy.

Vigneshwari G, Ii Year-Mba, Indra Ganesan College Of Engineering, Trichy. Vijayalakshmi M, Ii Year-Mba, Indra Ganesan College Of Engineering, Trichy.

Abstract

Exit Interviews Play A Crucial Role In Enabling Employers To Gather Valuable Feedback From Departing Employees. This Feedback Can Encompass The Employees' Perceptions Of The Employer's Brand, Particularly In The Context Of Employer Branding. Through Exit Interviews, Employers Can Gain Insights Into The Strengths And Weaknesses Of Their Employer Brand As Seen By Their Employees. By Asking Pertinent Questions, Employers Can Encourage Honest And Constructive Feedback That Can Aid In Identifying Areas For Improvement And Refining Their Employer Branding Strategy. By Conducting Exit Interviews, Companies Can Bolster Their Reputation As An Employer And Strengthen Their Capacity To Attract And Retain Exceptional Talent In The Future.

Keywords: Exit Interview, Employer Branding, Employee Experience, Retention, Culture, Feedback, Insight, Attrition, Improvement.

ISBN: 978-81-970087-3-3


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179 An Analysis Of The Impact Of Fiscal Policy On Economic Growth

Dr. Soundar Rajan C, Professor, Department Of Management Studies, Indra Ganesan College Of Engineering, Trichy.

Ramya S, Ii Year-Mba, Indra Ganesan College Of Engineering, Trichy. Thulasimal M, Ii Year-Mba, Indra Ganesan College Of Engineering, Trichy.

Abstract

Fiscal Policy Ensures Macroeconomic Stability As A Precondition For Growth At The Macro Level. This Study Investigates The Impact Of Fiscal Policy On Economic Growth Of South Africa From 1960 To 2014 Through A Cointegrated Vector Autoregression Approach. It Seeks To Contribute To The Existing Literature As Well As In Designing Effective Fiscal Policy Programmes Which Can Propel Economic Performance. The results Of The Long Run Estimates Revealed That Government Tax Revenue Has A Positive And Significant Long Run Influence On Economic Growth, Whereas The Government Gross Fixed Capital Formation And Budget Deficit Have A Negative Impact On Real Gdp. For That Reason, The Study Recommends That Some Expansionary Fiscal Policy Measures Should Be Strengthened Since They Play A Very Important Role In The Economy So As To Meet The Government Target Of The National Development Plan Vision For 2030.

Keywords: Budget Deficit, Capital Formation, Government, Tax Revenue, South Africa

180 A Study On Latest Recruitment Trends

Thazhali B, Assistant Professor, Department Of Management Studies, Indra Ganesan College Of Engineering, Trichy.

Vasanth G, Ii Year-Mba, Indra Ganesan College Of Engineering, Trichy. Sharmila Kv, Ii Year-Mba, Indra Ganesan College Of Engineering, Trichy.

Abstract

One Of The Most Important Part Of Hiring Process Is Sourcing Talents. It Lays A Foundation For The Successful Staffing As It Will Identify In Advance The Talent Pool Who Eventually Will Turn Out To Be Potential Applicants. For Any Organization An Effective Sourcing Drive Improves The Quality Of Applicant Pool And Also Decreases The Complexity Of Assessment And Selection System Since More Candidates Would Be Good. No Doubt That Recruitment Is A Great Deal Of Preparation Both From Organization And Applicant Perspective. These Organizations Are Certainly Viewing It As A Strategic Arena To Ensure That They Are Getting Competent Employees. The Present Study Aims At Exploring The New Methods, Sources And Techniques For Hiring Employees In Retail Industry. For This Purpose Human Resource Managers Associated With Retail Firms Were Interviewed To Find Out Most Preferred, Prospective And Effective Methods To Staff Their Organizations. The Role Of Recruitment Contributing Other Aspects Of Organizational Effectiveness And The Evolution Of Recruitment In Natshell Is Also Discussed By Reviewing The Literature With Respect To Various Similar Industries.

Keywords: Alternate Recruitment, Employee Referrals, Methods Of Recruitment, Recruitment Strategies, Retail Hr



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181 A Study On Factors That Influence Joining Decisions Of An Employee

Vela Jv, Assistant Professor, Department Of Management Studies, Indra Ganesan College Of Engineering, Trichy.

Dr. Soundar Rajan C, Professor, Department Of Management Studies, Indra Ganesan College Of Engineering, Trichy.

Kalanithi G S, II Year-Mba, Indra Ganesan College Of Engineering, Trichy.

Abstract

The Study Is Aimed To Identify The Factors That Influence The Employment Decisions Of College Graduates. A Mixed- Methods Study Design Was Used To Collect Data From Graduates From Different Disciplines And Backgrounds. This Study Found That Personal Attributes Such As Self-Efficacy, Resilience, And Motivation Play An Important Role In Graduate Recruitment Decisions. Educational Qualifications Such As Academic Performance, Work Experience, And Relevant Skills Also Proved To Be Important Factors In Graduate Recruitment Decisions. Labor Market Conditions, Such As The Availability Of Employment Opportunities, Salary Expectations, And Job Security, Have Had A Significant Impact On Graduate Recruitment Decisions. Career Expectations Such As Job Satisfaction, Opportunities For Advancement, And Work-Life Balance Were Also Identified As Important Factors Influencing Graduate Employment Decisions. The Study Also Found That Graduate Employment Decisions Are Influenced By Job Satisfaction And Overall Well-Being. The Results Of This Study Will Serve As The Basis For Policy Decisions Aimed At Reducing College Graduate Unemployment And Improving College Graduate Employability. The Study Recommends That Policy Makers Help Improve The Personal Attributes, Educational Attainment And Employability Of Graduates So That They Can Make Informed Career Decisions. Career Guidance Services Should Also Be Provided To Help Graduates Navigate The Labor Market And Make Informed Employment Decisions

Keywords: Unemployment, Policy, Satisfaction, Job Security

182 A Report On Manpower Planning For Enhanced Productivity

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Abstract

This Research Focuses On Manpower Planning And Development As An Effective Tool For Achieving Original Goals, Using Star Paper Mill Ltd Abu As The Case Study. The Problems Of This Study Are Numerous, To Which One Is The Absence Of Administrative Control In Achieving The Overall Approved Programs. The Objective Of This Study Is To Map Out Enough Manpower Planning Time And Skills That Will Help Manager Gather Information That Will Help Them After Ascertaining The Organization Manpower Planning Resources. The Findings Of This Study Showed That Adequate Finance Is Needed Mailed For Field Work, And Also That Previous Manpower Plan Serves As A Good Basis In Determining New Manpower Plan. Therefore, It Is Discovered Through The Data Analysis Which Was Questionnaire That Manpower Planning Has An Effect In Of This Project State That Management Should Be Using Their Previous Manpower Plan As A Point Of Contact While Prepping For A New Plan In Order To Avoid Mistakes.

Keywords: Manpower Planning, Questionnaires

183 A Study On The Effectiveness Of Financial Education Programs On Financial Literacy

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Abstract

This Study Estimates How Financial Education Affects A Person's Financial Literacy Score, Short-Term Financial Behaviors, And Long-Term Financial Behaviors Using Data From The 2012 National Financial Capability Study (Nfes). There Are Seven Categories Of Financial Education High School, College, Employer, High School And College, High School And Employer, College And Employer, And Combinations Of All Three Courses To Estimate The Effectiveness Of Financial Education. This Course Detail Has Not Been Studied In Previous Literature About Financial Education. Financial Education Has A Positive Relationship With A Person's Financial Literacy Score. Splitting The Sample Into Groups Based On Education And Income Results Show That People With Low Education And Income Have Larger Course Coefficients Compared To People With High Education And Income.

Keywords: Nfes, Financial Behaviors

184 B2b Marketing & Sales Strategies For A Technology Software Company Offering ChatBoots

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Abstract

There Are Serious Concerns About The Theory-Practice Gap In The Research On Business Marketing. One Of The Key Aspects Is The Relevance And Implement Ability Of The Results. The Overarching Objective Of This Special Issue Of "From Strategy Frameworks To Value-In-Use: Implementing Strategies And Theories Of B2b Marketing And Sales Management" Is To Enhance Understanding Of Managerial Implementation. We Have Four Goals In This Introductory Article. First, We Discuss Implementation As A Concept, Given The Varying Views And The Considerable Ambiguity. Second, We Identify And Analyze Aspects That Influence The Potential For Carrying Out Managerially Relevant Research And Challenge The Implementation Process. As A Result We Propose An Implementation Framework For Use In Our Third Task: To Introduce The Articles In This Special Issue. We Conclude By Presenting An Agenda For Enhancing The Managerial Relevance Of Future Business-Marketing Research.

Keywords: B2b



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185 Study On Absenteeism Of Workmen In An Engineering Company

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Abstract

The Purpose Of The Research Is To Identify The Impacts Of An Absenteeism Of Employees On The Organization. The Aims, Restrictions, Research Methods, Findings, Advice, And Conclusions Are All Included In The Paper. The Data Is Gathered Utilizing Secondary And Primary Data. The Responses Provided By The Company's Employees Are Evaluated And Interpreted Using Several Statistical Tools That Use The Percentage Analysis Method. This Study Shows Information On The Effects Of Impact Of Employee Absenteeism On Organization Productivity. 100 People Make Up The Sample Out Of A Total Of 120 People. The Researcher Created The Questionnaire In Accordance With The Study's Goal

. **Keywords:** Absenteeism, Productivity.

186 The Role Of Financial Markets In Channeling Savings Into Productive Investments

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Abstract

The Extended Period Of Limited Growth Experienced Until Recently In Many European Countries Raises The Issue As To Which Policies Could Be Most Effective In Improving Their Economic Performance. This Paper Argues That Further Financial Sector Reforms May Be A Valuable Complement To Ongoing Efforts To Reform Labour And Product Markets. There Is A Long-Standing View In The Economic Literature That Well-Functioning Financial Systems Allow Economies To Exploit The Benefits Of Innovation In Terms Of Productivity And Growth. Moreover, Measured Productivity Differentials Between Europe And The United States Seem To Originate Particularly In The Financial Sector And From Sectors That Are Particularly Dependent On External Financing. Building On And Summarizing The Existing Literature, This Paper First Introduces A Number Of Concepts That Are Important For Financial Sector Analyses And Policies. Second, It Presents A Selection Of Indicators Describing The Efficiency And Development Of The European Financial System From The Perspective Of A Variety Of Dimensions. Third, An Attempt Is Made To Estimate The Extent To Which Greater Financial Efficiency Might Improve The Allocation Of Productive Capital In Europe. While In The Recent Past The Research And Policy Debate In Europe Has Focused On Fostering Financial Integration, The Present Paper Puts The Main Emphasis On Financial Development Or Modernisation In The Context Of The Finance And Growth Literature.

Keywords: Attrition Control, Turnover, Absenteeism

ISBN: 978-81-970087-3-3


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187 Study On Impact Of Social Media And Content Marketing On Social Media Users

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Abstract

The Emergence Of Web 2.0 Has Created The New Phenomenon In Business Strategies As It Allowed Two- Way Communications Between Companies And The Consumers. Nowadays, The Business Practitioners Tend To Use The Social Media Marketing To Create Awareness And Promote Their Brands To The Customers. Nevertheless, The Main Point In Sharing The Information Through The Social Media Is About The Content Itself. To Attract More Consumers Engage With The Brands. Social Media Content Marketing (Smcm) Also Plays An Important Role In Conveying Effective Information To The Consumers Thus Attract Them To Keep Engaging With The Brands. Meanwhile, Brand Health Is The Evaluation From Digital Audiences About The Brands And Products. It Measures The Awareness Of The Brand For Long- Term Period Thus Develop The Brand Equity. There Are Few Indicators In Measuring The Brand Health Such As Time On Site, Repeat Visitors, Social Likes, Subscriptions, And Bounce Rates. There Are Still Limited Studies On The Impact Of Social Media Content Marketing (Smcm) Towards Brand Health. The Purpose Of This Study Is To Investigate The Role Of Smcm In Increasing The Brand Health Score

Keywords: Social Media Marketing, Content Marketing, Brand Health

188 Customer Satisfaction And Marketing Effectiveness Of Crompton Greaves Fans


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Abstract

"Market Survey" Is An Important Requirement For Initiating Any Successful Business. The Objective Of A Market Survey Is To Collect Information On Various Aspects Of The Business. This Survey Is A Tool Through Which We Can Minimize Risk. After The Market Survey, The Results Must Be Analyzed In Order To Finalize A Business Plan. The Workshop Session On Market Surveys Was Designed To Provide The Participants With An Understanding Of The Importance And Procedures Of Such A Survey." Crompton Greaves Limited Is A Major Player In The Motor Industry In India. The Primary Objective Of The Project Was To Study The Market Survey Of Agro Pumps Of The Company And Potential Of Agro Pumps In Ahmednagar District. Secondary Objectives Was To Study The Customer Need, Want And Satisfaction Of Agro Pumps Product In Ahmednagar District And Detail Analyze The Product Of Competitor And To Study The Market Share Of Various Pumps Set In Ahmednagar District.

Keywords: Market Survey, Data

ISBN: 978-81-970087-3-3


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189 An Analysis Of The Impact Of Taxation On Foreign Direct Investment

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Abstract

Foreign Direct Investment Plays A Vital Role In Promoting Economic Growth, Especially For Developing Economies. It Causes Improvement In The Different Sectors Such As Education, Healthcare, Manufacturing Industries, And Creates More Jobs. The Speed Of Fdi Inflows Has Been Increasing In Pakistan Each Year. In Order To Attract More Fdi, Many Countries Try To Reframe Their Tax Policies By Introducing Different Tax Incentives Such As Tax Holidays, Investment Allowances, Exemptions, Deductions Etc. The Purpose Of The Present Paper Is To Find The Implication Of Taxation In The Decision Of Fdi Inflows In Pakistan. Time Series Data Is Used Government Needs To Reconsider Its Priorities While Making Policies Favouring Fdi.

Keywords: Economic Growth, Foreign Direct Investment, Taxation, Trade

190 A Systematic Study On School Management And Teacher Staff Selection Process In A School

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Abstract

Effective Recruitment, Selection Are Critical To Institution Success. They Enable Companies To Possess Performing Employees Who Are Satisfied With Their Jobs, Thus Contributing Positively To The Institution. Better Recruitment And Selection Strategies Result In Improved Institution Outcomes. With Regard To This Context, The Research Paper Entitled Recruitment And Selection Has Been Prepared To Place A Light- Weight On Recruitment And Selection Process. The Main Objective Is To Spot General Practices That Institution Use To Recruit And Choose Employees And, To Work Out How The Recruitment And Selection Practices Would Undergone Privately Schools. Successful Recruitment And Selection Practices Are Key Components At The Entry Point Of Human Resources In Any Organization. The Study Also Focus Its Attention To Work Out How The Recruitment And Selection Practices Affect The Institution Outcomes And Supply Some Suggestions Which Will Help

.The Research Methodology Applied Is That The Exploratory. The Info Was Collected Through Well Structured Questionnaires. The Source Of Knowledge Was Both Primary And Secondary. Sample Size Was 30. Data Analysis Has Been Through With The Help Of Spss Software. Data Analysis Has Been Through With Statistical Tools Like Tables, Graphs, Pie Charts, Bar Diagrams

Keywords: Recruitment, Selection, Reference, Interview, Qualification

ISBN: 978-81-970087-3-3


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191 Employee Attrition And Retention Strategies In Bpo Industry

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Abstract

Attrition Word Is Very Dangerous Now A Day For Any Organization Those Are Working Like Bpo's, Because Staff Attrition (Or Turnover) And Absenteeism Represents Significant Costs To Most Organizations. It Is Odd, Therefore, That Many Organizations Neither Measure Such Costs Nor Have Targets Or Plans To Reduce Them—However, It Seems To Be One Of The Areas In Which Hr Can Make A Difference - And One That Can Be Measured In Quantifiable, Financial Terms Against Targets. The Study Is Focused On Recruitment And Retention Challenges That The It/Bpo Industry Currently Faces And To Examine Ways To Reduce High Turnover Rates Among First Year Employees In The Leading Domestic Call Center Based In Indore. According To The Department Of Human Resources (Msource Bpo, Indore), Turnover Rates For Permanent Agents/Executives Were 15.6% In 2009 And 35% In 2012. Department Of Human Resources Which Also Tracks Attrition Of Temporary Employees Measured The Turnover Rate For Temporary Employees To Be 77% In 2012. The Monetary Cost Of Such High Turnover Is Enormous.

Keywords: Attrition Control, Turnover, Absenteeism.

192 The Effect Of Working Capital Management On Firm Profitability In The Retail Industry

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Abstract

The Main Aim Of This Article Is To Examine The Effect Of Working Capital On Profitability Of Indian Firms. We Collected Data About A Sample Of 263 Non-Financial Bse 500 Firms Listed At The Bombay Stock (Bse) From Studies Conducted In Different Markets. The Results Reveal That Working Capital Management And Profitability Is Positively Conversion Period Exhibit A Positive Relationship With Corporate Profitability. The Present Study Contributes To The Existing Literature By Examining The Effect Of Working Capital Management On Profitability In The Context Of An Emerging Capital Market Such As India.

Keywords: Working Capital Management, Ols Regression, Return On Assets, Accounts Payable, Current Ratio, Leverage

ISBN: 978-81-970087-3-3

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193 How To Increase Sales Force In A Start Up Organization

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Abstract

Although Companies Devote Considerable Time And Money To Managing Their Sales Forces, Few Focus Much Thought On How The Structure Of The Sales Force Needs To Change Over The Life Cycle Of A Product Or A Business. However, The Organization And Goals Of A Sales Operation Have To Evolve As Businesses Start Up, Grow, Mature, And Decline If A Company Wants To Keep Winning The Race For Customers. Specifically, Firms Must Consider And Alter Four Factors Over Time: The Differing Roles That Internal Salespeople And External Selling Partners Should Play. The Size Of The Sales Force, Its Degree Of Specialization, And How Salespeople Apportion Their Efforts Among Different Customers, Products, And Activities. These Variables Are Critical Because They Determine How Quickly Sales Forces Respond To Market Opportunities, They Influence Sales Reps' Performance, And They Affect Companies' Revenues, Costs, And Profitability.

194 Study Of Women At Workplace: A Global Phenomenon

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Abstract

Women's Participation Within The Work Force Has Been A Comparatively Increasing And Is Developing. Nowadays, Legal And Cultural Practices, Combined With The Inertia Of Long Non Secular And Academic Conventions, Restricted Women's Entry And Participation Within The Workforce. Particular Barriers To Equal Participation Within The Geographic Point Enclosed A Scarcity Of Access To Academic Opportunities; Prohibitions Or Restrictions On Members Of A Selected Gender Coming Into A Field Or Finding Out A Field; Discrimination Inside Fields, As Well As Wage, Management, And Status Hierarchies; And Therefore The Expectation That Mothers, Instead Of Fathers, Ought To Be The First Child Care Suppliers. Challenges That Stay For Women Within The Geographic Point Embrace The Gender Pay Gap, The Distinction Between Women's Earnings Because Of Decisions And Express Discrimination; The "Glass Ceiling", That Prevents Ladies From Reaching The Higher Echelons Inside Their Companies; Favouritism And Sexual Harassment; And Network Discrimination, Whereby Recruiters For High-Status Jobs Area Unit Usually Men Who Recruit Different Men. In Spite Of All These Barriers Women Are Exploring In All The Fields. When It Comes To The Security Of Women's Which Still A Question Mark At Certain Situations Which Frightened Many Women Which Discourages Them To Extent Where They Either Stop Working Or They Drop Out Their Plan To Work. There Are Also Certain Women Who Reach Higher Levels And Create Many Other Budding Aspiring Women's With Same Interest.

Keywords: Challenges, Discrimination, Glass Ceiling, Women, Workplace



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195 "Impact Of Nanotechnology On Mechanical Engineering: Advancements, Challenges, And Future Prospects"

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Abstract: This Research Explores The Transformative Impact Of Nanotechnology On The Field Of Mechanical Engineering. Nanotechnology Involves Manipulating Materials At The Nanoscale, Presenting Unique Opportunities To Enhance Mechanical Properties, Improve Materials Performance, And Revolutionize Manufacturing Processes. The Study Delves Into Key Advancements Resulting From The Integration Of Nanotechnology In Mechanical Engineering Applications, Such As Nanomaterials For Structural Components, Nanocomposites, And Nano-Manufacturing Techniques. Furthermore, The Research Addresses Challenges Associated With Nanotechnology Implementation, Including Ethical Considerations And Potential Environmental Impacts. Through A Forward-Looking Perspective, The Study Outlines Future Prospects And Emerging Trends, Highlighting The Role Of Nanotechnology In Shaping The Future Of Mechanical Engineering.

Keywords: Nanotechnology, Mechanical Engineering, Nanomaterials, Nanocomposites, Manufacturing, Advancements, Challenges, Future Prospects, Nano-Manufacturing, Materials Performance.

196 "Smart Sensing Technologies For Condition Monitoring In Machinery: Advances, Applications, And Future Directions"

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Abstract: This Research Investigates The Profound Impact Of Smart Sensing Technologies On Condition Monitoring In Machinery. The Study Explores The Latest Advancements In Sensor Technologies, Including Iot-Enabled Devices, Wireless Sensors, And Advanced Data Analytics, For Real-Time Monitoring Of Machinery Health. Applications Of Smart Sensing In Predictive Maintenance, Fault Detection, And Performance Optimization Are Analyzed Across Various Industrial Sectors. The Research Also Delves Into The Integration Of Artificial Intelligence And Machine Learning Algorithms For Intelligent Data Interpretation And Decision-Making. Furthermore, The Study Outlines The Challenges Associated With Implementing Smart Sensing Technologies And Envisions Future Directions, Emphasizing Their Role In Creating More Reliable, Efficient, And Sustainable Machinery Systems.

Keywords: Smart Sensing Technologies, Condition Monitoring, Machinery Health, Iot, Wireless Sensors, Data Analytics, Predictive Maintenance, Fault Detection, Machine Learning, Artificial Intelligence, Industrial Applications.

197 "Integration Of Augmented Reality In Mechanical Design And Assembly: Enhancing Visualization, Collaboration, And Efficiency"

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Abstract: This Research Explores The Integration Of Augmented Reality (Ar) Technology In The Domain Of Mechanical Design And Assembly Processes. Augmented Reality, With Its Ability To Overlay Digital Information Onto The Real-World Environment, Offers New Dimensions For Visualizing Complex Mechanical Systems During The Design Phase And Facilitating Assembly Procedures. The Study Delves Into The Advancements And Applications Of Ar In Mechanical Engineering, Examining Its Potential To Enhance Visualization, Improve Collaboration Among Design Teams, And Streamline Assembly Workflows. The Research Also Addresses Challenges Associated With The Implementation Of Ar In Mechanical Design And Assembly And Provides Insights Into The Future Trends And Opportunities That Ar Presents In Revolutionizing These Critical Engineering Processes.

Keywords: Augmented Reality, Mechanical Design, Assembly, Visualization, Collaboration, Efficiency, Digital Information Overlay, Engineering Processes, Future Trends.

198 "Advances In Unmanned Aerial Vehicles (Uavs) For Civil Applications: Transforming Industries And Enhancing Everyday Life"

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Abstract: This Research Explores The Rapid Advancements In Unmanned Aerial Vehicles (Uavs) And Their Profound Impact On Various Civil Applications. The Study Investigates How Uav Technology Has Evolved Beyond Military Applications To Play A Crucial Role In Industries Such As Agriculture, Infrastructure Inspection, Environmental Monitoring, And Emergency Response. The Research Delves Into The Latest Technological Innovations In Uav Design, Sensors, Communication Systems, And Autonomy, Highlighting Their Contributions To Increased Efficiency, Safety, And Cost-Effectiveness In Civil Applications. Additionally, The Study Addresses Regulatory Challenges, Privacy Concerns, And Future Trends Shaping The Widespread Integration Of Uavs Into Everyday Life And Various Sectors.

Keywords: Unmanned Aerial Vehicles (Uavs), Civil Applications, Technological Advancements, Industry Transformation, Infrastructure Inspection, Environmental Monitoring, Emergency Response, Autonomy, Regulatory Challenges, Privacy Concerns, Future Trends.

Top Of Form



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199 "Trends In Renewable Energy Storage Systems: Innovations, Integration, And Sustainable Solutions"

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Abstract: This Research Investigates The Evolving Landscape Of Renewable Energy Storage Systems, Exploring Recent Trends That Shape The Development, Integration, And Sustainability Of Energy Storage Technologies. The Future Direction Of This Critical Component In The Transition To A More Sustainable Energy Landscape.

Keywords: Renewable Energy, Energy Storage Systems, Trends, Innovations, Grid Integration, Sustainability, Battery Technologies, Pumped Hydro Storage, Thermal Energy Storage, Flow Batteries, Compressed Air Energy Storage, Market Trends, Policy Influences.

200 "Applications Of Machine Vision In Quality Control Processes: Enhancing Precision, Efficiency, And Product Integrity"

1 Dr. Thangarasu V S, 2.mr. Faizal Dasthahir S.B, 3.mr. Gopi P,
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Abstract: This Research Explores The Diverse Applications Of Machine Vision In Quality Control Processes Across Various Industries. Machine Vision, Leveraging Advanced Imaging And Artificial Intelligence, Has Become A Cornerstone In Ensuring Product Quality, Precision, And Compliance With Industry Standards. The Study Delves Into How Machine Vision Systems Are Applied In Inspecting And Verifying Critical Aspects Of Manufacturing, Such As Dimensional Accuracy, Surface Defects, And Assembly Quality. Additionally, The Research Examines The Role Of Machine Vision In Real-Time Quality Monitoring, Defect Classification, And Process Optimization. The Findings Highlight The Transformative Impact Of Machine Vision On Improving Efficiency, Reducing Errors, And Enhancing Overall Product Integrity In Quality Control Processes.

Keywords: Machine Vision, Quality Control, Precision Manufacturing, Artificial Intelligence, Imaging Technology, Defect Detection, Assembly Verification, Real-Time Monitoring, Process Optimization, Product Integrity.

201 "Human-Robot Interaction In Hazardous Environments: Enhancing Safety, Efficiency, And Collaborative Performance"

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Abstract: This Research Investigates The Critical Role Of Human-Robot Interaction (Hri) In Hazardous Environments, Exploring How Advanced Robotics And Collaborative Technologies Contribute To Improved Safety, Efficiency, And Overall Performance. The Study Delves Into The Design And Implementation Of Robotic Systems That Can Seamlessly Collaborate With Human Operators In Environments Where Traditional Human Presence May Pose Risks. It Examines How Human-Robot Teams Can Be Optimized For Tasks Such As Search And Rescue, Disaster Response, And Industrial Operations In Hazardous Conditions. The Research Also Considers Aspects Of User Interface Design, Communication Protocols, And Real-Time Decision-Making To Facilitate Effective Collaboration Between Humans And Robots In Challenging And Dangerous Scenarios.

Keywords: Human-Robot Interaction, Hazardous Environments, Robotics, Collaborative Technologies, Safety, Efficiency, Collaborative Performance, Search And Rescue, Disaster Response, Industrial Operations.

202 "Future Prospects Of 3d Printing In Space Exploration: Innovations, Challenges, And Extraterrestrial Applications"

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Abstract: This Research Explores The Evolving Landscape And Future Prospects Of 3d Printing Technology In The Realm Of Space Exploration. As A Disruptive Manufacturing Technique, 3d Printing Has Shown Great Promise In Addressing The Challenges Of Space Missions By Enabling On-Demand Fabrication Of Critical Components And Structures. The Study Investigates The Advancements And Innovations In 3d Printing Materials, Techniques, And Technologies That Can Be Applied In Space Environments. Additionally, It Addresses Challenges Related To Microgravity Printing, Material Limitations, And The Integration Of 3d Printing Into Long-Term Space Missions. The Research Provides Insights Into The Potential Applications Of 3d Printing In Constructing Habitats, Manufacturing Tools, And Supporting Sustainable Space Exploration Endeavors.

Keywords: 3d Printing, Space Exploration, Additive Manufacturing, Extraterrestrial Applications, Innovations, Challenges, On-Demand Fabrication, Space Habitats, Microgravity Printing, Future Prospects.

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Abstract: This Research Explores The Evolving Landscape Of Sustainable Transportation Solutions That Extend Beyond Conventional Vehicles. As The World Grapples With Environmental Challenges And Seeks Alternatives To Traditional Transportation Methods, The Study Delves Into Innovative And Eco-Friendly Modes Of Transportation. It Investigates Advancements In Electric Vehicles, Hydrogen Fuel Cell Technology, Autonomous Vehicles, And The Integration Of Sustainable Materials In Transportation Infrastructure. Additionally, The Research Addresses The Role Of Smart Transportation Systems, Shared Mobility Services, And Urban Planning Strategies In Creating A More Sustainable And Efficient Transportation Ecosystem. The Findings Contribute Insights Into The Future Of Transportation, Emphasizing The Need For Diverse And Environmentally Conscious Solutions.

Keywords: Sustainable Transportation, Electric Vehicles, Hydrogen Fuel Cells, Autonomous Vehicles, Eco-Friendly Infrastructure, Smart Transportation Systems, Shared Mobility, Urban Planning, Environmental Conservation, Future Transportation.

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Abstract: This Research Investigates The Pivotal Role Of Biomechanics In The Field Of Prosthetics And Orthotics, Emphasizing Its Influence On The Design, Development, And Optimization Of Assistive Devices. Biomechanics, As Applied To The Musculoskeletal System, Plays A Crucial Role In Understanding Human Movement, Enabling The Creation Of Prosthetic Limbs And Orthotic Devices That Closely Mimic Natural Biomechanical Functions. The Study Explores How Biomechanical Principles Guide The Design Process, Encompassing Materials Selection, Joint Mechanics, And Ergonomic Considerations To Enhance Functionality And Comfort For Users. Additionally, The Research Addresses Advancements Such As Sensor Integration And Smart Materials, Further Integrating Biomechanics Into The Evolution Of Prosthetics And Orthotics. The Findings Contribute To Improving The Quality Of Life For Individuals With Limb Loss Or Musculoskeletal Impairments.

Keywords: Biomechanics, Prosthetics, Orthotics, Assistive Devices, Musculoskeletal System, Joint Mechanics, Materials Selection, Ergonomic Design, Sensor Integration, Smart Materials, Quality Of Life.

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205 "Innovative Approaches To Vibration Control In Mechanical

Systems: Technologies And Strategies For Enhanced Performance"

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Abstract: This Research Explores Cutting-Edge Approaches To Vibration Control In Mechanical Systems, Investigating Innovative Technologies And Strategies Aimed At Improving Performance And Mitigating Undesirable Vibrations. The Study Delves Into Advancements In Active And Passive Vibration Control Methods, Such As Smart Materials, Tuned Mass Dampers, And Semi-Active Control Systems. Additionally, It Addresses The Integration Of Sensors, Actuators, And Advanced Algorithms To Create Adaptive Systems Capable Of Real-Time Vibration Response Adjustments. The Research Also Examines The Application Of These Innovative Approaches In Various Industries, Including Aerospace, Automotive, And Structural Engineering, Contributing To The Advancement Of Vibration Control Methodologies And Promoting Enhanced System Reliability.

Keywords: Vibration Control, Mechanical Systems, Innovative Approaches, Smart Materials, Tuned Mass Dampers, Semi-Active Control, Adaptive Systems, Sensors, Actuators, Advanced Algorithms, Performance Enhancement.

206 "Big Data Analytics For Predictive Maintenance In Manufacturing:

Transforming Operations Through Data-Driven Insights"

I Dr. Eleyaraja D, 2mr. Matliyarasan S, 3mr. Mohamed Burose A, Associate Professor, 2,3 Iv Year Students, Department Of Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Explores The Transformative Impact Of Big Data Analytics On Predictive Maintenance Strategies Within The Manufacturing Industry. Focusing On The Integration Of Data-Driven Insights, The Study Investigates How Advanced Analytics Techniques, Machine Learning Algorithms, And Sensor Technologies Contribute To The Early Detection Of Equipment Failures And Optimization Of Maintenance Schedules. The Research Addresses The Challenges And Opportunities Associated With Implementing Big Data Analytics In Manufacturing, Emphasizing Its Potential To Reduce Downtime, Enhance Operational Efficiency, And Extend The Lifespan Of Machinery. The Findings Contribute To A Comprehensive Understanding Of The Role Of Big Data Analytics In Revolutionizing Maintenance Practices And Promoting A Proactive And Cost-Effective Approach In Manufacturing Environments.

Keywords: Big Data Analytics, Predictive Maintenance, Manufacturing, Data-Driven Insights, Machine Learning, Sensor Technologies, Operational Efficiency, Equipment Failures, Maintenance Schedules, Cost-Effective Approach.

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"Advancements In Composite Materials For Structural Applications:

Innovations, Challenges, And Future Directions"

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Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Explores The Latest Advancements In Composite Materials And Their Significant Impact On Structural Applications. Investigating Innovations In Materials Science, Manufacturing Processes, And Design Methodologies, The Study Aims To Understand How Composites Contribute To Enhanced Structural Performance, Durability, And Sustainability. The Research Delves Into Applications Across Various Industries Such As Aerospace, Automotive, Construction, And Renewable Energy. Additionally, The Study Addresses Challenges Associated With Composite Materials, Including Manufacturing Scalability, Cost Considerations, And Environmental Impact. Looking Forward, The Research Offers Insights Into The Future Directions Of Composite Materials, Highlighting Their Evolving Role In Shaping The Landscape Of Structural Engineering.

Keywords: Composite Materials, Structural Applications, Innovations, Materials Science, Manufacturing Processes, Design Methodologies, Aerospace, Automotive, Construction, Renewable Energy, Sustainability, Challenges, Future Directions.

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"Smart Cities And The Role Of Mechanical Engineering In Urban Planning: Integrating

Innovation For Sustainable Urban Environments"

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Abstract: This Research Investigates The Pivotal Role Of Mechanical Engineering In The Development And Realization Of Smart Cities, Emphasizing The Integration Of Innovative Technologies For Sustainable Urban Planning. The Study Explores How Mechanical Engineering Principles Contribute To The Design And Implementation Of Smart Infrastructure, Transportation Systems, And Energy-Efficient Buildings. It Addresses Key Aspects Such As Smart Sensors, Energy Harvesting, And Advanced Materials, Highlighting Their Impact On Improving Urban Living Conditions, Reducing Environmental Impact, And Enhancing Overall City Functionality. The Research Also Examines Challenges Related To Integration, Scalability, And The Societal Implications Of Smart City Technologies. Ultimately, The Findings Provide Insights Into The Critical Role Of Mechanical Engineering In Shaping The Future Of Urban Environments.

Keywords: Smart Cities, Mechanical Engineering, Urban Planning, Innovation, Sustainable Infrastructure, Transportation Systems, Energy-Efficient Buildings, Smart Sensors, Advanced Materials, Urban Living Conditions.

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 Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Explores The Integration Of Cognitive Computing In Decision Support Systems For Mechanical Engineers, Emphasizing Its Role In Enhancing Problem-Solving Capabilities And Fostering Innovation. The Study Investigates How Cognitive Computing Technologies, Such As Artificial Intelligence And Machine Learning, Contribute To Intelligent Decision-Making Processes In Mechanical Engineering Applications: It Delves Into The Utilization Of Cognitive Systems For Data Analysis, Pattern Recognition, And Knowledge Extraction, Providing Valuable Support In Complex Problem-Solving Scenarios. The Research Also Considers The Implications Of Cognitive Computing On Engineering Creativity, Collaboration, And Efficiency. The Findings Contribute To A Comprehensive Understanding Of How Cognitive Computing Empowers Mechanical Engineers To Make Informed Decisions And Drive Innovation In Their Field

Keywords: Cognitive Computing, Decision Support, Mechanical Engineering, Artificial Intelligence, Machine Learning, Problem-Solving, Innovation, Data Analysis, Pattern Recognition, Engineering Creativity.

210 "Renewable Energy Integration In Conventional Power Systems: Challenges, Strategies, And Future Perspectives"

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 Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Investigates The Complex Process Of Integrating Renewable Energy Sources Into Conventional Power Systems, Addressing Challenges, Exploring Strategies, And Outlining Future Perspectives. The Study Delves Into The Technical, Economic, And Regulatory Challenges Associated With The Integration Of Renewable Energy, Examining Issues Such As Grid Stability, Variability, And The Need For Energy Storage Solutions. It Explores Of Policy Frameworks And Market Mechanisms In Fostering A Sustainable Transition. Ultimately, The Findings Contribute To The Understanding Of The Evolving Landscape Of Power Systems With Increased Renewable Energy Penetration.

Keywords: Renewable Energy Integration, Conventional Power Systems, Challenges, Strategies, Smart Grid Technologies, Demand-Side Management, Energy Storage, Policy Frameworks, Sustainable Transition.

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111 "Biofabrication Techniques For Tissue Engineering: Advancements, Applications, And Future Directions"

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Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Investigates The Rapidly Evolving Field Of Biofabrication Techniques For Tissue Engineering, Exploring The Latest Advancements, Applications, And Future Directions. The Study Delves Into Innovative Approaches Such As 3d Bioprinting, Electrospinning, And Cell Sheet Engineering, Highlighting Their Role In Creating Complex And Functional Tissues. It Examines The Materials Utilized In Biofabrication Processes, Including Biocompatible Polymers And Biomimetic Scaffolds. The Research Addresses Applications In Regenerative Medicine, Organ Transplantation, And Disease Modeling, Showcasing The Potential Of Biofabrication In Transforming Healthcare. Additionally, The Study Discusses Challenges Such As Vascularization, Scalability, And Regulatory Considerations, Offering Insights Into The Ongoing Efforts To Overcome These Hurdles And Propel Biofabrication Toward Broader Clinical Adoption

Keywords: Biofabrication, Tissue Engineering, 3d Bioprinting, Electrospinning, Cell Sheet Engineering, Biomimetic Scaffolds, Regenerative Medicine, Organ Transplantation, Disease Modeling, Healthcare Transformation, Challenges, Regulatory Considerations.

112 "Human-Centric Robotics For Rehabilitation And Assistance: Innovations, Challenges, And Future Directions"

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Abstract: This Research Explores The Transformative Role Of Human-Centric Robotics In The Domains Of Rehabilitation And Assistance, Focusing On Innovations, Challenges, And Future Directions. The Study Investigates How Advanced Robotics, Artificial Intelligence, And Human-Machine Interaction Technologies Contribute To Designing Assistive Robots Tailored For Rehabilitation Purposes. It Examines Applications In Physical Therapy, Mobility Assistance, And Cognitive Rehabilitation, Highlighting The Positive Impact On Patient Outcomes And Quality Of Life. The Research Also Addresses Challenges Such As Adaptability To Individual Needs, Safety Considerations, And Ethical Implications. By Providing Insights Into Ongoing Advancements And Potential Future Developments, The Findings Contribute To The Evolution Of Human-Centric Robotics In The Realm Of Rehabilitation And Assistance.

Keywords: Human-Centric Robotics, Rehabilitation, Assistance, Innovations, Artificial Intelligence, Human-Machine Interaction, Physical Therapy, Mobility Assistance, Cognitive Rehabilitation, Challenges, Future Directions.


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213 "Nanostructured Coatings: A Breakthrough In Tribological Performance For Advanced Engineering Applications"

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Mechanical Engineering, Indra Ganesan College Of Engineering.

Abstract: This Research Investigates The Revolutionary Impact Of Nanostructured Coatings On Tribological Performance, Focusing On Breakthroughs In Advanced Engineering Applications. The Study Explores The Design, Synthesis, And Application Of Nanocoatings, Emphasizing Their Role In Minimizing Friction, Wear, And Improving The Overall Durability Of Materials. It Delves Into Various Nanomaterials Employed In Coatings, Such As Graphene, Carbon Nanotubes, And Nanocomposites, Showcasing Their Unique Tribological Properties. The Research Evaluates The Influence Of Nanostructured Coatings In Diverse Industries, Including Aerospace, Automotive, And Manufacturing. Additionally, The Study Addresses Challenges Related To Scalability, Adhesion, And Environmental Impact. By Providing Insights Into The Transformative Potential Of Nanostructured Coatings, The Research Contributes To The Advancement Of Tribological Science And Engineering.

Keywords: Nanostructured Coatings, Tribological Performance, Nanocoatings, Advanced Engineering Applications, Graphene, Carbon Nanotubes, Nanocomposites, Friction Reduction, Wear Resistance, Aerospace, Automotive, Manufacturing, Scalability, Adhesion, Environmental Impact.

214 "Self-Lubricating Materials: Paving The Way For Maintenance-Free Surfaces In Engineering Applications"

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Abstract: This Research Explores The Innovative Realm Of Self-Lubricating Materials And Their Potential To Revolutionize Engineering Applications By Creating Maintenance-Free Surfaces. The Study Investigates The Design, Properties, And Applications Of Materials Engineered To Exhibit Inherent Lubrication, Minimizing Friction, Wear, And The Need For External Lubricants. It Delves Into Various Self-Lubricating Technologies, Including Solid Lubricant Embedded Composites, Coatings, And Materials With Intrinsic Lubricating Properties. The Research Evaluates The Performance Of Self-Lubricating Materials In Diverse Engineering Environments, From Cost-Effectiveness, Providing Insights Into The Future Prospects Of Self-Lubricating Materials In Achieving Maintenance-Free Surfaces.

Keywords: Self-Lubricating Materials, Maintenance-Free Surfaces, Solid Lubricants, Engineered Composites, Lubricating Coatings, Friction Reduction, Wear Resistance, Aerospace, Industrial Machinery, Durability, Scalability, Cost-Effectiveness, Future Prospects.

215 "Tribological Innovations In Aerospace Engineering Materials: Advancements, Challenges, And Flight-Worthy Solutions"

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Abstract: This Research Explores The Cutting-Edge Field Of Tribological Innovations In Aerospace Engineering Materials, Focusing On Advancements, Challenges, And The Development Of Flight-Worthy Solutions. The Study Investigates How Novel Materials And Surface Engineering Techniques Contribute To Enhancing The Tribological Performance Of Components Critical To Aerospace Applications. It Delves Into Advancements Such As Nanocomposite Coatings, Solid Lubricant Systems, And Specialized Materials Tailored For Extreme Aerospace Conditions. The Research Evaluates The Impact Of Tribological Innovations On Fuel Efficiency, Maintenance Intervals, And Overall Reliability Of Aerospace Systems. Additionally, The Study Addresses Challenges Related To Material Compatibility, Environmental Factors, And Stringent Aerospace Regulations, Providing Insights Into The Future Trajectory Of Tribological Advancements In Aerospace Engineering.

Keywords: Tribological Innovations, Aerospace Engineering Materials, Nanocomposite Coatings, Solid Lubricants, Flight-Worthy Solutions, Material Compatibility, Fuel Efficiency, Maintenance Intervals, Reliability, Aerospace Systems, Challenges, Advancements, Future Prospects.

216 "Understanding Tribofilm Formation For Enhanced Surface Protection: Mechanisms, Applications, And Future Perspectives"

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Abstract: This Research Delves Into The Intricate World Of Tribofilm Formation, Investigating The Mechanisms, Applications, And Future Perspectives Of This Process For Achieving Enhanced Surface Protection. The Study Explores How Tribofilms, Formed During Friction And Wear Interactions, Contribute To Reducing Friction, Preventing Wear, And Enhancing The Overall Durability Of Surfaces. It Delves Into The Chemistry And Physics Behind Tribofilm Formation, Examining The Role Of Additives, Lubricants, And Environmental Factors In Shaping The Properties Of These Protective Films. The Research Evaluates Applications Across Associated With Tribofilm Stability, Scalability, And Tailoring For Specific Materials, Providing Insights Into The Potential Future Developments In This Field.

Keywords: Tribofilm Formation, Surface Protection, Friction Reduction, Wear Prevention, Durability, Additives, Lubricants, Chemistry, Physics, Applications, Automotive, Manufacturing, Energy, Aerospace, Challenges, Future Perspectives.

217 "Friction And Wear Reduction Through Surface Texturing
Techniques:Mechanisms, Applications, And Advances"

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Abstract: This Research Explores The Diverse Landscape Of Surface Texturing Techniques Aimed At Reducing Friction And Wear, Investigating The Underlying Mechanisms, Applications, And Recent Advances In This Field. The Study Delves Into The Principles Of Surface Texturing, Examining How Controlled Patterns Of Micro- And Nanostructures Influence Tribological Behavior. It Explores Applications Across Various Industries, From Automotive And Aerospace To Manufacturing And Biomedical Engineering. The Research Evaluates The Effectiveness Of Different Surface Texturing Methods, Including Laser Texturing, Chemical Etching, And Additive Manufacturing, In Achieving Friction And Wear Reduction. Additionally, The Study Addresses Challenges Such As Scalability, Durability, And Material Compatibility, Providing Insights Into The Evolving Role Of Surface Texturing In Enhancing Tribological Performance.

Keywords: Surface Texturing, Friction Reduction, Wear Reduction, Tribology, Microstructures, Nanostructures, Applications, Automotive, Aerospace, Manufacturing, Biomedical Engineering, Laser Texturing, Chemical Etching, Additive Manufacturing, Challenges, Advances.

218 "Biodegradable Lubricants: A Sustainable Approach To Tribology For Eco-Friendly
Applications"

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Abstract: This Research Explores The Sustainable And Eco-Friendly Aspects Of Biodegradable Lubricants, Examining Their Role In Tribology And Their Applications Across Various Industries. The Study Investigates The Formulation, Properties, And Performance Of Biodegradable Lubricants, Emphasizing Their Potential To Reduce Environmental Impact And Enhance Sustainability. It Delves Into The Mechanisms By Which These Lubricants Provide Effective Friction Reduction And Wear Protection. The Research Evaluates Applications In Automotive, Industrial Machinery, And Other Sectors Where Environmentally Friendly Lubrication Is A Priority. Additionally, The Study Advances And Future Prospects Of Biodegradable Lubricants In The Field Of Tribology.

Keywords: Biodegradable Lubricants, Sustainable Tribology, Eco-Friendly Lubrication, Environmental Impact, Friction Reduction, Wear Protection, Automotive, Industrial Machinery, Applications, Challenges, Advancements, Future Prospects.

219 "Emerging Trends In Triboelectric Nanogenerators For Energy Harvesting: Innovations, Applications, And Future Directions"

1. Mr. Kamalakkannan V, 2. Mr. Suseendran V, 3. Mr. Syed Kaja S,
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Abstract: This Research Explores The Cutting-Edge Field Of Triboelectric Nanogenerators (Tengs) For Energy Harvesting, Focusing On Emerging Trends, Innovations, Applications, And Future Directions. The Study Investigates The Principles Underlying Tengs, Examining How Friction-Induced Electrical Charges Can Be Harnessed For Efficient Energy Conversion. It Delves Into Recent Advancements Such As Flexible And Wearable Tengs, Self-Powered Sensors, And Integration With Internet Of Things (Iot) Devices. The Research Evaluates Applications In Future Prospects Of Tengs For Energy Harvesting.

Keywords: Triboelectric Nanogenerators, Energy Harvesting, Innovations, Applications, Future Directions, Flexible Tengs, Wearable Energy Harvesters, Self-Powered Sensors, Iot Integration, Healthcare, Electronics, Environmental Monitoring, Challenges, Advancements.

220 "Polymer Composites For High-Performance Wear-Resistant Applications: Advances, Challenges, And Prospects"

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Abstract: This Research Investigates The Utilization Of Polymer Composites In High- Performance Wear-Resistant Applications, Exploring Recent Advances, Challenges, And Future Prospects In The Field. The Study Delves Into The Design, Fabrication, And Characterization Of Polymer Composites Engineered To Exhibit Exceptional Wear Resistance. It Examines The Incorporation Of Reinforcing Fillers, Nanomaterials, And Novel Polymer Matrices To Enhance The Mechanical Properties And Durability Of These Composites. The Research Evaluates Applications Across Industries Such As Automotive, Aerospace, And Manufacturing Where Wear-Resistant Materials Are Crucial For Extended Component Lifetimes. Additionally, The Study Addresses Challenges Related To Scalability, Cost-Effectiveness, And Material Compatibility, Providing Insights Into The Ongoing Developments And Potential Future Directions In The Realm Of Polymer Composites For Wear-Resistant Applications.

Keywords: Polymer Composites, Wear-Resistant Applications, Advances, Challenges, Prospects, Reinforcing Fillers, Nanomaterials, Mechanical Properties, Durability, Automotive, Aerospace, Manufacturing, Scalability, Cost-Effectiveness, Material Compatibility.

221 "Application Of Machine Learning In Mechanical System Diagnostics: Enhancing Fault Detection And Predictive Maintenance"

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Abstract: This Research Explores The Application Of Machine Learning Techniques In The Domain Of Mechanical System Diagnostics, Focusing On Their Role In Enhancing Fault Detection And Enabling Predictive Maintenance Strategies. The Study Investigates How Machine Learning Algorithms, Including Supervised And Unsupervised Learning Methods, Can Analyze Complex Data Sets From Mechanical Systems To Identify Abnormalities And Predict Potential Failures. It Delves Into The Integration Of Sensors, Data Analytics, And Advanced Algorithms To Create Intelligent Diagnostic Systems Capable Of Real-Time Monitoring And Analysis. The Research Evaluates Applications Across Various Industries, Such As Manufacturing, Automotive, And Aerospace, Where Efficient Diagnostics Contribute To Increased Reliability And Reduced Downtime. Additionally, The Study Addresses Challenges Related To Data Quality, Model Interpretability, And The Implementation Of Machine Learning In Real-World Mechanical Systems.

Keywords: Machine Learning, Mechanical System Diagnostics, Fault Detection, Predictive Maintenance, Supervised Learning, Unsupervised Learning, Data Analytics, Sensors, Real-Time Monitoring, Manufacturing, Automotive, Aerospace, Challenges, Applications.

222 "Advancements In Tribocorrosion: Challenges And Solutions In The Intersection Of Wear And Corrosion"

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Abstract: This Research Investigates Recent Advancements In Tribocorrosion, Exploring The Challenges Posed At The Intersection Of Wear And Corrosion And Presenting Innovative Solutions. The Study Delves Into The Complex Mechanisms Underlying Tribocorrosion Phenomena, Examining The Simultaneous Occurrence Of Mechanical Wear And Chemical Corrosion In Materials Subjected To Sliding Or Rubbing Contact In Corrosive Environments. It Addresses Challenges Such As Material Degradation, Surface Damage, And The Synergistic Effects Of Tribocorrosion On Component Reliability. The Research Evaluates Emerging Solutions, Including Novel Materials, Coatings, And Surface Treatments Designed To Mitigate Tribocorrosion And Enhance The Longevity Of Components. The Study Provides Valuable Insights Into The Ongoing Developments And Future Prospects In The Field Of Tribocorrosion.

Keywords: Tribocorrosion, Wear, Corrosion, Advancements, Challenges, Solutions, Material Degradation, Surface Damage, Synergistic Effects, Novel Materials, Coatings, Surface Treatments, Experimental Testing.

223 "Fluid Dynamics In Novel Propulsion Systems: Insights, Innovations, And Future

Directions"

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Abstract: This Research Explores The Intricate Role Of Fluid Dynamics In Novel Propulsion Systems, Providing Insights Into The Underlying Principles, Showcasing Recent Innovations, And Outlining Future Directions In The Field. The Study Delves Into The Aerodynamics And Hydrodynamics Of Unconventional Propulsion Technologies, Including But Not Limited To Electric Propulsion, Ion Drives, And Bio-Inspired Propulsion. It Addresses The Fluid Dynamics Challenges And Opportunities Associated With These Novel Systems, Such As High-Speed Flows, Plasma Dynamics, And Complex Interactions. The Research Evaluates Advancements In Computational Fluid Dynamics (Cfd) Simulations And Experimental Methodologies Applied To Understand And Optimize Fluid Behavior In Innovative Propulsion Designs. Additionally, The Study Considers The Environmental Impact And Efficiency Improvements Achieved Through Advancements In Fluid Dynamic Understanding Within These Propulsion Systems.

Keywords: Fluid Dynamics, Novel Propulsion Systems, Aerodynamics, Hydrodynamics, Electric Propulsion, Ion Drives, Bio-Inspired Propulsion, Computational Fluid Dynamics (Cfd), Innovations, Challenges, Environmental Impact, Efficiency Improvements, Future Directions.

224 "Green Tribology: Environmentally Friendly Solutions For Wear Reduction And Sustainable Engineering Practices"

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Abstract: This Research Explores The Principles And Applications Of Green Tribology, Focusing On Environmentally Friendly Solutions For Wear Reduction And The Promotion Of Sustainable Engineering Practices. The Study Investigates Innovative Approaches And Materials Designed To Minimize Friction, Wear, And Lubricant-Related Environmental Impact. It Delves Into The Development Of Bio-Based Lubricants, Eco-Friendly Additives, And Sustainable Surface Treatments To Enhance Tribological Performance. The Research Evaluates Applications Across Various Industries, Emphasizing The Role Of Green Tribology In Achieving Challenges Related To Scalability, Commercial Viability, And The Integration Of Green Tribology Principles Into Industrial Practices, Providing Insights Into The Evolving Landscape Of Sustainable Wear Reduction.

Keywords: Green Tribology, Environmentally Friendly Solutions, Wear Reduction, Sustainable Engineering Practices, Bio-Based Lubricants, Eco-Friendly Additives, Sustainable Surface Treatments, Sustainability

225 "Advancements In Tribology For Wear-Resistant Surfaces: Innovations, Challenges, And Future Directions"

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Abstract: This Research Explores Recent Advancements In The Field Of Tribology With A Focus On Developing Wear-Resistant Surfaces. The Study Investigates Innovative Technologies, Materials, And Coatings Designed To Enhance The Durability And Performance Of Surfaces Subjected To Friction And Wear. It Delves Into The Mechanisms Of Wear, Lubrication Strategies, And The Role Of Advanced Materials Such As Nanocomposites, Hard Coatings, And Self-Lubricating Materials In Mitigating Surface Degradation. The Research Evaluates Applications Across Diverse Industries, From Manufacturing And Automotive To Aerospace, Where Wear-Resistant Surfaces Are Crucial For Prolonged Component Lifetimes. Additionally, The Study Addresses Challenges Associated With Real- World Implementation, Scalability, And Sustainability, Providing Insights Into The Ongoing Developments And Future Prospects Of Tribological Advancements For Wear-Resistant Surfaces.

Keywords: Tribology, Wear-Resistant Surfaces, Advancements, Innovations, Challenges, Nanocomposites, Hard Coatings, Self-Lubricating Materials, Manufacturing, Automotive, Aerospace, Durability, Scalability, Sustainability, Future Prospects.

226 "Biomimicry In Tribology: Learning From Nature's Wear-Resistant Designs For Innovative Engineering Solutions"

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Abstract: This Research Investigates The Application Of Biomimicry In Tribology, Exploring How Nature's Wear-Resistant Designs Can Inspire Innovative Engineering Solutions. The Study Delves Into The Examination Of Biological Systems, Such As Animal Joints, Insect Cuticles, And Plant Surfaces, To Uncover Principles And Structures That Impart Remarkable Resistance To Wear And Friction. It Explores How These Natural Adaptations Can Be Mimicked And Applied In The Development Of Engineered Materials, Surfaces, And Lubrication Strategies. The Research Evaluates The Potential Of Biomimicry In Creating Sustainable And Bio-Inspired Wear-Resistant Solutions Across Challenges Related To The Translation Of Biological Designs Into Practical Engineering Solutions, Providing Insights Into The Future Possibilities Of Biomimicry In Tribology.

Keywords: Biomimicry, Tribology, Wear-Resistant Designs, Engineering Solutions, Bio-Inspired Materials,

227 "Biodegradable Lubricants: A Sustainable Approach To Tribology For Eco-Friendly Applications"

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Abstract: This Research Explores The Sustainable And Eco-Friendly Aspects Of Biodegradable Lubricants, Examining Their Role In Tribology And Their Applications Across Various Industries. The Study Investigates The Formulation, Properties, And Performance Of Biodegradable Lubricants, Emphasizing Their Potential To Reduce Environmental Impact And Enhance Sustainability. It Delves Into The Mechanisms By Which These Lubricants Provide Effective Friction Reduction And Wear Protection. The Research Evaluates Applications In Automotive, Industrial Machinery, And Other Sectors Where Environmentally Friendly Lubrication Is A Priority. Additionally, The Study Addresses Challenges Such As Temperature Stability, Compatibility With Materials, And Commercial Availability, Providing Insights Into The Advancements And Future Prospects Of Biodegradable Lubricants In The Field Of Tribology.

Keywords: Biodegradable Lubricants, Sustainable Tribology, Eco-Friendly Lubrication, Environmental Impact, Friction Reduction, Wear Protection, Automotive, Industrial Machinery, Applications, Challenges, Advancements, Future Prospects.

228 "Advancements In Tribocorrosion: Challenges And Solutions In The Intersection Of Wear And Corrosion"

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Abstract: This Research Investigates Recent Advancements In Tribocorrosion, Exploring The Challenges Posed At The Intersection Of Wear And Corrosion And Presenting Innovative Solutions. The Study Delves Into The Complex Mechanisms Underlying Tribocorrosion Phenomena, Examining The Simultaneous Occurrence Of Mechanical Wear And Chemical Corrosion In Materials Subjected To Sliding Or Rubbing Contact In Corrosive Environments. It Addresses Challenges Such As Material Degradation, Surface Damage, And The Synergistic Effects Of Tribocorrosion On Component Reliability. The Research Evaluates Emerging Solutions, Including Novel Materials, Coatings, And Surface Treatments Designed To Mitigate Tribocorrosion And Enhance The Durability Of Components. Additionally, The Study Considers Challenges In Experimental Testing And Modelling Approaches, Providing Insights Into The Ongoing Developments And Future Prospects In The Field Of Tribocorrosion.

Keywords: Tribocorrosion, Wear, Corrosion, Advancements, Challenges, Solutions, Material Degradation, Surface Damage, Synergistic Effects, Novel Materials, Coatings, Surface Treatments, Experimental Testing.

229 "Fracture Mechanics And Structural Integrity In Engineering Design: Principles, Applications, And Advances"

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Abstract: This Research Explores The Fundamental Principles, Applications, And Recent Advances In Fracture Mechanics And Structural Integrity, Emphasizing Their Crucial Role In Engineering Design. The Study Delves Into The Understanding Of Crack Initiation, Propagation, And Failure Mechanisms In Materials And Structures. It Investigates How Fracture Mechanics Principles Are Applied To Assess The Integrity Of Components In Various Engineering Disciplines, Including Aerospace, Civil, And Mechanical Engineering. The Research Evaluates Advancements In Experimental Techniques, Analytical Models, And Numerical Simulations For Predicting And Preventing Fractures. Additionally, The Study Addresses The Challenges Associated With Designing Structures For Optimal Safety And Durability, Providing Insights Into The Ongoing Developments And Future Directions In Fracture Mechanics And Structural Integrity.

Keywords: Fracture Mechanics, Structural Integrity, Engineering Design, Crack Propagation, Failure Mechanisms, Aerospace Engineering, Civil Engineering, Mechanical Engineering, Experimental Techniques,

230 "Self-Lubricating Materials: Paving The Way For Maintenance-Free Surfaces In Engineering Applications"

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Abstract: This Research Investigates The Transformative Potential Of Self-Lubricating Materials In Engineering Applications, Focusing On Their Ability To Create Maintenance-Free Surfaces. The Study Explores The Design, Properties, And Applications Of Materials Engineered To Exhibit Inherent Lubrication, Thereby Minimizing Friction, Wear, And The Need For External Lubricants. It Delves Into Various Self-Lubricating Technologies, Including Solid Lubricant Embedded Composites, Coatings, And Materials With Intrinsic Lubricating Properties. The Research Evaluates The Performance Of Self-Lubricating Materials In Diverse Engineering Environments, From Aerospace Components To Industrial Machinery. Additionally, The Study Addresses Challenges Such As Durability, Scalability, And Material Compatibility. Providing Insights Into The Ongoing Developments And Potential Future Directions In The Realm Of Self-Lubricating Materials For Maintenance-Free Surfaces.

Keywords: Self-Lubricating Materials, Maintenance-Free Surfaces, Solid Lubricants, Engineered Composites, Lubricating Coatings, Friction Reduction, Wear Resistance, Aerospace, Industrial Machinery, Durability, Scalability, Material Compatibility, Future Prospects.

231 "Enhancing Energy Efficiency In Hvac Systems Through Smart Technologies: Innovations, Challenges, And Sustainable Solutions"

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Abstract: This Research Explores The Integration Of Smart Technologies To Enhance Energy Efficiency In Heating, Ventilation, And Air Conditioning (Hvac) Systems. The Study Investigates Innovative Approaches Such As Iot (Internet Of Things), Machine Learning Algorithms, And Sensor Networks To Optimize Hvac Operations For Improved Energy Performance. It Delves Into The Development Of Smart Controls, Predictive Maintenance Strategies, And Adaptive Systems Designed To Respond Dynamically To Environmental Conditions. The Research Evaluates Applications Across Various Sectors, Including Commercial Buildings, Residential Spaces, And Industrial Facilities, Highlighting The Potential For Reducing Energy Consumption And Environmental Impact. Additionally, The Study Addresses Challenges Related To Implementation Costs, Interoperability, And User Acceptance, Providing Insights Into The Ongoing Developments And Future Prospects Of Smart Technologies In Enhancing Energy Efficiency Within Hvac Systems.

Keywords: Hvac Systems, Energy Efficiency, Smart Technologies, Iot, Machine Learning, Sensor Networks, Smart Controls, Predictive Maintenance, Adaptive Systems, Commercial Buildings, Residential Spaces, Industrial Facilities, Challenges, Innovations, Sustainable Solutions.

232 "Techniques For Accurate Wear And Friction Analysis: Advances, Challenges, And Precision Engineering"

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Abstract: This Research Investigates The Advancements, Challenges, And Precision Engineering Techniques Employed In Achieving Accurate Wear And Friction Analysis. The Study Explores Innovative Methodologies, Experimental Setups, And Analytical Tools Designed To Precisely Measure And Characterize Wear And Friction Behavior In Various Materials And Interfaces. It Delves Into The Application Of Advanced Surface Analysis Techniques, Including Microscopy, Spectroscopy, And Profilometry, To Capture Minute Changes And Surface Interactions. The Research Evaluates The Integration Of Computational Methods, Such As Finite Element Analysis Wear Mechanisms, Providing Insights Into The Evolving Landscape Of Techniques For Achieving High-Precision Wear And Friction Analysis

Keywords: Wear Analysis, Friction Analysis, Precision Engineering, Surface Analysis Techniques, Microscopy, Spectroscopy, Profilometry, Computational Methods, Finite Element Analysis, Molecular Dynamics Simulations, Challenges, Advances, Standardization, Wear Mechanisms, Precision Wear Measurement.

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233 "Nature's Wear-Resistant Designs: Insights For Biomimetic Engineering Applications"

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Abstract: This Research Explores The Wear-Resistant Designs Found In Nature And Investigates Their Potential Applications In Biomimetic Engineering. The Study Delves Into The Examination Of Biological Systems Such As Animal Joints, Insect Exoskeletons, And Plant Surfaces To Uncover Principles And Structures That Impart Remarkable Resistance To Wear And Friction. It Explores How These Natural Adaptations Can Inspire Innovative Biomimetic Engineering Solutions For Creating Materials, Surfaces, And Lubrication Strategies With Enhanced Wear Resistance. The Research Evaluates The Transferability Of These Designs Across Various Industries, From Manufacturing And Aerospace To Biomedical Applications, Showcasing The Potential Benefits Of Biomimicry In Wear-Resistant Engineering. Additionally, The Study Addresses Challenges In Translating Biological Designs Into Practical Applications, Providing Insights Into The Future Possibilities Of Biomimetic Wear-Resistant Solutions.

Keywords: Biomimicry, Wear-Resistant Designs, Biomimetic Engineering, Nature-Inspired Materials, Surfaces, Lubrication Strategies, Manufacturing, Aerospace, Biomedical Applications, Challenges, Future Possibilities.

234 "Smart Materials And Their Applications In Mechanical Engineering: Innovations, Challenges, And Future Perspectives"

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Abstract: This Research Explores The Innovative Realm Of Smart Materials And Their Diverse Applications In Mechanical Engineering. The Study Investigates Materials With Responsive And Adaptive Properties, Such As Shape Memory Alloys, Piezoelectric Materials, And Magnetostrictive Materials. It Delves Into The Integration Of Smart Materials In Actuators, Sensors, And Structural Components, Showcasing Their Ability To Enhance The Functionality And Performance Of Mechanical Systems. The Research Evaluates Applications Across Various Mechanical Engineering Domains, Including Robotics, Aerospace, And Biomedical Engineering. Highlighting The Transformative Impact Of Smart Materials On Design And Functionality. Additionally, Ongoing Developments And Future Prospects Of Smart Materials In Mechanical Engineering.

Keywords: Smart Materials, Mechanical Engineering, Innovations, Challenges, Shape Memory Alloys, Piezoelectric Materials, Magnetostrictive Materials, Actuators, Sensors, Structural Components, Robotics.

235 "Role Of Artificial Intelligence In Predictive Tribology: Advancements, Challenges, And Future Directions"

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Abstract: This Research Explores The Pivotal Role Of Artificial Intelligence (Ai) In Advancing Predictive Tribology, Focusing On Innovations, Challenges, And Future Directions. The Study Investigates How Machine Learning Algorithms, Neural Networks, And Data Analytics Are Utilized To Predict Friction, Wear, And Lubrication Performance In Various Tribological Applications. It Delves Into The Integration Of Ai With Experimental And Simulation Methods To Create Accurate Predictive Models For Tribological Behavior. The Research Evaluates Applications Across Industries, Including Automotive, Manufacturing, And Energy, Showcasing The Potential Of Ai In Optimizing Component Design And Maintenance Strategies. Additionally, The Study Addresses Challenges Related To Data Quality, Model Interpretability, And Real-World Implementation, Providing Insights Into The Ongoing Developments And Future Prospects Of Ai In Predictive Tribology.


Keywords: Artificial Intelligence, Predictive Tribology, Machine Learning, Neural Networks, Data Analytics, Friction, Wear, Lubrication, Automotive, Manufacturing, Energy, Advancements, Challenges, Future Directions.

236 "Emerging Trends In Triboelectric Nanogenerators For Energy Harvesting: Innovations, Applications, And Future Directions"

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Abstract: This Research Explores The Cutting-Edge Field Of Triboelectric Nanogenerators (Tengs) For Energy Harvesting, Focusing On Emerging Trends, Innovations, Applications, And Future Directions. The Study Investigates The Principles Underlying Tengs, Examining How Friction-Induced Electrical Charges Can Be Harnessed For Efficient Energy Conversion. It Delves Into Recent Advancements Such As Flexible And Wearable Tengs Of Tengs In Providing Sustainable And Self-Sufficient Power Sources. Additionally, The Study Addresses Challenges Such As Scalability, Material Selection, And System Optimization, Providing Insights Into The Ongoing Developments And Future Prospects Of Tengs For Energy Harvesting.

Keywords: Triboelectric Nanogenerators, Energy Harvesting, Innovations, Applications, Future Directions, Flexible Tengs, Wearable Energy Harvesters, Self-Powered Sensors, Iot Integration, Healthcare, Electronics, Environmental Monitoring, Challenges, Advancements.


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**237 "Friction And Wear Reduction Through Surface Texturing
Techniques: Mechanisms, Applications, And Advances"**

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Abstract: This Research Investigates The Diverse Strategies Employed In Reducing Friction And Wear Through Surface Texturing Techniques, Emphasizing The Underlying Mechanisms, Practical Applications, And Recent Advances. The Study Delves Into The Principles Of Surface Texturing, Exploring How Controlled Patterns Of Micro- And Nanostructures Influence Tribological Behavior. It Examines Applications Across Various Industries, From Automotive And Aerospace To Manufacturing And Biomedical Engineering, Where Improved Friction And Wear Resistance Are Crucial. The Research Evaluates The Effectiveness Of Different Surface Texturing Methods, Including Laser Texturing, Chemical Etching, And Additive Manufacturing, In Achieving Enhanced Tribological Performance. Additionally, The Study Addresses Challenges Such As Scalability, Durability, And Material Compatibility, Providing Insights Into The Evolving Role Of Surface Texturing In Enhancing Friction And Wear Reduction.

Keywords: Friction Reduction, Wear Reduction, Surface Texturing Techniques, Tribology, Microstructures, Nanostructures, Applications, Automotive, Aerospace, Manufacturing, Biomedical Engineering, Laser Texturing, Chemical Etching, Additive Manufacturing, Challenges, Advances.

**238 "Human-Machine Collaboration In Manufacturing Processes:
Enhancing Efficiency, Quality, And Innovation"**

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Abstract: This Research Explores The Evolving Landscape Of Human-Machine Collaboration In Manufacturing Processes, Focusing On How The Integration Of Human Intelligence With Advanced Technologies Enhances Efficiency, Quality, And Innovation. The Study Investigates Collaborative Robotics, Artificial Intelligence, And Augmented Reality As Key Enablers In Fostering Seamless Interaction Between Human Operators And Related To Safety, Training, And Trust In Human-Machine Collaboration, Providing Insights Into The Ongoing Developments And Future Prospects Of This Transformative Approach In Manufacturing.

Keywords: Human-Machine Collaboration, Manufacturing Processes, Efficiency, Quality, Innovation, Collaborative Robotics, Artificial Intelligence, Augmented Reality, Automotive, Aerospace, Electronics, Safety, Training, Trust, Future Prospects.

239 "Green Tribology: Environmentally Friendly Solutions For Wear Reduction And Sustainable Engineering Practices"

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Abstract: This Research Delves Into The Principles And Applications Of Green Tribology, Emphasizing Environmentally Friendly Solutions For Wear Reduction And The Promotion Of Sustainable Engineering Practices. The Study Explores Innovative Approaches And Materials Designed To Minimize Friction, Wear, And Lubricant-Related Environmental Impact. It Delves Into The Development Of Bio-Based Lubricants, Eco-Friendly Additives, And Sustainable Surface Treatments To Enhance Tribological Performance. The Research Evaluates Applications Across Various Industries, Emphasizing The Role Of Green Tribology In Achieving Sustainability Goals And Reducing The Ecological Footprint Of Mechanical Systems. Additionally, The Study Addresses Challenges Related To Scalability, Commercial Viability, And The Integration Of Green Tribology Principles Into Industrial Practices, Providing Insights Into The Evolving Landscape Of Sustainable Wear Reduction.

Keywords: Green Tribology, Environmentally Friendly Solutions, Wear Reduction, Sustainable Engineering Practices, Bio-Based Lubricants, Eco-Friendly Additives, Sustainable Surface Treatments, Sustainability Goals, Ecological Footprint, Challenges, Applications, Advancements, Future Prospects.

240 **ELECTROMAGNETIC HIGH FREQUENCY TRANSIENTS MEASUREMENTS OF SOME HOUSEHOLD DEVICES**

DR. ANUSUYA M Ranjith R,3. Prakashraj R

Abstract:

Electric and electronic devices are contributing to our exposure to wide range of electromagnetic frequencies, therefore causing an increase of electromagnetic pollution in both rural and urban environments. This exposure to spiking and frequencies of electromagnetic radiation on overburdened wires has been known as "dirty electricity". Furthermore, it is more specifically the "transients" and "harmonics", which are tiny spikes in the electricity turning house wiring into an antenna, radiating the formed spikes' frequencies. This arising dirtiness has the potential to cause and exacerbate health problems existing in some people. Some experts consider dirty electricity to be the most biologically active electromagnetic pollution. Although the exact magnitude of effects of EMF on population health cannot be assessed, largely due to misclassification and bias in the assessment of, most studies suggest that risks, if present, are likely to be moderate. Given that most people nowadays are routinely exposed to EMF, this would however imply that potentially large numbers of people could suffer from adverse health effects or diminished well being related to EMF exposure. Large research study, such as for example the INTERPHONE, have been initiated to address public concern regarding effects of EMF. Some of the incidence of

headaches, general weakness, dry eye or mouth, facial flushing, depression, mood, dizziness, pain, incidence of asthmatic symptoms and other respiratory symptoms, skin irritation, clarity of thought and more energy. Some students with attention deficit disorder (ADD) or attention deficit hyperactivity (ADHD) might be more sensitive to EMF energy.

In this study, we would like to emphasize dirty electricity has some harmful effects on human body. For this purpose, electromagnetic spectrum analysis and electric and magnetic field measurements of some household devices like hair dryer, old ray tube television, blender, electrical heater, toaster, vacuum cleaner and microwave oven are measured and discussed.

Keywords: Electromagnetic Household Devices, High Frequency Transient, Measurement

241 EFFECT OF CO ADDITION ON THE ELECTRICAL PROPERTIES OF NI-MN-ONTC THERMISTORS

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Aaroothira U,3. Abinash T

Abstract:

Temperature sensors such as thermocouples, resistance temperature detectors, NTC thermistors are widely used for monitoring of temperature. NTC thermistors have various advantages such as fast response time, low cost, small size, large changes in resistance versus temperature.

Nickel manganite based NTC thermistors are derived from two or more metal oxide powders such as manganese oxide, iron oxide, cobalt oxide, nickel oxide, copper oxide, and zinc oxide. In commercial spinel-based NTC thermistors, the material constant "B" is between 2000 and 5000 K and sensitivity coefficient at 25°C is in the range between -2.2 and -5.5 %/K.

In this study, the influence of Co addition on the electrical properties of Ni_{0.5}Co_xMn_{2.5-x}O₄ (x=0.5,

and 1.1) NTC thermistors was investigated. The samples manufactured by the conventional solid-state reaction method. The powders were calcined at 900°C for 2 hours and were pressed to form disc shaped samples. The samples were sintered at 1300°C for 5 hours in air. The bulk density of the sintered samples was calculated using Archimedes principle

Keywords: Cobalt Oxide, Electrical Properties, NTC Thermistors

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242 DESIGN OF A SOLAR - HIGH TEMPERATURE PEM FUEL CELL HYBRID SYSTEM FOR MICRO COMBINED HEAT AND POWER APPLICATION FOR RENEWABLE ENERGY COMMUNITIES

DR. ANUSUYA M

Alagu Sundari S,3. Alwin Sesbrit Y

Abstract:

Hybrid system has a combination of mainly different renewable energy sources available and stabilizes the system which ensures the stable output from sources and reduces the bonage on climate changes. Hybrid power generation system with PV panels is a fast-growing technology and it is expected that it will play a major role in the future global electricity generation with hydrogen energy. The aim of this study is to provide a theoretical design and analysis for a renewable energy community electricity and heat demand in Ankara (Turkey). In the present study, a high temperature proton exchange membrane fuel cell stack design and analyze for micro-CHP with using photovoltaic (PV) panels and electrolyzer. Integration of PV panel system powers the electrolyzer in order to generate enough hydrogen and oxygen from water to meet energy demand of the communities. This design is environmental, efficient, and independent of coal and oil. Thus, World energy demand is raising quickly with the increasing population and industrialization in the future fossil fuels like coal, natural gas and oil do not meet our energy demand. Renewable energy sources have importance for these reasons. Alternative energy sources are mostly used in hybrid systems in order to increase system overall efficiency. The study shows that this hybrid power micro combined heat and power system provides a viable option for powering stand-alone energy communities in a self-sustained manner.

Keywords: Solar Energy, Hydrogen Energy, Hybrid System, Renewable Energy Communities

143 PRINCIPLES, OBJECTIVES AND TECHNICAL DIFFICULTIES IN SMARTGRIDCONTROL

1. DR. ANUSUYA M
2. Anbuselvan G,3. Arjun R J

Abstract:

Smart grid will along with facilitate novice sources of energy and new forms of requirements. The potential of smart grids are huge. They could revolutionize the way we produce and use energy, enabling new forms of generation to connect and bringing customers into the heart of the equation with their ability to shift demand and balance the system. Smart grid can help us keep the power on at minimum cost to consumers, while creating jobs and improving growth. Participation is informed and enabled new products, service, and markets, accommodating all generation and storage options and provided the power quality for the range of needs in the 21st century economy by smart grid. Power consumption differs based on time; season of the year, the day of the week, and the hour of the day, weather, temperature, humidity, wind, sky coverage and type of consumers; residential, commercial or industrial. Optimizing the power generation according to demand acquisition utilization and operating efficiency. The study shows that smart grid inspects the power control for both consumer side and producer side. Therefore, optimizing the power management which has been demonstrated with the proposed method optimizes the cost savings. The proposed smart grid optimization methodology provides an applicable option for developing the perfect balance among reliability, availability, efficiency and cost.

Keywords: Smart Grid, Optimization Methods, Power Management

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**244. AN EFFICIENT MECHANICAL DESIGN OPTIMIZATION FRAMEWORK
BASED ON ANN-SURROGATE MODEL AND PARTICLE SWARM
OPTIMIZATION**

MRS.K.RAMYA

Barath P, J. Bavithra R

Abstract:

The optimization of the designs including simulated data or experimental data is still challenging since most of the design problems involves dealing with the characteristics of non-linearity and non-differentiable. To that end, there is a need to easily and efficiently utilize the integration of surrogate models and simulation-based optimization methods. In this work, a framework to optimize these kind of design problems by using ANN-based surrogate model and PSO algorithm is proposed. A case study is considered to show the applicability and efficacy of the proposed optimization framework, and it is observed that this framework can handle the design problems having non-linearity and non-differentiable functional characteristic through the integration of ANN and PSO.

Keywords: ANN, Mechanical Design Optimization, Particle Swarm Optimization, Surrogate.

**245. INFLUENCE OF ELECTRON CONCENTRATION ON THE MARTENSITIC
TRANSFORMATION AND STRUCTURAL PROPERTIES OF CU-AL-FE HIGH-
TEMPERATURE SHAPE MEMORY ALLOYS**


1. **MRS.K.RAMYA**

2. Dhanalakshmi M, 3. Gopalakrishnan D

Abstract:

Nowadays, shape memory alloys with high operating temperatures suitable for use in space and aerospace industries are needed. Especially because of their low cost, CuAl-based alloy systems are of great interest as high-temperature shape memory alloys among different shape memory alloy groups. In this work, martensitic transformation and structural that the main martensitic phase in the alloy samples was 18R martensite and microstructures of the alloy samples contained different precipitate phases. It was also found that phase components of the alloys were not affected by the increased c/a ratio.

Keywords: Cu-Al-Fe; Electron Concentration; Martensitic Transformation


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246. FUTURE BASED ON ADDITIVE MANUFACTURING TECHNOLOGIES: 3D PRINTING

1. MRS.K.RAMYA,2. Hemnath S,3. Jeevidha Praveena S

Abstract:

The availability of the product is vital as the consumer needs increase. Difficulties in production and supply chain cause manufacturers to quickly adopt new technologies. Nowadays, 3D printing (3D-P), one of the new technologies that mentioned as an additive manufacturing (AM), is a solution to many production problems. AM is building 3D objects by adding layer-upon-layer of material, whether the material is plastic, metal or concrete. The 3D-P, which have been chosen because of the fact that they can only make rapid prototypes, and because they speed up the design process very much, have come to the level of being used for the final product production with the development of the technology used. Today, 3D AM technology is used for modeling, prototype manufacturing, tool manufacturing, limited production parts, and specific parts manufacturing applications. More recently, 3D AM is being used to fabricate end-use products in aircraft, electronic circuits, dental restorations, education, space researches, medical implants, aircraft engines, automobiles, and even fashion products. The main advantages of 3D AM technology are the freedom to design, the production of complex designs at much cheaper cost, the inadequacy of team needs, the possibility of lighter designs, and the elimination of a few of the production steps in one go. The most positive aspect of this technology is that the products that are simple structures with three-dimensional printers can be produced by everyone, that is, they are the same as those that produce and consume. Innovations that 3D AM will bring; much faster product development and commissioning processes; production strategies and methods to be prepared from scratch; change in profit and rawmaterial sources; brand new abilities; new competitors. This research compiles the development process, usage areas and innovations of 3D AM technology.

Keywords: Additive Manufacturing, 3D Printing.

247. POSITION DEPENDENT MASS EFFECTS ON HYDROGEN ATOM IN DEBYE PLASMA

1. MRS.K.RAMYA, 2. Kaneshwaran M, 3. Karuppasamy C

Abstract:

In order to investigate the plasma screening and position dependent mass effects on the hydrogen atom in Debye plasma, the effective Schrödinger equation including more general exponential screened Coulomb potential is approximately solved analytically. The effects of the screening parameters on energies are investigated approximately by solving the effective Schrödinger equation using asymptotic iteration method.

Keywords: Hydrogen Atom, Energy, Debye Plasma, Position Dependent Mass

248. EFFECTS ON FORAGE QUALITY OF SWEET SORGHUM SILAGE WITH ADDITION OF MUNG BEAN (VIGNA RADIATA)

MRS.K.RAMYA

Kural Oviya S

Madhan M

Abstract:

Sweet sorghum is known to be an annual C4 plant of tropical origin and is an interesting crop. It is well adapted to sub-tropical and temperate regions, being highly biomass productive and water efficient. Sweet sorghum which can be grown under widely differing climatic conditions, has been identified as a promising crop with the potential to provide for a wide spectrum of forage or energy uses. Sweet sorghum is ensiled to preserve its nutritive value and it has high metabolic energy value, but crude protein is low. Many studies have been conducted to assess the benefits to dry matter yield and nutritive value of combining sorghums with annual legumes. This study was conducted to evaluate nutritive value of sweet sorghum (*Sorghum saccharatum*) silage when ensiled with different proportions of mung bean (*Vigna radiata*). Sweet sorghum was harvested at for 60 days, four bags per mixture. Crude protein (CP) increased as proportion of mung bean increased in the mixture. In addition, pH, lactic and acetic acids increased when mung bean was added. Silage with 100% mung bean had the highest pH and lowest lactic acid concentration. It is concluded that mixing mung bean with sweet sorghum for silage increased CP concentration of the mixture. Additional research is needed to assess mixtures that produce silage with more desirable fermentation characteristics.

Keywords: Sweet Sorghum, Mung Bean, Silage Quality, Crude Protein Content


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1. MS. KALATVANI T
2. Martin Naveen I,3. Meena M

Abstract:

This study was performed on the purpose of providing needs by giving access to robot arm remotely in environment that are undesirable for people or in chemical areas which can be damaged on human hands. In this work, a robot arm design simulating hand movements was designed. This robot was designed as Cartesian robot that can move in X, Y, Z axis linearly and that has arm holding and transportation properties. This robot works wirelessly as distinct of literature. Flex sensors was placed on a glove for every finger in order to provide simulating hand movements. Flex sensors are 4.5" namely 112,5*6,38*0,5 mm sizes and 0.5 g weight. They have resistance properties between 10-20 kilohms. Data taken from fingers sends to control point wirelessly with a serial module card that has 2.4 GHZ telecommunication frequencies. A relay card with 8 channeled, 433 MHz wireless RF receptor was preferred for receiving and processing data coming from robot arm section. Micro servo motor has 0,1 sec/600 turning angle, 9 g weight, 23,1*12,2*29 sizes and 4,8 V-7 V working range. Arduino uno was chosen in the aim of system control. Arduino uno has atmega 328 microcontroller, 40 mA current, 25 g weight, and sizes of 68,6*53,4 *29 mm.

Flex sensors put up 10 kilohm resistances when they are not twisted. However; this value can be up to 20 kilohm as they are twisted. Thus, it can be understood that how much fingers are twisted and, accordingly, simulating robot provides running of servo motors that has 0,1 sec/600 turning angle and twisting fingers of arms in the same ratio, as well. Control was performed with designed algorithm and wireless duplexer via Arduino uno.

Keywords: Robot Arm, Arduion Uno, Wireless, Flex Sensor



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249. FORAGE YIELD AND SOME QUALITY CHARACTERISTICS OF SWEET SORGHUM (SORGHUM BICOLOR VAR. SACCHARATUM) AS AFFECTED BY PLANT DENSITIES UNDER MEDITERRANEAN CLIMATIC CONDITIONS

MRS.K.RAMYA

Mahalakshmi S

Maheshwaran M

Abstract:

Plant density is one of the important factor determines growth, development and yield. Plant density selection to allow for expression of maximum forage yield is a management practice that would make sorghum production more economical. Cultivation of plants with desirable density has positive effect on crop yield components, so that the suitable will be achieved by optimum plant density. This study was conducted to evaluate the effects of plant density on forage yield and some quality characteristics of sweet sorghum (*Sorghum bicolor* var. *saccharatum*) grown in summer second crop production period, on the experimental fields of Faculty of Agriculture, Ege University under Mediterranean ecological conditions of Izmir, Turkey during two years in 2013-2014. The experiment was carried out with a randomized complete block design with three replication; five plant spacings 70 cm among the rows and 5, 10, 15, 20 and 25 cm within the rows (D1:285,714; D2:142,857; D3:95,238; D4:71,428 and D5:57,142 plant ha⁻¹, respectively) were tested. 'Keller' cultivar of sweet sorghum was used as crop material. Some traits were tested in the experiment such as plant height, stem diameter, fresh & dry matter yields, sugar content, crude protein (CP) concentration, NDF and ADF contents. Average result of two years indicated that there were significant effects of plant densities on the fresh or dry matter yield and some forage quality parameters of sweet sorghum. Densely populated stands (D1 and D2) gave higher CP content compared to sparsely populated stands (D4 and D5). D3 was the most successful planting density of sweet sorghum regarding dry matter yield and crude protein yield to the regions with Mediterranean-type climates under irrigation, and it is recommended for production.

Keywords: Sweet Sorghum, Plant Density, Forage Yield, Forage Quality

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252. THERMODYNAMIC ANALYSIS OF SIMAV GEOTHERMAL DISTRICT HEATING SYSTEM ASSISTED BY SOLAR ENERGY

MS. KALAIYANI T

Mohandass P, J. Nandhini K

Abstract:

In this study, the usage of the evacuated tube solar collectors in a large district heating system was investigated. By this way, Simav geothermal district heating system, located in the southern part of the Simav graben system (39° latitude, 28°4' longitude) at Kutahya province in western Anatolia of Turkey, were taken into account. The proposed system consists of four sub-circuits. The Circuit I is geothermal flow cycle which transfers the heat from the geothermal fluid (98°C and 400 kPa) to the heat exchanger. Circuit II is solar heat storage cycle which save the heat from getting the solar collector, Circuit III is district heating cycle and Circuit IV is residential heating cycle which utilize the radiator with an inlet temperature of 55°C and outlet temperature of 45°C. The effect of monthly solar radiation employing the different number of the solar collectors was evaluated in the proposed system in point of changing the parameter of the thermal energy storage inlet temperature using energy and exergy analysis. According to calculations, the number of heated residences by solar energy change between 384 and 1,363. The number of the used solar collector per the heated residence calculated between 4 and 16.

Keywords: Energy-Exergy Analysis, Geothermal, Solar Collector, District Heating.


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251 APPROPRIATE USER ACCEPTANCE CRITERIA FOR NEW SOCIAL MEDIASITES

MS. KALAVANI T

Meenakshi Devi K.J. Mekala E

Abstract:

Nowadays social media sites have attracted a number of users and they have become the mostly commonly used websites for general public. These websites are used by individuals, small and even big organizations for various purposes, such as meeting your old friends, sharing your own experiences, sharing pictures and videos, promoting businesses, sharing knowledge etc. Their popularity is increasing at an increasing rate. User's needs are endless so there will be some new area for creating new social media sites. There are two main ideas for creating new social media sites. Firstly, one should identify the new needs of users which are not fulfilled by the current websites. Secondly, the new website must incorporate those features which are mostly liked by end users and add further functionality into the website that attract more users. It is really important to know the criteria based on which the users prefer one website over the other. Therefore, the objective of this study is to compare the use of social media and find the acceptance criteria that why an end user prefers one social media over the other. This user feedback based information will help social media developers to incorporate new user needs into future social media to increase usersatisfaction. We performed experiments on data collected fifteen most commonly used and popular social media websites in current era. The test data were collected till May 08, 2016.

Keywords: Social Media Sites, Sloppy Mail, Accessing From Devices

253. EVALUATING THE DETERMINANTS OF CUSTOMER LOYALTY IN THE TURKISH SMART PHONE MARKET VIA SAMSUNG SMART PHONE USERS MS.

KALAIVANI T

Natarajan V,3, Nisha M

Abstract:

The purpose of this study is to examine the effect of customer satisfaction on customer loyalty and to evaluate the effects of usage characteristics in the Turkish smart phone market through Samsung smart phone users. To test the research model, we collected data from 219 Samsung smart phone users via face-to-face and online survey. The results show that customer satisfaction is a significant influence on customer loyalty. The features of the device (functions, usability and design) and corporate factors (customer support and corporate image) significantly affect customer satisfaction.

Data collected from 219 respondents were tested using partial least squares Structural Equation Modeling (PLS) approaches. Results; Functional value, emotional value, social value and brand identification positively affect smart phone brand loyalty. In particular, this study investigates the level of customer satisfaction, loyalty, brand image, corporate image and impact on the source country.

This study includes t-test, factor and regression analyzes applied to an online and face-to-face questionnaire. The results demonstrate administrative and theoretical results for satisfaction and customer relationship management.

Keywords: Customer Satisfaction; Loyalty; Predictors; Results; Smartphone, Samsung



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**254. CONDITION MONITORING OF THE UNCOATED CARBIDE
CUTTING TOOL IN TURNING PROCESS OF THE ALUMINUM ALLOY 6061
VIA VIBRATION SIGNAL ANALYSIS**

MS. KALAIVANI T
Pavithra B
Praveenkumar M

Abstract:

This study have been conducted in an attempt to monitor the changing of tool wear caused by increasing the cutting speed, depth of cut and feed rate. The signal processing analysis was ~~done on the raw signal, the vibration signal then, which is analyses by using MATLAB~~ software. The relationship among several parameter of vibration signal, such as energy and maximum amplitude with cutting speed and depth of cut was studied. The material machined was Aluminum Alloy 6061 and uncoated carbide as a cutting tool. At the same time, the cutting temperature was also monitored. The results show that vibration signal can be one of the method to monitor tool wear in turning process via in-situ and therefore can be obtained useful for establishing the end of tool life in these operation. Based on the results the suitable speed and depth of cut range was identified to maximize the tool life.

Keywords: Cutting Tool, Turning, Vibration, Aluminum Alloy 6061, Tool Life

249. FORAGE YIELD AND SOME QUALITY CHARACTERISTICS OF SWEET SORGHUM (SORGHUM BICOLOR VAR. SACCHARATUM) AS AFFECTED BY PLANT DENSITIES UNDER MEDITERRANEAN CLIMATIC CONDITIONS

MRS.K.RAMYA

Mahalakshmi S

Maheshwaran M

Abstract:

Plant density is one of the important factor determines growth, development and yield. Plant density selection to allow for expression of maximum forage yield is a management practice that would make sorghum production more economical. Cultivation of plants with desirable density has positive effect on crop yield components, so that the suitable will be achieved by optimum plant density. This study was conducted to evaluate the effects of plant density on forage yield and some quality characteristics of sweet sorghum (*Sorghum bicolor* var. *saccharatum*) grown in summer second crop production period, on the experimental fields of Faculty of Agriculture, Ege University under Mediterranean ecological conditions of Izmir, Turkey during two years in 2013-2014. The experiment was carried out with a randomized complete block design with three replication; five plant spacings 70 cm among the rows and 5, 10, 15, 20 and 25 cm within the rows (D1:285,714; D2:142,857; D3:95,238; D4:71,428 and D5:57,142 plant ha⁻¹, respectively) were tested. 'Kelfer' cultivar of sweet sorghum was used as crop material. Some traits were tested in the experiment such as plant height, stem diameter, fresh & dry matter yields, sugar content, crude protein (CP) concentration, NDF and ADF contents. Average result of two years indicated that there were significant effects of plant densities on the fresh or dry matter yield and some forage quality parameters of sweet sorghum. Densely populated stands (D1 and D2) gave higher CP content compared to sparsely populated stands (D4 and D5). D3 was the most successful planting density of sweet sorghum regarding dry matter yield and crude protein yield to the regions with Mediterranean-type climates under irrigation, and it is recommended for production.

Keywords: Sweet Sorghum, Plant Density, Forage Yield, Forage Quality



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1. MS. KALAIVANIT
2. Martin Naveen J,3. Meena M

Abstract:

This study was performed on the purpose of providing needs by giving access to robot arm remotely in environment that are undesirable for people or in chemical areas which can be damaged on human hands. In this work, a robot arm design simulating hand movements was designed. This robot was designed as Cartesian robot that can move in X, Y, Z axis linearly and that has arm holding and transportation properties. This robot works wirelessly as distinct of literature. Flex sensors was placed on a glove for every finger in order to provide simulating hand movements. Flex sensors are 4.5" namely 112,5*6,38*0,5 mm sizes and 0.5 g weight. They have resistance properties between 10-20 kilohms. Data taken from fingers sends to control point wirelessly with a serial module card that has 2.4 GHz telecommunication frequencies. A relay card with 8 channeled, 433 MHz wireless RF receptor was preferred for receiving and processing data coming from robot arm section. Micro servo motor has 0,1 sec/600 turning angle, 9 g weight, 23.1*12,2*29 sizes and 4,8 V-7 V working range. Arduino uno was chosen in the aim of system control. Arduino uno has atmega 328 microcontroller, 40 mA current, 25 g weight, and sizes of 68,6*53,4 *29 mm.

Flex sensors put up 10 kilohm resistances when they are not twisted. However, this value can be up to 20 kilohm as they are twisted. Thus, it can be understood that how much fingers are twisted and, accordingly, simulating robot provides running of servo motors that has 0,1 sec/600 turning angle and twisting fingers of arms in the same ratio, as well. Control was performed with designed algorithm and wireless duplexer via Arduino uno.

Keywords: Robot Arm, Arduion Uno, Wireless, Flex Sensor



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251. APPROPRIATE USER ACCEPTANCE CRITERIA FOR NEW SOCIAL MEDIASITES

MS. KALAVANI T

Meenakshi Devi K.,J. Mekala E

Abstract:

Nowadays social media sites have attracted a number of users and they have become the mostly commonly used websites for general public. These websites are used by individuals, small and even big organizations for various purposes, such as meeting your old friends, sharing your own experiences, sharing pictures and videos, promoting businesses, sharing knowledge etc. Their popularity is increasing at an increasing rate. User's needs are endless so there will be some new area for creating new social media sites. There are two main ideas for creating new social media sites. Firstly, one should identify the new needs of users which are not fulfilled by the current websites. Secondly, the new website must incorporate those features which are mostly liked by end users and add further functionality into the website that attract more users. It is really important to know the criteria based on which the users prefer one website over the other. Therefore, the objective of this study is to compare the use of social media and find the acceptance criteria that why an end user prefers one social media over the other. This user feedback based information will help social media developers to incorporate new user needs into future social media to increase usersatisfaction. We performed experiments on data collected fifteen most commonly used and popular social media websites in current era. The test data were collected till May 08, 2016.

Keywords: Social Media Sites, Sloppy Mail, Accessing From Devices

252. THERMODYNAMIC ANALYSIS OF SIMAV GEOTHERMAL DISTRICT HEATING SYSTEM ASSISTED BY SOLAR ENERGY


MS. KALAVANI T

Mohandass P,3. Nandhini K

Abstract:

In this study, the usage of the evacuated tube solar collectors in a large district heating system was investigated. By this way, Simav geothermal district heating system, located in the southern part of the Simav graben system (39° latitude, 28°4' longitude) at Kutahya province in western Anatolia of Turkey, were taken into account. The proposed system consists of four sub-circuits—The Circuit I is geothermal flow cycle which transfers the heat from the geothermal fluid (98°C and 400 kPa) to the heat exchanger, Circuit II is solar heat storage cycle which save the heat from getting the solar collector, Circuit III is district heating cycle and Circuit IV is residential heating cycle which utilize the radiator with an inlet temperature of 55°C and outlet temperature of 45°C. The effect of monthly solar radiation employing the different number of the solar collectors was evaluated in the proposed system in point of changing the parameter of the thermal energy storage inlet temperature using energy and exergy analysis. According to calculations, the number of heated residences by solar energy change between 384 and 1,363. The number of the used solar collector per the heated residence calculated between 4 and 16.

Keywords: Energy-Exergy Analysis, Geothermal, Solar Collector, District Heating.


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255. NUMERICAL INVESTIGATION OF MHD FORCED FLOW IN A THREE-DIMENSIONAL CYLINDRICAL PIPE

MS. KALAVANI T

Saravanakumar S

Shakshiya T

Abstract:

In this work, laminar three-dimensional magneto-hydrodynamic (MHD) forced convection has numerically investigated. 3D cylindrical-pipe is under the influence of externally magnetic field. The wall temperature of channel is different from liquid temperature. Numerical study has analyzed for three different magnetic field strengths and without magnetic field but constant inlet velocity. The study has designed in ANSYS-WORKBENCH and has analyzed with the ANSYS-FLUENT commercial software. The working fluid has selected as lithium. As a result, the liquid lithium flow rate has seemed to be strongly influenced by of the magnetic field force.

Keywords: Magneto Hydro Dynamic, MHD, Forced Convection, Magnetic Field

256. EFFECT OF VARIOUS DRILL BITS ON THRUST FORCE IN DRILLING OF CARBON FIBER REINFORCED PLASTIC

DR. MAHAVEER SREE JAYAN M

Sheik Kasim J

Sindhu G

Abstract:

The usage of carbon fiber reinforced plastic is increasing day by day in several industries such as aerospace and automotive due to its high strength to weight ratio and perfect fatigue strength. Conventional drilling process is widely used to make a hole in a material and a hole is needed for assembly with rivet or bolt. In drilling process, thrust force is a crucial performance evaluation criteria since it effects machinability directly. Besides thrust force is responsible for delamination damage occurred during drilling of C, lower thrust forces occurred in drilling with drill bit A. Maximum thrust force occurred at the combination of 0.18 mm/rev feed rate, 18 m/min cutting speed and drill bit C parameters. Minimum thrust force occurred at the combination of 0.06 mm/rev feed rate, 42 m/min cutting speed and drill bit A.

Keywords: Drilling, Carbon Fiber Reinforced Plastic


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257. DESIGN OF BAND STOP FILTER WITH FREQUENCY SELECTIVE SURFACES ANALYSIS BY IMPLEMENTING THE GOLDEN RATIO RULE

DR. MAHAVEER SREE JAYAN M

Tamilarasi B

Tamilmaran R

Abstract:

The designs which are made with frequency selective surfaces (FSS) analysis can be in different shapes and sizes. Square, round, plus, triangle, snowflake etc... are some of them. In this article, band stop filter (BSF) is designed by using frequency selective surfaces with the Golden Ratio Rule which is found by Fibonacci. In Golden Ratio Rule, each number is the sum of two numbers coming before that number and the ratio of every sequential number equals approximately 1.618, exact 1.618 at last. In design, Golden Ratio Rule is used while forming thickness, width and length. All of the simulations are run in CST Studio computer program between 700 MHz and 1700 MHz in frequency domain section. There isn't any active or passive components in the design. Only 80 cm X 130 cm copper plate and the shapes over it, the BSF with 1.35 GHz center frequency and 44 MHz band width frequency is formed and has become ready to perform. If shapes and sizes are changed while preserving the ratio, it can be reachable different center and band width frequency. After obtaining the operating frequency, the design will block the electromagnetic effects in accordance with BSF, and electric or magnetic waves cannot transmit from the copper plate, as a result; side effects which are harmful for human body can be stopped.

Keywords: Band Stop Filter, Frequency Selective Surfaces, Golden Ratio Rule

251. DESIGNING A VIVALDI FED ANTENNA FOR PASSIVE MILLIMETER WAVE IMAGING SYSTEM IN KA BAND

1. DR. MAHAVEER SREE JAYAN M
2. Vairavel B
3. Velammal C

Abstract:

This antenna will be used for Passive Millimeter Wave Imaging System (PMWIS) which has 35 GHz operating frequency described as Ka Band. The antenna should work in that specific frequency because of having low attenuation in that region according to frequency behavior in misty conditions. Antenna also should have approximately 50 ohm input impedance value so that perfect matching to the active circuits will occur. The input reflection coefficient, S11, has to be under -20 dB and the gain of the antenna, G, has to be over 10 dB value for better efficiency. Micro-strip Vivaldi Fed Antenna provides all of the conditions for imaging system was designed by using Antenna Magus Computer Program and later it was designed in detail with CST Computer Program. The last format of the Vivaldi Fed Antenna has -25 dB input reflection coefficient, 48.5 ohm input impedance and

12.3 dB gain for 35 GHz operating frequency. It is ready to connect to the low noise amplifier and detector, which are active circuits of the Passive Millimeter Wave Imaging System. At the end, the detector will be connect to the video amplifier and computer. The receiver of PMWIS is composed to the Vivaldi Fed Antenna connected to the other equipment will scan elevation and azimuth angles, as a result; the video amplifier will transfer the signals to the computer. Computer will show to the user the scanning area image. In this system, antenna is the most important section and particular attention was given to the antenna in this study.

Keywords: Vivaldi Antenna, Passive Millimeter Imaging, Ka Band


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252. A CASE STUDY: THE EFFECT OF THE USE OF AUGMENTED REALITY APPLICATIONS ON BUILDING MARKETING PROCESS

1. DR. MAHAVEER SREE JAYAN M
2. Jagadeeshkumar S,3. Kirthick Raj D

Abstract:

With the emerging technologies, virtual living spaces has become a part of daily life. Today, the line between the virtual and the real is getting blurry and virtuality leaves its place into a mixed environment between the real and the virtual. Technologies like augmented reality (AR) enable many possibilities in many different fields. AR is formed by the combination of the real and the computer generated virtual objects in the real physical world. Today AR systems are used in many different fields like; education, medicine, games and commercials and military. The use of AR in architecture is increasing every day. The architectural design implementation is a interdisciplinary process where the architect, the client and other technical experts and engineers coexist. The AR, gives opportunity to observe the architectural designs in their real environments before they are built. With this feature, AR contributes implementation process positively. Especially the clients will be able to interact with the virtual architectural models in the real environment and will have the opportunity of examining them in many ways which will make them understand the designs better. Thus, problems based on marketing and client expectations will be solved before the implementation. Additionally production of designs that will meet the clients' expectations will be eased. In this study, the effect of the use of AR on architectural design marketing was researched. In this case study; 2D renderings and 3D AR models of the same design has been showed to the 25 clients which are chosen with random selection method. Afterwards, effectiveness of both methods is researched. Regarding to the applied survey results, the importance of the use of AR in architectural design marketing was determined. It's expected for this report to contribute especially the future works in this field.

Keywords: Augmented Reality, Architecture, Marketing Method

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253. INFLUENCE OF HEAT TREATMENT ON THERMAL, MECHANICAL AND MICROSTRUCTURAL CHARACTERIZATION OF AL BASED MG-AL-SB EUTECTIC ALLOY

1. DR. MAHAVEER SREE JAYAN M
2. Ramesh P
3. Ramesh S

Abstract:

Al based Mg-Al-Sb eutectic alloy was melted by induction furnace, and was casted into kokil mould. Then, samples were annealed at 573 K with vacuum furnace. The values of enthalpy of fusion (ΔH) and the specific heat capacity (C_p) of the solid phase for Al based Mg-Al-Sb eutectic alloy were measured with DSC. The crystal structure parameters and the grain sizes for the tempered and the untempered alloys were investigated by XRD diffraction. The microhardness for the alloys was measured from approximately 5 different points with Vickers microhardness device. The mechanical properties of the alloys were obtained with compression test. Before and after deformation, the break surface morphology of the alloys were investigated by using Scanning Electron Microscopy (FESEM), and its compositions were determined by Energy Dispersive X-Ray (EDX) analysis.

Keywords: Heat Treatment, Specific Heat Capacity, Enthalpy, Microstructure, Mechanical Properties

254 OPTICAL AND STRUCTURAL PROPERTIES OF ZnSe THIN FILMS WITH CHEMICAL BATH DEPOSITION

1. DR. MAHAVEER SREE JAYAN M
2. Vignesh G

Abstract:

Zinc selenide (ZnSe) thin films were deposited on glass substrate using the chemical bath deposition method at 80 °C from aqueous solutions of zinc sulphate and sodium selenosulphide in which was employed as producing selenium source with solid selenium. The structural and optical properties of ZnSe thin films were analyzed at different pH. Optical properties such as transmission, reflectance, absorbance, refractive index and dielectric constant were determined using the absorbance and transmission measurements from Hach Lange 500 spectrophotometer, at normal incidence of light in the wavelength range of 300-1000 nm. From absorbance and transmittance spectra, the band gap energies were determined ranged between 2.08 eV and 2.35 eV. The hexagonal form was observed by XRD. The pH values were scanned at 8-11. Also, the film thicknesses were measured by AFM, and were reduced with increased pH.

Keywords: Znse, Chemical Bath Deposition, Thin Film, Ph Effect, Optical Properties

255. CONJUGATION OF ALDEHYDE DEXTRAN WITH HORSERADISH PEROXIDASE AND DECOLORIZATION OF SYNTHETIC DYE WASTEWATER

1. DR. MANIVASAHAM A
2. Abinaya C
3. Abishek C
- 4.

Abstract:

This work is aim to conjugation reaction of Horseradish Peroxidase with aldehyde dextran and enzymatic decolorization of Reactive Blue 19 dye using the conjugate. Horseradish Peroxidase- aldehyde dextran covalent conjugate was synthesized in laboratory conditions. Aldehyde dextran was obtained from oxidation of dextran. With the conjugation, Horseradish Peroxidase enzyme is immobilized on aldehyde dextran and the effect time of the of Reactive Blue 19 dye carried out with Horseradish Peroxidase and the conjugate at pH:5.5 and different temperatures (21 °C, 33 °C, 37 °C, 43 °C, and 47 °C).

Keywords: Aldehyde Dextran, Conjugation, Decolorization, Horseradish Peroxidase

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**256. THE EFFECT OF HYDRAULIC RADIUS ON AERATION PERFORMANCE
IN HIGH-HEAD GATED CONDUITS**

1. DR. MANIVASAHAM A
2. Ajith V
3. Amamath P

Abstract:

The water is indispensable to balance the ecology and functionality of creatures. Hence, water has been used for drinking water supply, irrigation, and various industrial purposes. In the historical process, we are confronted with the "global water crisis" due to the population increase, urbanization, increasing water consumption with industrialization, environmental pollution caused by mixing of waste water to the nature, inadequacy of infrastructure and excessive irrigation in agriculture. The effectively use of freshwater bodies has crucial importance due the limited amount of freshwater sources. Thus, it is vital to improve the properties of polluted freshwater to reuse. The dissolved oxygen concentration is a crucial indicator for continuation of live on the water. There are many researches to keep concentration of dissolved oxygen in the limit level. The aim of these researches is the aeration of water in the most efficient way. Thanks to the aeration, very long distance and time of oxygen transfer in the natural environment will be provided in a short distance and time. In this direction, different flow systems with pressure and free surface for aeration have been widely used in recent years. The main purpose of these systems is to increase the amount of air in contact with water to transfer of oxygen in the air. In this study, the variation of air demand ratio with hydraulic radius in high-head gated conduits was investigated differently from the previous researches. The results of experiments show that, air suction performance decreases with increasing hydraulic radius in small gate openings, and hydraulic radius does not have a significant effect on air suction performance in large gate openings.

Keywords: Aeration Efficiency, Air Entrainment, Hydraulic Radius, High-Head Flow, Oxygen Transfer


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257. SULFATE RESISTANCE OF POLYPROPYLENE FIBER REINFORCED CONCRETE

DR. MANTVASAHAM A

Anbuselvi S,3. Annalakshmi A

Abstract:

In this study, sulfate resistance of polypropylene fiber reinforced concrete was investigated. For this purpose, two series of concrete mixtures having 0.45 water/cement ratio were prepared. A CEM I

42.5 R type portland cement and crushed limestone aggregate having a maximum particle size of 25 mm were used. The gradation of combined aggregate, obtained by mixing 60% 0-5 mm, 20% 5-15 mm and 20% 15-25 mm aggregate size fractions (by mass) was confirmed with standard gradation limits. In addition to the control mixture containing no fiber, concrete mixture containing 0.4% by volume polypropylene fiber with 5 mm length was produced. In all mixtures, cement content and slump value were kept constant as 350 kg/m³ and 120±20 mm, respectively. A polycarboxylate ether-based high range water reducing admixture was used for providing the desired slump value. The slump loss of concrete mixtures within 60 minutes was measured in 20 minutes time intervals. 7 and 28-day compressive strength of concrete mixtures were measured on 150 mm cube specimens. The mm prism specimens were prepared for sulfate resistance tests. The specimens were immersed in 5% sodium sulfate solution. The length changes of concrete samples were measured every 30 days until 150 days. According to test results, the required water reducing admixture content for providing desired slump value increased by adding polypropylene fiber into the concrete mixtures. Utilization of the polypropylene fiber has not significant effect on compressive strength of concrete mixtures. However, length changes of concrete mixtures arisen from sulfate attack decreased by using fiber.

Keywords: Concrete Mixture, Fresh Properties, Compressive Strength, Sulfate Attack, Polypropylene Fiber

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258. TRANSPORT PROPERTIES OF MORTAR MIXTURE CONTAINING METAKAOLIN

1. DR. MANIVASAHAMA
2. Archi M,3. Balan M

Abstract:

In this study, effect of utilization of metakaolin on fresh and transport properties of mortar mixture was investigated. For this aim, 5, 10 and 15 wt% of cement was replaced with metakaolin. In all mortar mixtures, water/cement ratio, sand/binder ratio and flow value were kept constant as 0.485,


2.75 and 250 ± 20 mm, respectively. A naphthalene-based water reducing admixture was used for providing desired flow value. The changed in the flow values of mortar mixtures in 15 minutes time intervals up to 60 minutes were measured. 1, 3, 7, 28 and 90-day compressive strength of mortar mixtures was obtained on 50 mm cube specimens. In addition, transport properties of mortar mixtures was determined by monitoring of 3 different tests such as water absorption, water sorptivity and chloride ion penetration at the end of 90 days curing. According to the test result, fresh properties of mortar mixture were affected negatively upon using metakaolin. Mentioned effect was more pronounced by increasing replacement level of metakaolin. In spite of having lower early compressive strength, mortar mixtures containing metakaolin showed higher compressive strength compared to control mixture beyond 28 day. The fact is reported to be both due to the physical pore-filling effect and to the pore refinement upon formation of additional

C

S-

through pozzolanic reaction. Besides, Transport properties of mortar mixtures improved by using metakaolin. It was more pronounced by increasing metakaolin content.

Keywords: Mortar Mixture, Metakaolin, Water Absorption, Water Sorptivity, Chloride Ion Penetration


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259. ANDROID BASED MOBILE C# PROGRAMMING EDUCATION APPLICATION

DR. MANIVASAHAM A
Bharani S, J. Boobalan R

Abstract:

Computer technology is improving day by day and software is one of the most important parts of it. Software can be called as group of special codes written for a specific purpose. Operating systems and application programs are examples of software. Software are produced by using different programming languages known as high level (C#, Java, Python and programming are the basics of software world, many sources like books, tutorial videos, web sites and courses have been published in the world to teach these subjects. Programming education is so important both for (improving the connected) etc. As smart phones are widely used and learning computer programming is a popular trend in computer world not only for computer engineering students but also for many young people on different area, we have developed an Android based mobile C# programming education application to support novice users on training C# programming.

Keywords: Android Based Education, C# Education Application

260. SULFATE RESISTANCE OF POLYPROPYLENE FIBER REINFORCED CONCRETE

In this study, effect of utilization of metakaolin on fresh and transport properties of mortar mixture was investigated. For this aim, 5, 10 and 15 wt% of cement was replaced with metakaolin. In all mortar mixtures, water/cement ratio, sand/binder ratio and flow value were kept constant as 0.485, 2.75 and 250±20 mm, respectively. A naphthalene-based water reducing admixture was used for providing desired flow value. The changed in the flow values of mortar mixtures in 15 minutes time intervals up to 60 minutes were measured. 1, 3, 7, 28 and 90-day compressive strength of mortar mixtures was obtained on 50 mm cube specimens. In addition, transport properties of mortar mixtures.


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261. LOGICAL KEY HIERARCHY IMPLEMENTATION IN CLOUD COMPUTING

DR. MANIVASAHAM A

Dhineshkumar P,3, Divya S

Abstract:

Cloud computing is a system that keeps the system, software or data contained in remote data centers and enables them to access at a desired time and on a desired device over the internet. Various schemes have been developed to transmit the data to multiple users by a single sender. The most commonly used among these schemes is Logical Key Hierarchy (LKH). In this study, the problems that can be encountered during the implementation of LKH structure in a cloud system are presented.

Keywords: Cloud Computing, Logical Key Hierarchy, Broadcasting

262. OPTICAL AND STRUCTURAL PROPERTIES OF ZnSe THIN FILMS WITH CHEMICAL BATH DEPOSITION

3. DR. MAHAVEER SREE JAYAN M

4. Vignesh G

Abstract:

Zinc selenide (ZnSe) thin films were deposited on glass substrate using the chemical bath deposition method at 80 °C from aqueous solutions of zinc sulphate and sodium selenosulphide in which was employed as producing selenium source with solid selenium. The structural and optical properties of ZnSe thin films were analyzed at different pH. Optical properties such as transmission, reflectance, absorbance, refractive index and dielectric constant were determined using the absorbance and transmission measurements from Hach Lange 500 spectrophotometer, at normal incidence of light in the wavelength range of 300-1000 nm. From absorbance and transmittance spectra, the band gap energies were determined ranged between 2.08 eV and 2.35 eV. The hexagonal form was observed by XRD. The pH values were scanned at 8-11. Also, the film thicknesses were measured by AFM, and were reduced with increased pH.

Keywords: Znse, Chemical Bath Deposition, Thin Film, Ph Effect, Optical Properties

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263. A NEW TITANIUM MESH CAGE DESIGN FOR LUMBAR SPINE STABILIZATION FOLLOWING CORPECTOMY

DR. MANIVASAHAMA

Ganesh Moorthy Y, S. Gayathri J


Abstract:

Corpus of a vertebra transmits the 80% of the axial load and therefore it has a critical importance for the stability of spine. This part of vertebra can become malfunctioned due to various reasons and removal of this part (corpectomy) may be inevitable in some cases such as trauma or tumor. Titanium mesh cages (TMC) are widely used in stabilization of spine followed by corpectomy and bone grafting in TMC to create a fusion between vertebrae may be required for better stabilization. Various designs of cages are available for application, however, biomechanical characteristics of stabilized spine is not examined in detail in literature.

In this study, a healthy human lumbar spine with L1-L2-L3 segment including the intervertebral disks and all ligaments is modeled mechanically using Finite Element Method (FEM). A stabilized segment with corpectomy of L2 followed by cage and bone graft insertion is also analyzed again using FEM. The integrity of cage for all possible motions; left/right bending, flexion/extension, torsion and compression are considered in biomechanical investigation. The cage is designed with re-entrant cell shape which brings the unique characteristic known as the auxeticity.

When the healthy spine and stabilized spine is compared for all motions, stabilized spine with auxetic TMC+Bone Graft presents very close stress distribution only with slightly higher stress values in stabilized model. This is a desired situation because lower stress values may lead weakening of bones in recovery stage. These results indicate that auxetic mesh cage and bone graft contributes the stability of spine significantly and can be alternative method for spinal fixation. It also brings the advantage of auxetic structure where cage will contract itself under high compressive loadings where it will avoid moving towards the posterior region of cage and protect the spinal cord under traumatic or progressively improving instabilities.

Keywords: Spine, Titanium Mesh Cage, Auxetic, Finite Element Method


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264. FINITE ELEMENT MODEL OF LUMBAR SPINE STABILIZATION WITH BONEGRAFT SUPPORTED TITANIUM MESH CAGE

1. MR. KARTHIK S
2. Harini K, 3. Hemamalini M

Abstract:

Clear understanding the biomechanics of spine stabilization is very important to overcome the issues related to stabilization techniques and advancing new techniques. Titanium mesh cages (TMC) are extensively utilized in stabilization with bone grafting in and out of TMC to create a better fusion between vertebrae. 41% of stabilization operations following corpectomy, i.e. removing the corpus of a vertebra due to some medical conditions, take place in lumbar area. In this study, both intact and stabilized L1-L2-L3 segment (L2 having displacement values are almost same for both intact and stabilized models.

Keywords: Finite Element Method, Spine Stabilization, Titanium Mesh Cage,

265. USING MACHINE LEARNING TECHNIQUES ON PREDICTING WASTAGE AMOUNT IN TEXTILE FACTORIES

1. MR. KARTHIK S
2. Loganathan M
3. Madumitha R

Abstract:

Textile enterprises have a variety of processes for the processed fabric. Production of colored fabrics, which have dye or hem, completed through wide range of processes. Due to this process variety, faulty product problem inevitably arises. It is extremely important in terms of cost and profitability of the enterprise to predict this wastage which occurs during the manufacturing of processed fabrics.

This study provides information about machine learning techniques, which is one of the important work area of computer science and artificial intelligence, and also informs how to use of these techniques in order to predict wastage in the textile business. Also, the test results of a sample machine learning technique for estimation of wastage is evaluated. Subsequently, some recommendations are given how to other machine learning techniques can be used.

Keywords: Predicting, Textile, Wastage, Machine Learning, Data Mining

ISBN: 978-81-970087-3-3


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**266. AGENT-BASED MODELING AND SIMULATION OF THE SUNN PEST -
WHEAT RELATION AND OF THE STRUGGLE AGAINST SUNN PEST IN TURKEY**

MR. KARTHIK S

Jeeva S

Kalaieswaran K

Abstract:

Wheat is a cereal of which agriculture has primarily been done and which is an important nutritional source for people. One of the most important problems encountered in wheat cultivation is plant mites. In this study, the struggle being performed against sunn pest, a plant mite, has been modelled in the virtual platform. Various methods have been used in the struggle against the sunn pest in our country and in the world. The effect of these methods on the sunn pest and wheat has not been simulated up to this time in the computer platform, that's why this project has arisen. In this project, the biological life cycle of the sunn pest and its effects on wheat during its active periods, the chemical and biological struggles performed were modelled after the relevant literature scan has been carried out, and were programmed in Repast Symphony 2.1 agent-based simulation platform, making use of the agents, a new generation programming paradigm. The biological growth stages of sunn pest and wheat have primarily been modelled in this study. As a result of the struggles simulated in the virtual platform, the amount of variability of the sunn pest and yielding wheat output were analyzed graphically. Biological developmental stages of the sunn pest and wheat can be observed throughout the simulation. From the findings of this study, the epidemic years of the sunn pest and the damage it will cause in future can be estimated. Making contribution to agricultural researches has been targeted by this project.

Keywords: Sunn Pest, Wheat, Predator, Agent Based Modeling And Simulation


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267. MODELING AND SIMULATION OF THE RESISTANCE OF BACTERIA AGAINST ANTIBIOTICS

MR. KARTHIK S

Kavitha M

Krishnaveni S

Abstract:

Nowadays, the unnecessary use of antibiotics comes up as an important health problem. Unnecessary and inappropriate use of antibiotics causes antibiotic resistance which has become an important problem in the community and in hospitals. Antibiotic resistance causes antibiotic to lose its ability for killing a particular bacteria or blocking its reproduction. This issue lead to the increase in the number of patients suffering seriously from both society-induced and medical infections, and the failure of treatment, even cases resulting in death. While the resistant bacteria continue to increase, surviving against antibiotic; it causes for disease to last longer, prolongation of treatment and cost increase. It was aimed in this study to investigate the interactions among the bacterias, immune system cells and antibiotics in a Repast Symphony 2.1 agent based simulation environment, having been modelled, and to observe the effects of variability of antibiotic resistance on the infection process. We have found as a result of the study that the increase of antibiotic resistance has become a serious threat against the results of the treatment of bacterial infections.

Keywords: Agent Based Modeling, Simulation, Antibiotic Resistance, Immune System

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268. USING MACHINE LEARNING TECHNIQUES ON PREDICTING WASTAGE AMOUNT IN TEXTILE FACTORIES

4. MR. KARTHIC S
5. Loganathan M
6. Madumitha R

Abstract:

Textile enterprises have a variety of processes for the processed fabric. Production of colored fabrics, which have dye or hem, completed through wide range of processes. Due to this process variety, faulty product problem inevitably arises. It is extremely important in terms of cost and profitability of the enterprise to predict this wastage which occurs during the manufacturing of processed fabrics.

This study provides information about machine learning techniques, which is one of the important work area of computer science and artificial intelligence, and also informs how to use of these techniques in order to predict wastage in the textile business. Also, the test results of a sample machine learning technique for estimation of wastage is evaluated. Subsequently, some recommendations are given how to other machine learning techniques can be used.

Keywords: Predicting, Textile, Wastage, Machine Learning, Data Mining

269. USE OF QUICK COUPLINGS IN DESIGN OF WORK DIES

DR. SARAVANAN V
Sivakumar P
Selveravivek S

Abstract:

Work dies are generally equipment with complete machine and equipment, enhance their function, enable integrity of measurement and location and ease the production and make it possible for a work to be carried out more easily and effectively. In this study a clamping work dies was designed by using quick couplings in bonding plastic or metal plates with friction stir welding (FSW) in high-speed CNC machine. In the design specific criteria were which are used in the design would provide us convenience and practicability for they can be used together with both work dies and fixtures in such practices.

Keywords: Work Dies, Manufacturing, Welding, Quick Couplings, Automotive Industry

270. INFORMATION SECURITY RISK ASSESSMENT IN HEALTH INSTITUTIONS AND MEASUREMENT OF USERS' AWARENESS ON INFORMATION SECURITY

1. MR. KARTHIK S
2. Manimala P
3. Moorthy E

Abstract:

With increasing dependence on developing technology and computer use, national and international laws and obligations, along with the increasing risks today's information security has been a critical issue. Attacks on information systems, destruction of information and the information falling into the third parties indicate the size of the risks.

This study was aimed to make a risk assessment of information security for the purpose of measuring the level of information security awareness of users working at two different health organizations located in Adana.

In the study, 251 persons have been taken part in the survey and the threat level was determined according to the information systems users in hospitals. The collected data was analyzed with using SPSS software in order to find out the highest level of risks and list the threats according importance and existence. The relationships between these threats and individual's age, gender, educational background, professional experience, levels of computer information and information security have been revealed.

As a result, the most important threat was sharing password according to the users. The other threats were respectively : leaking patients' health information, sabotage and lack of ensuring information security system.

Information security is a critical issue for all employees and especially for managers. For this reason, information security policies should be developed by institutions, these policies should be shared with all employees and information security awareness training should be given to users.

Keywords: Information Security, Information Systems, Risk Management In Information Systems, Health Organizations, Survey



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1. MR. KARTHIK S
2. Nithish Kumar A
3. Pandiya Raj S

Abstract:

Enzymes are biocatalysts which are mostly biomolecules found in protein structure. Also, they can include metal atom at the active center. Immobilization of enzymes onto solid natural and synthetic polymer supports or inorganic porous compounds for the treatment of aromatic compounds have many advantages. In addition to enhanced stability, enzymes can acquire additional advantageous properties by immobilization such as (i) immobilized enzymes can be reused, (ii) easily separated from other chemicals (iii) reduced operational cost, (iv) fast termination of reactions. Immobilization of enzymes is a method that is being applied to impart strength and durability to them. Soluble enzymes can be used longer time, especially soluble enzymes. So enzymes can be feasible for industrial applications. Especially for covalent type, in immobilization, the appropriate functional group must be selected or formed in order to bind the enzyme to the carrier. Enzyme immobilization articles are boosted especially after 2004. Also, citations of enzyme immobilization are very popular topics. In this work, recent trends were explained in enzyme immobilization methods and applications.

Keywords: Enzyme, Immobilization, Stability, Trends

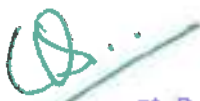
272. **DO TURKISH CONSUMERS PREFER CONVERGED PRODUCTS?
SMARTPHONE EXAMPLE**

1. MRS. SUGASHINI T
2. Periyakaruppi V
3. Pitchainuthupandi T

Abstract:

The smartphone market is facing a huge growth in the last few years, now reaching a sales projection for 2017 close to 15 million which makes Turkey one of the top ranked countries in smartphone market growth. Convenience and personalization are the main features of the Smartphones. Newer generation convergence products (all-in-ones, camera phones) offer consumers high quality product performance that rivals their dedicated versions. This increased availability of options starts another dilemma in the minds of consumers about purchase consideration. This paper investigates the choice patterns of Turkish university students for product forms (converged vs. dedicated) in different technological performance levels. In the end, managerial implications are addressed and directions for future research are suggested, as well as comparison of the results to previous studies.

Keywords: Smartphone, Converged Product, Dedicated Product, Technology Convergence, Turkey


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273. COMPARISON OF MACHINING CHARACTERISTICS BETWEEN AA 6082 AND AA 6082 T6 MATERIAL WITH CRYOGENIC COOLING

1. MRS. SUGASHINI T
2. Pooraniyammal M
3. Prithivi Raj M

Abstract:

In this study, AA 6082 and AA 6082 T6 material were machined by using different cutting parameters. Here the tool geometry (tip radius and rake angle), cutting speed, feedrate factor is used as the main variable. 134a refrigerant gas was used for cryogenic cooling. Surface roughness measurements were made to determine the most appropriate cutting parameters. As a result, it was decided to determine the best cutting conditions with optimal parameters .

Keywords: Machining, Cutting Al Alloys


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274. CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT IN TURKEY

1. MRS. SUGASHINI T
2. Sanjay S
3. Santhanapriya S

Abstract:

Migrations from rural areas to cities has been increasing in many parts of the world, especially in developing countries. This situation has led to an increase in construction, demolition and renovation works. Today, around 50% of the consumed products and 45% of generated solid wastes are related to the construction sector. Turkey has initiated urban transformation activities around the country with the law promulgated in 2012 and amount of C&D waste has been growth rapidly. The purpose of this study is present current C&D management system in Turkey. In this context; first definition and type of C&D wastes are given. Then, information about amount of C&D waste collected is given and some estimations were done when they were necessary. C&D waste management methods are explained and finally C&D waste management in Turkey is evaluated. C&D waste management regulations prepared by Ministry of Environment and Urbanisation and practice by city and district municipalities. Totally, 67 million ton C&D waste and excavation soil were produced only in Istanbul and according to estimations 130 million ton was produced across the country in 2013. It is expected that 150 million ton C&D waste and excavation soil will be produced in Istanbul in 2033. Currently reuse and recycling ratios are below the targets but with urban transformation activities and regulations they will increase.

Keywords: C&D Waste, Management, Recycling, Regulation.

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275. THE INVESTIGATION OF DISCHARGE COEFFICIENT FOR DIFFERENT UPSTREAM CREST LENGTHS IN TRIANGULAR LABYRINTH SIDE WEIRS

1. MRS. SUGASHINI T
2. Sathiyarani S
3. Prithivi Raj M

Abstract:

Weirs are the most simple hydraulic structures in terms of practical and the oldest used for centuries for purposes such as flow measurement and flood control. There are three main types: sharp-crested, broad-crested and labyrinth weirs. It is also classified in the form of overflow weirs and side weirs. It is observed in literature reviews that there isn't any flow in side weirs, high Froude numbers, part of the upstream crest length. This leads to decrease of discharge capacity. For this purpose a series of experiments have been carried out for different upstream crest lengths. Thus, the main purpose of this study is to examine in detail the effect of the change of the upstream crest length in sharp-crested labyrinth side weirs on the discharge capacity. Present experiments have been carried out on a triangular section with a 0.25 m weir length in the straight channel and a 45 degree apex angle for 0.12, 0.16, 0.20 m crest heights. The weir upstream crest length was closed and readings were taken in three stages at each crest height. The experiments were carried out by taken a flow change of 8-145 L/s and Froude number of 0.08-0.90. The experiments have been carried out under subcritical flow regime and steady flow conditions. Readings were obtained for minimum 30 mm nappe thickness, Froude numbers and discharge coefficients were calculated and necessary graphics were plotted. De Marchi method was used in this study. It has been determined that there is decrease in discharge coefficient as a result of the study. Parallel to the differences in comparison to the process and methods applied in the literature reviews, the study in terms of both theoretical and experimental basis will make a significant contribution to the subject of triangular labyrinth side weirs.

Keywords: Straight Channel, Discharge Coefficients, Side Weirs



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276. CREATING ALTERNATIVE PRODUCTION LINES BY USING SIMULATIONTECHNIQUE IN APPAREL PRODUCTION

1. MRS. SUGASHINI T
2. Sharmila M
3. Suman R

Abstract:

In this study, discrete-event system simulation technique is used in order to create a smooth work flow in t-shirt production line. In accordance with this purpose; work flow of t-shirt model is created, ~~input data is collected by using time study~~ in order to determine statistical distribution of all operations by using Stat-fit for Simul8 software. Model translation phase is executed in Simul8 Software. Then for the purpose of verification & validation process, actual system data and simulation model outputs are compared statistically by using normality test and two-sample t-test in Minitab Software. Once the simulation model of the actual system is properly validated, alternative models which are considering less operators in order to acquire more output and have a smoother line balance are generated. Finally, to analyze the difference of alternative models, two sample t-test is performed. The best alternative model is selected by considering output rate per operator.

Keywords: Apparel Industry, Simulation Technique, Productivity, Line Balancing



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277. A MODAL ANALYSIS OF TLP WITH TENDONS

1. **MRS. SUGASHINI T**
2. **Sundharavalli S**
3. **Swathi S**

Abstract:

The offshore industry requires continued development of new Technologies in order to produce oil in regions, which are inaccessible to exploit with the existing technologies. Tension leg platforms (TLPs) have been used exclusively as production and drilling platforms. TLPs consist of columns and pontoons. The unique feature is the mooring system, which consist of vertical tendons (called "tethers") which restrain the heave motion. Compliant offshore TLPs are essentially meant for deep oil/gas exploration and are usually constructed on the seashore and then towed down to the particular location for anchorage. They are connected to the sea bed by means of pretension cables. The increased use of TLPs in deep waters and necessity of reduction of usually high value of pretension make the effect of variable tension in the tether dynamics more significant. This work presents the modal analysis of tethers and TLPs considering the linearly varying tension along the tether length. For the analysis, the TLP which name is SNORRE-A is modelled for environmental conditions. ANSYS-Mechanical APDL program is used for modelling and analysis. The mod shapes and natural frequencies of TLP is obtained and the results are discussed.

Keywords: Ansys, Offshore, Tlp, Tendons

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278. DESIGN AND ANALYSIS OF LIGHT QUADCOPTER BODY

1. MS. DEEPIKA J
2. Thilagavathi S
3. Vedadurai B

Abstract:

In this study, it was aimed to draft the body desing and analyse the quadcopters, which is a four- motor multicopter, from composite material. The body design of the quadcopters produced in this project was done using SolidWorks program and only static analyses were carried on Ansys Workbench. The method manufacturing product was determined after the design was made and then the composite materials required were selected and supplied. After these processes, the manufacturing phase was started. The prepereg, which is resin-impregnated fibre was glued to the polyurethane foam (Airex T92.80) with epoxy, after being treated in the hot press and pressed again, so that the designed body was produced from the sandwich panel.

Keywords: Ansys Workbench, Composite Materials, Multicopter, Solidworks, Quadcopter


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179. EFFECTS OF SELECTIVE LASER SINTERING (SLS) METHOD ON MICROSTRUCTURAL FEATURES OF Ti6Al4V POWDER ALLOY

1. MS. DEEPIKA J
2. Yogalakshmi N

Abstract:

Additive Manufacturing is one of the methods of modern (non-traditional) manufacturing. The fundamental of this method is based on adding materials layer by layer on top of each other. The purpose of this method is manufacturing the parts that cannot be manufactured by traditional machining process because of their geometrical complexity, disposing the limits of manufacturing. Nowadays Laser Sintering and Melting machines can rapidly manufacture the parts that cannot be manufactured by traditional machining process because of their geometrical complexity in many fields by using various metal powders.

In this article, test specimens were manufactured via Selective Laser Sintering of Additive Manufacturing Method by using Ti6Al4V metal powder. Test specimens were manufactured via SLS method, different machining parameters as laser power, laser hatching speed, hatching distance and in various energy density values based on these parameters by their island and grid hatching strategies. After the grinding, polishing and etching processes of Ti6Al4V alloys that were manufactured with different machining parameters via SLS method, in their microstructural analysis, pore distribution and dimension, α/β phase transformation were examined. Besides, EDX elemental analysis was performed. The results were benchmarked. Findings were compared with the literature.

Keywords: Additive Manufacturing, Selective Laser Sintering, Ti6al4v, Microstructure

280. DETERMINATION OF AIR PERMEABILITY PROPERTY OF AIR-LAID NONWOVEN FABRICS USING REGRESSION ANALYSES

1. MS. DEEPIKA J
2. Swathi S
3. Sathiyarani S

Abstract:

Nonwoven fabrics are defined as textile products which are produced as textile sheets from staple or filament fibers and entangled by mechanical, chemical, thermal processes. Products from nonwoven fabrics are widely used in application areas such as hygiene, medical, agriculture, civil, home textile, automotive, filtration, ready-made production, food packaging. With wide variety of application areas and production techniques, nonwoven fabric production rate is increased day by day in Turkey, and the production is carried out in Gaziantep, Istanbul and Corlu, predominantly. Airlaid nonwoven fabrics are generally used for hygienic care products such as diaper, adult nappy and sanitary napkins. Air permeability is one of the foremost properties that affect the usage performance of hygienic care products. The structural properties of airlaid nonwoven fabrics; thickness, weight, fiber type and the pore size influence air permeability performance with a wide range. Among these properties, pore size is the determinant parameter for air permeability property. Since this type of fabrics have thin structure, determining the pore size properties by using image processing techniques seems possible. In this study, 17 different airlaid nonwoven fabric samples are produced. The pore sizes of these samples are determined by digital image processing methods. Pore sizes of the samples are calculated as the proportion of covered area of the fabric to the total area. In order to get a reliable data, five image frames are acquired from different regions and analyzed. Air permeability of the samples is tested by digital air permeability test device. Then regression analyses were applied to the experimental results using SPSS 21.0 package program. Finally regression equation was obtained for prediction of air permeability by using thickness, weight, fiber type and the pore size parameters, before production.

Keywords: Airlaid Nonwovens, Air Permeability, Pore Size, Image Processing, Regression Analysis

**281. DEVELOPMENT OF A TEST DEVICE CAPABLE OF PERFORMING
STATIC LOADING TESTS OF CARPETS AUTOMATICALLY**

1. MS. DEEPIKA J
2. Suman R
3. Periyakaruppi V

Abstract:

The appearance of the cut-pile carpets are deteriorated due to foot traffic and long time heavy loadings. The most important factor affecting appearance of carpets is thickness loss after static loads due to being under furniture for long time. There are two standards; "BS 4939:1987, ISO 3416- 1986 Method for determination of thickness loss of textile floor coverings after prolonged heavy static loading" and "ISO 3415:1986 Textile floor coverings - Determination of thickness loss after brief, moderate static loading" for testing carpet thickness loss performance after static loading. In today's technology, the static loading is applied manually to the carpet sample by means of a moment arm. Two loading masses (700 kPa for prolonged-heavy static loading and 220 kPa for brief- moderate static loading) must be prepared and the loading time required in related standards is followed by the user. On the other hand, for both standards it is required that the static loading must be applied on at least five specimens of a sample. Since static loading duration is 24 hours for prolonged- heavy static loading and 2 hours for brief-moderate static loading for each specimen and only one specimen can be applied on the moment arm, the test duration for one carpet sample take very long time. This time consuming due to tests' duration cause to serious problems in terms of carpet manufacturers whereas long time is needed to take test results for academic studies. In the scope of this study, a carpet static loading test instrument which is capable of performing static loading on five different specimens at same time according to both of two standards; BS 4939:1987 and ISO 3415:1986 will to be developed. Thus, static loading tests can be performed automatically in shorter time durations.

Keywords: Carpet, Pro-Long Heavy Static Loading, Brief Moderate Static Loading, Automation, Carpet Static Loading Test Device

282. CONTROLLERS DESIGN FOR A REAL-TIME SEPIC CONVERTER

1. MS. DEEPIKA J
2. Pitchaimuthupandi T
3. Thilagavathi S

Abstract:

Voltage regulators is used to provide a reference voltage for a circuit. The most efficient method of regulating voltage is with a DC/DC converter such as Buck converters (only reduce voltage), Boost converters (only increase voltage), Buck-Boost converters and SEPIC (Single Ended Primary Inductance Converter) converters. When the reference output voltage is in the range of input voltage, it is best solution to choose a converter that can increase or decrease the voltage like SEPIC. Due to the fact that there are two capacitors and two inductors, the SEPIC converter is a fourth order, non-minimum phase non-linear system. Therefore, effects of operating conditions and variations on load make difficult to control.

The purpose of this study is to design and control a real-time SEPIC converter instead of other DC/DC converters. For this purpose, the output of the SEPIC, which is triggered by the duty cycle of the control transistor, is controlled using nonlinear model predictive control (NMPC) approach where satisfactory stabilization results are obtained. According to real-time application results, the mathematical model of the SEPIC is verified by NMPC without a comparison of the other control methods.

Keywords: Nonlinear Control, Sepic Converter



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283. MONITORING AND ANALYSING OF LOOMS TO IMPROVE PERFORMANCE OF WEAVING HALL

1. MS. DEEPIKA J
2. Nithish Kumar A
3. Sharmila M

Abstract:

Efficiency of weaving machines is a very effective parameter on the cost of productions. In this study, in order to improve the performance of a weaving hall, data are gathered from looms individually and collected in a central computer by the designed system which is implemented real textile industry in Denizli in Turkey. Thus the statuses of all looms in weaving hall are monitored on-line on the screen of the central computer and an increase on the performance of weaving hall is achieved by analyzing these data.

Keywords: Monitoring, Improving Performance, Weaving Machines, Embedded Systems

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**284. MECHANICAL AND COMFORT PROPERTIES OF FABRICS
PRODUCED WITH HOLLOW YARNS**

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Yogalakshmi N

Pandya Raj S

Abstract:

In the scope of this study, core yarns in the yarn count of 59 Tex were produced by using cotton, viscose, and polyester fibres in the mantle and different ratios of polyvinylalcohol(PVA) in the core. After completion of yarn production on ring spinning frame, winding process was performed in order to get packages. These yarns in the form of packages, were used to produce plain knitted fabrics. Single jersey fabrics were produced on laboratory typed knitting machine and after the fabric production, fabrics were divided into two classes according to washed and non-washed fabrics. Washing process was performed in order to remove PVA-core from the yarn structures to obtain hollow yarn structure which will enhance the comfort properties of the fabrics produced with these type of yarns whereas will influence negatively the mechanical properties of the fabrics. The comfort and mechanical properties of washed and non-washed single jersey fabrics were measured under standard laboratory conditions. These performed tests were mass per unit area, air permeability, water vapour permeability, wicking, pilling and bursting strength. As a result of these tests; it was observed that before and after washing process, results of air and water vapour permeability, wicking, pilling, bursting strength test measurements are significantly influenced by the mantle-core proportion. In this way, due to high permeability characteristics of fabrics made of hollow yarns have been determined that it may be used for sports clothing.

Keywords: Core Yarn, Hollow Yarn, PVA, Air Permeability, Water Vapour Permeability, Wicking, Pilling, Bursting Strength.



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285. AN ADAPTATION OF MATRIX ENCODING TECHNIQUE FOR DATA HIDING IN RGB IMAGES

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Balamurugan M

Abstract:

Hiding data in a digital medium is a modern form of steganography which aims to create an inconspicuous structure by embedding the message to be transmitted into an ordinary cover object. A digital image file is a popular choice for steganographic applications, since it can be found and shared commonly on the Internet. Image steganography methods hide the message data into the cover image by altering the values of bits in the image's pixels. Each single pixel in an image file with RGB color space has certain clusters of bits which correspond to red, green and blue color values. When embedding secret data bits into an RGB image, as in any application of steganography, it is important to ensure that the resulting stego-image has sufficient imperceptibility. Researches and studies on image steganography have lead to the development of techniques that are specialized in making the stego-images less perceptible to both human vision and computerized steganalysis methods. Matrix encoding, which enables to make less changes while message bits are embedded into the cover image, is a special technique that is proven to be an effective solution for the imperceptibility improvement problem. This study proposes an adaptation of matrix encoding technique to be performed in spatial domain image steganography for embedding data into an RGB image with an improved rate of imperceptibility.

Keywords: Image Steganography, RGB Color Space, Matrix Encoding



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286. COMPARATIVE ANALYSIS OF WEB APPLICATION SECURITY SCANNERS

1. MRS. REVATHI N
2. Bonusree K
3. Bharamitharan D

Abstract:

The websites that are used for social activities make our daily life easier but we are likely to be hurt by them because of their unprevented security risks. In particular, most web application owners do not have information about the security requirements of web applications. For this reason, many tools have been developed for web application developers, security experts and web site owners to ensure the security of their websites. In this study, functional and behavioral analysis of W3AF, Paros Proxy, Grabber, Arachni Scanner, Skipfish and Vega web application security scanners is performed for scanning their security vulnerabilities such as SQL Injection, Cross Site Scripting, etc. The results are presented to show the effectiveness level of the web application development processes that include the security analysis with current tools. In addition, the strengths and weaknesses of these applications in different cases are reported. Certain questions about which features that a good web application security scanner should include have been tried to be answered by unifying the complementary features of the missing aspects of these tools and their good aspects.

Keywords: Website Security, Vulnerability Scanners, Website Vulnerabilities


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287. NUMERICAL ANALYSES OF A HEAT EXCHANGER IN A THERMAL ENERGY STORAGE SYSTEM

1. MRS. REVATHIN
2. Deeba Anjalini J
3. Devibalan S

Abstract:

In this study, a numerical calculation has been performed to compare the experimental results in the literature. In this respect, thermal behavior and heat transfer characteristics of Paraffin Wax (melting point between 45°C and 51°C) as the phase change material (PCM) have been investigated during constrained melting and solidification processes inside a shell-and-tube type of heat exchanger. Due to PCMs low thermal conductivity, the influence of fins applying in the heat exchanger has studied for enhancing the heat transfer in the melting processes. Two-dimensional transient numerical simulations have been carried out using the ANSYS Fluent 16.2 commercial software package. The simulation results have indicated that as the length of fins increases, the heat transfer increases and the melting time decreases. Furthermore, the length of fins and natural convection play important roles during the melting process.

Keywords: Latent Heat Energy Storage, Phase Change Material, Melting, Fins

288. EXTRUSION AND COMPARATIVE INVESTIGATION OF PRISTINE AND NANOPARTICLE ADDED POLYPROPYLENE FILAMENTS FOR PIEZOELECTRIC SMART TEXTILE APPLICATIONS

1. MRS. REVATHI N
2. Dharun U
3. Dinesh Babu J

Abstract:

Polymer-based piezoelectric materials are good candidates for smart e-textile applications. However, there is a limited number of polymers which can exhibit piezoelectric effect. Researchers have been working on both finding new polymers/copolymers and increasing the piezoelectric behaviour of existing polymers. This presentation will focus on nanoparticle addition into isotactic polypropylene (PP). Three sets of PP filaments were extruded via a laboratory scale single-screw melt extruder. Pristine PP, 1wt% Multiwalled Carbon Nanotube (MWCNT) added PP and 1wt% Tourmaline(TM) added PP filaments have been successfully produced. Masterbatch preparation, filament extrusion and sample preparation processes have been studied. Masterbatches were prepared via a ThermoFisher Scientific Prism EuroLab16 twin-screw compounding. Filament extrusion and sample preparation parameters were kept the same for each set of filament. Filaments were subjected to a high voltage (15kV) during the filament formation in the drawing area at an elevated temperature. Mechanical and thermal characteristics of the produced piezoelectric filaments have been comparatively investigated. The evaluation results of peak-to-peak voltage output of produced filaments upon an applied mechanical stimulus have been reported. A comparative investigation has been done for the produced filaments and fiber composite samples. The results showed that both MWCNT and TM added composite PP filaments generated higher peak voltages under an applied constant impact as compared to pristine PP filaments. The highest peak voltage output was observed on 1wt% TM added PP filament while the peak voltage output of 1wt% MWCNT added PP filaments were in between the TM added PP and pristine PP filaments. This experimental study reveals that appropriate nanoparticle addition can contribute further the voltage generation of the polymeric piezoelectric materials. These produced smart filaments can easily be integrated into textile structure for smart textile applications.

Keywords: Piezoelectric, Filament Extrusion, Voltage Generation, Smart Textiles

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289. VOLTAGE OUTPUT AND CURRENT DENSITY OF 3-D PIEZOELECTRIC FABRIC UNDER VARIOUS APPLIED LOADS

MRS. REVATHI N


Divyasree G

Faizal Ahamed J

Abstract:

Increasing energy demand have led to a significant increase in the experimental works on energy harvesting. Material engineers are now intensively working on either finding new ways for green energy generation or improving the energy output of the existing energy harvesting materials. Concurrently, a new area of research for textile engineers too has opened up, wherein the photovoltaic and piezoelectric materials are now being used in textiles to produce light weight, flexible wearable energy harvesting structures. Think of how many hours people are physically active during the day and how much mechanical energy hence produced is wasted. This has encouraged researchers to use this wasted energy to generate electrical power. Piezoelectric materials are good candidates for transforming mechanical energy into electrical energy. The starting point of this work was what if we can produce piezoelectric fibers and then manufacture fabrics from them. Here, we introduce the energy generation characteristic of a 3 dimensional (3-D) piezoelectric fabric, containing piezoelectric filaments, conductive yarns and insulative yarns. The fabric was produced by a 3-D knitting machine. Piezoelectric filaments were used as spacer yarn interconnecting or separating two knitted layers. In this presentation, we will give the information about piezoelectric filament production, 3-D all fiber piezoelectric fabric construction as well as the experimental results for voltage responses and current densities of 3-D spacer fabric under various applied loads. The results proved that the voltage output and current density of the piezoelectric fabric is proportional to the applied mechanical energy.

Keywords: Voltage Output, Current Density, Piezoelectric Fabric


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**290. INVESTIGATION OF A CHEMICAL MODIFICATION METHOD WHICH
ENABLE POLYAMIDE/ELASTANE FABRICS TO BE DYED AT LOWER
TEMPERATURES**

MR. RAJKIRAN

Fazluddeen M

Gayathri R

Abstract:

Within this study, dyeability of the polyamide/elastane fabrics, which are commonly used in textile industry, below the boiling temperature with 1:2 metal complex dyes without causing loss of efficiency was examined. For this aim, firstly studies on developing a cationization agent ~~which can modify fibers chemically~~ was investigated. ~~Then its application process~~ was determined with the aim of making possible to dye polyamide/elastane fabrics at low temperature (80°C). As a result of experiments, optimum conditions of cationization treatment were determined as pH 7, 60°C, 30 min. and a concentration of 5% for decreasing dyeing temperature to 80°C. Fabric samples treated at these conditions were dyed at 80°C and results were compared with the untreated sample dyed at 100°C. It was seen that it was possible to decrease dyeing temperature from 100°C to 80°C without a loss in color efficiency or decrease in fastness values if cationization treatment was done. All results were also proved by industrial scale experiments.

Keywords: Polyamide, Elastane, Dyeing, Cationization, Color Yield, Fastness

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291. INVESTIGATION OF THE DYEABILITY OF COTTON KNITTED FABRICS WITH WITH VARIOUS DYE PLANTS IN THE PRESENCE OF POTASSIUM ALUMINUM SULFATE MORDANT

MR. RAJKIRAN

Gokulan S

Gowsalya S

Abstract:

As the certain chemical compounds present in synthetic dyes are carcinogenic, mutagenic and allergic, dyes obtained from natural sources are increasingly gaining importance in the textile dyeing field. In the content of this study, cotton fabrics were dyed in the presence of potassium aluminum sulfate mordant with 39 different dye plants. Then both color efficiency and fastness properties of dyed samples were evaluated. Dye plants that give both good color efficiency and sufficient fastness values were determined. According to the experimental results it can be said that for yellow pomegranate rind or turmeric; for green myrobalan; for yellowish brown onion hull; for reddish brown catechu give the best results.

Keywords: Cotton, Natural Dye, Mordant, Fastness, Color Yield

292 PROGRAMMING ENCRYPTION ALGORITHMS WITH STEGANOGRAPHY

MR. RAJKIRAN

Guruprakash N V

Hajira Banu K

Abstract:

In this paper a different cryptographic method is introduced by using Power series transform, science of steganographi. Here,we produce a new algorithm for cryptology,we use Expanded Laplacetransformation of the exponential function for encrypting the plain text and we use codes of ASCII for support to the confidentiality of the chipertext. After, Chipertext have embedded by steganographic method in another plaintext to hide the existence of chipertext. We show corresponding inverse of Power Series transform for decryption. Then; Experimental results were obtained by writing a computer program for crypto machines.

Keywords: Cryptology, Encryption, Decryption, Laplace Transform, Steganography, Programming ForEncryption Algorithms.



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293. MICROPROCESSOR CONTROLLED RESPIRATORY FUNCTION TEST SIMULATOR

1. MR. RAJKIRAN
2. Harish V
3. Jai Surya D

Abstract:

In this study, simulator design that everybody can use easily was performed for respiratory function test applied to people having shortness of breath, stertorous respiration, expectorating complaints, to people who smokes cigarette for a long time whether they have complaints or not, to people thinking illness that exists in another organ of the body affects lung, to athletes, to people to be given inhaler, relieving inflammation, and preservative medications because of their illness, and to people that effect of medications want to be investigated.

Among function tests; air volume entering and exiting to lungs during relaxation or exercise, maximum air amount (FEV1) to be exhaled in one second while lungs are full, and reversibility that are measurements test about whether velocity increases or not with expander medications (bronkodilators) by this simulator.

A PIC16F877 based design was performed for this. Analogue signals obtained with blowing flow meter flow sensor are translated to digital information by PIC. LED group consisting from 16 groups was designed as 5 levels. These 5 levels will become active in stages according to age groups or volume given by lungs during blowing, and it will assist to be informed of us.

Respiratory function tests can also be used to observe response to the treatment as well as they are subsidiary tests for diagnosis. As much as respiratory function tests assist diagnosing some diseases, especially asthma and COPD, they are important tests playing role on determining of severity of these diseases, and on evaluating response of the treatment. Not only these tests are used by chest diseases clinics, but also they are used to measure the effect of rheumatic, neurologic, hematologic diseases on lung functions, and to evaluate response to the treatment. It will be contributed to observe conditions of lungs by this designed device.

Keywords: Respiratory Function Test-Microprocessor Control-Simulator

294. GREEN SUPPLIER SELECTION: A REVIEW OF METHODOLOGIES AND CRITERIA

1. MR. RAJKIRAN
2. Jayapekiyam B
3. Kalarani K

Abstract

Supplier selection, which is one of the key elements for building effective supply chains, has been a prominent topic for over sixty years. Supplier selection along with supplier evaluation have been studied comprehensively in both corporate and academic world. In recent years, companies tend to consider green policies due to the growing body of consciousness about environmental issues such as stakeholders' force to adopt environmentalist approaches, depletion of natural resources and environmental legislations set by governments. Therefore, in order to analyze and review the current literature on green supplier selection problem, this paper provides a systematic literature review on published researches between 2007 and 2016. The major goals of this paper are to determine the most widely used decision criteria in green supplier selection problem and methodologies implemented by the researchers to address the solution of the problem. By summarizing the literature, we present the literature gaps along with possible future research directions.

Keywords: Green Supplier Selection, Literature Review, Multi-Criteria Decision Making



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**295. PRODUCTION OF CP-TI REINFORCED A356 ALUMINUM COMPOSITE
BY VACUUM-ASSISTED INVESTMENT CASTING**

MR. RAJKIRAN

Kalpana S
Karthick Sundaram S

Abstract:

This study aims to manufacture aluminum based metal-metal composite (MMC) reinforced with sawdusts which provide strengthening of matrix alloy in an environment-friendly way. Commercially pure titanium (CP-Ti) was used as a reinforcement and A356 aluminum alloy was chosen as a matrix material. CP-Ti sawdusts were compressed in an attempt to obtain porous monoblock preform which was infiltrated by A356 melt under vacuum atmosphere. Plaster mould investment casting technique was performed in order to keep cooling rate as low as possible. Casting operation was carried out at varied temperatures from 700 to 790°C. The effect of pouring temperature on interface bonding performance between CP-Ti and A356 alloy was investigated. Light optical microscopy and energy-dispersive X-ray spectroscopy (EDS) were conducted for microstructural analysis and characterization of interfacial region.

Keywords: Titanium, Aluminum, Composite, Investment Casting

196. A MATHEMATICAL PROGRAMMING MODEL FOR MULTI-OBJECTIVE OPTIMIZATION IN FLEXIBLE MANUFACTURING CELLS

1. MR. PRITHIVIRAJ
2. Kiruthiga G3.Krishna K

Abstract:

Flexible manufacturing systems have a chance of responding quickly to changing customer requests. Because the systems are developing technological and highly automated manufacturing systems. In this study, a mathematical programming model that considers a weighted approach to minimize the total inter cell and intra cell part movements, total ~~machine-system-workload-unbalance;~~ ~~total-labor--system-workload-unbalance;~~ and the total number of tools on all machines in cells according to optimum alternative routes of parts, is developed. The proposed mathematical programming model is formulated as a mixed integer linear programming. First, an illustrative example problem and then related sensitivity analysis are performed to show how to carry out the proposed model using LINGO optimization software. In this study, the objective function elements that mentioned above are optimized according to the optimal alternative routings selected for all parts due to the proposed mathematical model.

Keywords: Flexible Manufacturing Systems, Mathematical Programming Model, Alternative Routing Flexibility.



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297. THE EFFECT OF DIFFERENT AFTERTREATMENTS ON COLORATION OF WOOL FABRICS WITH HAZELNUT SHELLS


MR. PRITHIVIRAJ

Mahalakshmi M.B. Malini M

Abstract:

Dyeing of textile materials with natural sources is a well-known process and it has used since pre-historic times. Today natural dyeing has started to attract attention because it is believed that natural dye sources are less harmful to humans and environment. In natural dyeing different natural sources like herbal sources can be used. In this study hazelnut shells were used for the coloration of the wool fabrics. By this way it was planned to show the usability of a herbal waste in a dyeing process. The dyeing processes were conducted with different mordanting agents and also not mordanted but dyed samples were evaluated too. After dyeing, different chemical processes containing hydrogen peroxide, sodium dithionite, sodium carbonate or tartaric acid were managed. Then the dyed samples were analyzed in terms of CIE L*a*b* color values, color changes and color efficiencies. It was observed that hazelnut shells can be used for the coloration of the wool fabrics and depending on the mordanting agent and aftertreatments different colors can be observed.

Keywords: Hazelnut Shell, Mordant, Natural Dye, Aftertreatment, Wool


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298. USE OF GREEN TEA IN DYEING OF CELLULOSIC FIBERS

1. MR. PRITHIVIRAJ
2. Mathiyarasan P
3. Mavithra K

Abstract:

The colors of the textile goods can be important for the sales appeal. So it can be told that textile finishing especially dyeing-printing processes have a great role in steering the customers. Today for the coloration of textile goods generally synthetic dyes are used. However in this study it was aimed to introduce the usability of green tea in coloration of cotton and linen fabrics as a natural dye source. Green tea has been used directly in dyeing of the fabrics, in other words green tea has not been taken to an extraction period previously. So dye extraction and dyeing has been managed at the same time during the dyeing step at boiling temperature. In dyeing period simultaneously mordanting has been managed by the use of different mordants such as $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$, $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$, $\text{K}_2\text{Cr}_2\text{O}_7$, $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$, $\text{KAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$. Additionally, the dyeings without use of any mordant has been conducted too. The dyed fabrics were then analyzed in terms of color efficiencies (K/S) and color values (CIE $L^*a^*b^*$). Moreover the fastnesses of the dyed samples were examined too. Finally it was found that green tea can be used for the coloration of both linen and cotton fabrics.

Keywords: Cotton, Linen, Natural Dye, Green Tea


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1. MR. PRITHIVIRAJ
2. Meiyanaamoorthy K
3. Mohamed Safeullah S

Abstract:

In this paper, we focus on solving mean-variance portfolio optimization with cardinality constraints. This multi-objective problem has two conflicting objectives: profit maximization and risk minimization. Therefore, an efficient frontier that presents a tradeoff between the two objectives is sought. Cardinality constraints that impose a restriction on the number of assets to be held and lower-upper limits for the proportion of each asset bring the problem to the class of NP-Complete problems. In general, metaheuristic algorithms may conveniently provide near optimal solutions for the problems in this class. A popular algorithm, ant colony optimization that was firstly introduced for solving travelling salesman problem, has widely been adapted to solve various discrete optimization problems in the literature. However, there are not many applications on continuous domains. Portfolio optimization requires a search in the continuous search space and therefore in this study, a continuous variant of ant colony optimization technique is adapted. The method was tested on five well-known publicly available benchmark problems along with two new data sets from a developing country that intends to further extend the publicly available benchmark data sets to the attention of researchers. Initial results are promising to enable the design of an efficient algorithm for both practitioners and researchers.

Keywords: Ant Colony Optimization, Portfolio Optimization, Mean-Variance Model


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300. VARIABLE NEIGHBORHOOD SEARCH FOR PORTFOLIO OPTIMIZATION

1. MR. PRITHIVIRAJ
2. Pavithra G3.Priyanka P

Abstract:

Portfolio optimization involves a multi-objective problem with two conflicting objectives: profit maximization and risk minimization. If a portfolio cannot provide a better profit for a given risk value or cannot provide a lower risk for a desired return level, then that portfolio is accepted to be on the efficient frontier that is determined with a set of pareto-optimal solutions. In this paper, we present a continuous variant of variable neighborhood search (VNS) approach, for solving the cardinality constrained mean-variance portfolio model that provides a practical investment strategy for rational investors. In order to overcome continuous domain difficulties, five local search neighborhood structures that include procedures utilizing derivative information: Steepest-Descent method, Fletcher-Reeves method, Davidon-Fletcher-Powell method and procedures utilizing non-derivative information: Hooke-Jeeves method, Nelder-Mead method are integrated to VNS. The proposed solution approach is tested on seven different capital market indices; namely, Hang Seng, DAX 100, FTSE 100, S&P 100, Nikkei 225, XU030 and XU100 using popular performance measures defined in the literature in order to calculate the errors between heuristic frontier and the standard efficient frontier. The proposed approach has promising insights and by developing strong local search operators designed for continuous domain, the algorithm may be enhanced for providing a superior solution methodology.

Keywords: Portfolio Optimization, Variable Neighborhood Search, Mean-Variance



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301. PLAY STREET: THE FUTURE OF RESIDENTIAL STREETS

1. MR. PRITHIVIRAJ
2. Raja Ganesh B3.Rajesh B

Abstract:

Roaming freely and playing on the street and at the doorstep of the house, have a remarkable place in today's adults' childhood memories. Streets are vital for cities and for children's development, with the variety of playing opportunities and irreplaceable gradual experience of urban environment. Unfortunately, today's children are detached from the street, due to adult's fear of crime, security, ~~alienation and dominance of traffic~~. This situation creates ~~inactive~~ children under the threat of immune system diseases, obesity and lack of social skills.

Many parents in cities prefer to live in gated communities, at least to meet the outdoor space necessity. This situation decreases the life-span period of the houses in urban areas and damages the sense of belonging and urban sustainability.

In Turkey, as in many parts of the World, local authorities who are aware of child's right to play, define streets under the name of "Child's Street" or "Play Street" in order to encourage children to play out. Even under different child oriented local management movements, this street type takes possession over "standard" streets. "Play Street"s are rapidly spreading and has many impacts on residential community and urban environment.

This study defines and compares street play environments, describing variety of types, including temporary traffic closure, permanent street arrangements, housing design impacts and urban designat neighborhood scale within the context of space for children's play.

As a conclusion, the benefits of streets where children can safely spend time and learn to live together with all age groups and all parts of the community as a micro-urban experience are stated together with the challenges to reach the "ideal" play street and its probable negative and positive effects on the urban environment.

Keywords: Social Innovation, Play Street, Inclusion, Children's Environment, Urban Space

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302. URBAN GREEN SPACES IN THE CONTEXT OF CHANGE AND INTERACTION

MR. PRITHIVIRAJ

Rizwana Parveen A3.Sakthivel R

Abstract:

Public green spaces have a very critical place within social life, in terms of the functions they have in environment-human and individual-society interaction. Today, the community is becoming less and less connected with public green spaces, mostly due to small-scale designs that have been carried out without a holistic perspective. Achieving the efficient use of these areas depends on moving beyond the stereotypes and acting with the awareness that the interaction between the individual and environment is one of the basic needs of society.

Especially in developing countries, there are unqualified and unhealthy green areas allocated to the public use. Scattered unplanned and undersized green spaces and parks are not able to represent a powerful meaning for its environment in terms of their use and this leads to inefficient use of the areas in question. Public green spaces can be recovered by first determining the reasons of them being idle and then rehabilitating these areas. In the paper, best-practice examples of rehabilitation are given and discussed. In order to carry out the recovery process of the various scaled greenspaces with certain order and level in a healthy manner, it is necessary to establish a frame in which the public spaces can be assessed within the context of change, use and interaction in today's conditions. In the paper, the factors affecting the use of the green areas positively and/or negatively are determined and then the effects of rehabilitation applications through "AlaCatı Yel DeGirmenleri Parkı" are evaluated in line with these criteria, with the aim to contribute to the rehabilitation of the public green areas.

Keywords: Design For Interaction, Public Green Spaces, Rehabilitation, AlaCatı

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303. EFFECT OF AUSTENITISATION TEMPERATURE ON MICROSTRUCTURE AND MECHANICAL PROPERTIES OF 38MNV86 MICROALLOYED STEEL

DR. ANITHA B

Sandhya S3.Sanjay D

Abstract:

The effect of austenitisation temperatures on the final microstructure and mechanical properties of a microalloyed medium C steel was investigated. The microstructure was characterized by optical microscopy; the mechanical behavior was studied by hardness, tensile and instrumented Charpy V- notch impact tests carried out at room temperatures. Continuous cooling transformation (CCT) diagram has been calculated with the aid of by JMatPro which is a commercial software package which is based on CalPhaD and extended by various models which allow calculation of materials properties. The experimental and numerical studies showed that austenitisation temperatures had important effect on impact energy due to ferrite/pearlite fractions.

Keywords: Microalloyed Steel, Jmatpro Simulation, CCT Diagram, Austenitization Temperatures


304. MICROSTRUCTURAL ASPECTS OF NICKEL-BASED SURFACING DEPOSITED BY GAS METAL ARC WELDING (GMAW)

1. DR. ANITHA B
2. Santhiya P
3. Saran Kumar J

Abstract:

Nickel-based alloy coating was deposited on AISI 1.2714 tool steel substrate using by gas metal arc welding (GMAW). The deposit was characterized by hardness measurements, microstructural examination and EDS / XRD analyses. It was investigated the influence of mixing the base metal and filler metal and the influence of microstructural evolution. There were no cracks or other defects observed in the hardfacing coating. The microstructure of the hardfacing deposit predominantly consisted of the γ -Ni phase and the interdendritic eutectic mixture. These studies also revealed the presence of niobium-rich carbides. Hardness testing revealed that the average hardness of the hardfacing was lower than that of substrate.

Keywords: Hardfacing, Ni-Based Alloy, Microhardness, Microstructure


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305. START UP OF ANAMMOX REACTOR AND SHORT TERM EFFECTS OF TiO₂ NANOPARTICLES ON ANAMMOX BACTERIA

1. DR. ANITHA B
2. Sathishkumar S
3. Sharmila Devi S

Abstract:

Biological nitrogen removal is widely accomplished by conventional nitrification and denitrification processes in wastewater treatment systems. Conventional nitrification and denitrification processes lead to high operation cost due to oxygen requirement and external carbon addition. Even if this process is successful, there is some serious difficulties during wastewater treatment, especially industrial wastewater treatment. In recent years, anammox (anaerobic ammonium oxidation) has been discovered as a new approach for ammonium removal. In this process, ammonium is used as electron donor and nitrite is used as electron acceptor and mainly nitrogen gas and some nitrate are produced. These systems produce less sludge compared to conventional nitrification and denitrification processes, consume less oxygen and do not require external carbon addition.

Nowadays, metallic and metal oxide nanoparticles are being used at medical and electrical industries, personal care products. Eventually, these nanoparticles are discharged to domestic wastewater treatment plants. In literature, there is no study which investigates the nanoparticle inhibition on Anammox systems.

The first objective of this study is to investigate the inhibitory effects of TiO₂ on enriched Anammox culture. In this context, short and long term inhibition levels of titanium dioxide (TiO₂) will be determined in both batch and continuous systems. The second objective of the study is the recovery of anammox process by TiO₂ nanoparticle inhibition. Both batch and continuous experiments has been performed during the study. Firstly, 0-10 mg/L TiO₂ nanoparticle concentrations used according to literature information. Concentration of TiO₂ nanoparticle increased step by step if there is no inhibition in the system. After the inhibition experiments, anammox bacteria subjected to recovery tests which consist of EDTA washing procedure. Anammox bacteria centrifuged and then they shaken with EDTA washing solution to get rid of the TiO₂ nanoparticles from the bacteria.

Keywords: Anammox, TiO₂, Inhibition, Nitrogen Removal


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346. GREEN AND SUSTAINABLE APPROACH FOR DESIGN OF ANTIBACTERIAL WOUND CARE DRESSINGS

DR. ANITHA B

Sharon Esther Jessica C

Subbutakshmi C

Abstract:

One of the most important challenges for antibacterial wound care dressings is their production methods and adverse effects of toxicants on human and living organisms while using and disposing them. Wound dressing with a global market size of 13 billion dollars in 2008, is one of the most developed areas in medicine sector. Approximately 200,000 burn incidents are happening in Turkey every year, of which one of the thousandth is mortal. In addition, increasing earth population and the environmental pollution, much focus has been placed in the recent years to find new health and hygiene related products with the minimum adverse effect on the environment. To address these growing concerns for the mankind and the environment, the development of new antibacterial wound care agents has become one of the most important research areas to combat some pathogens. Assessing the risks associated with the use of synthetic and metal-based antimicrobial agents in commercial products requires a detailed understanding of the materials mobility, biocompatibility, and biodegradability in a physiological environment. Unfortunately, there is not enough research to observe the adverse effects of these active agents and also what they produced, used and released or left to the environment in an unconscious manner in the most of the time. The additive toxicity also becomes an important issue when the compound is actually released to the environment.

Here, we focus on the use of domestic medicinal plants extraction which are cultivated in Turkey, as an effective antibacterial agent for the purpose of open wound treatment by incorporating with nanofibers. We further investigated the performance and morphology of the nanofiber webs as well as characterized their structural properties.

Keywords: Antibacterial, Wound Care, Plant Extract, Nanofiber, Eco-Friendly

307. CLOSED LOOP LASER DIODE TEMPERATURE CONTROL SYSTEM DESIGN

- a. DR. ANITHA B
- b. Suganya S3.Susmitha V

Abstract:

In cancer treatments, because of being a minimally invasive method and having no significant harmful side effect to the patient. This method begins with the administration of ALA-5 photosensitizer material prior to treatment in the tissue, which reacts chemically to the specific wavelength light. Dosimetry calculations determine the time required for ALA-5 in the body to remain only in the tumor. At the end of this period, the tumor tissue becomes eligible for targeted treatment. In order to be able to create the thermal effect on the tissue with the laser beam, a laser with a constant wavelength must be used. When ALA-5 provides sufficient energy in the target tissue excited with specific wavelength light energy in the cell, the cancer cells lead to necrosis. In order to complete the treatment successfully, Photodynamic therapy system's laser diode must have a constant temperature and constant output power so that it can generate constant wavelengths. Since the laser diode temperature is directly related to the wavelength and the output power, control of the temperature at a single point is an essential issue.

In the study, the selected laser diode need to be stabilized at a temperature of 15 °C so that it could operate steadily at a wavelength of 635 nm which can excite the ALA-5. The thermoelectric controller (TEC), the thermistor directly connected to the laser diode, detects the temperature of the diode. The sensed temperature value is applied to the (Dspic30f4013) microcontroller's ADC circuit via an analog circuit that will produce 5V for the maximum value and 0V for the minimum value of the thermistor. This feedback from the thermistor with PID control on the microprocessor determines the PWM on and off time ratio. Cooling control is provided instantaneously by PWM signal applied on the thermoelectric material.

Keywords: Photodynamic Therapy, Laser Diode Temperature Control, Closed Loop,



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308. COMPARISON OF NATO BULLETS AND 6.8 MM REMINGTON

DR. ANITHA B

Valarmathi P Varsa

Tanusya S S

Abstract:

In this study, it is aimed to compare the Nato ammunition at medium and heavy level and to observe the field and technical analysis of Remington ammunition as a Nato ammunition. Modeling of the ammunitions used in the project was done with the help of Solidworks Packet Program and static and dynamic analysis with Autodesk Inventor program. After the modeling was done, the method to be used for the field was determined and the materials required for the test were selected and provided. After these operations, the test phase was passed. AW ACCURACY - MC MILAN - KANNAS - G-3 weapons and steel hood, steel vest, compacted snow, soil, wood, mud, dry pine and steel plate. Thus, the drilling powers of ammunition have been tested and observed.

Keywords: Weapons, Ammunition, Nato, Solidworks, Autodesk Inventor

309. CONTROLLING THE BUILDING MODEL USING HIGH ORDER SLIDINGMODECONTROL OPTIMIZED BY MULTI OBJECTIVE GENETIC ALGORITHM

1. DR. IRAVIATHUL BASIRA A

2. Vasundharan R

3. Vignesh V

Abstract:

High Order Sliding mode control (HOSMC) has been used in many mechanical systems and structural system due to its accuracy, chattering attenuate and high control performance. However, choosing controller parameters for systems is still an important research area. This study presents a numerical analysis to decrease the effect of earthquake vibrations on building model having Active Tuned Mass Damper (ATMD). The system is excited by an earthquake and a linear motor is used as the control device. ATMD is installed on top floor of building model. Tuning of High Order Sliding Mode Controller (SMC) using Super Twisting Algorithm with Multi Objective Genetic Algorithm (MOGA) is designed for a three storey building model with ATMD. HOSMC parameters have been chosen by MOGA with multiple objective functions. Then, simulation results of uncontrolled and controlled model are compared. The results show that building model with HOSMC tuned by MOGA is effective to decrease the effects of vibrations.

Keywords: High Order Sliding Mode Controller, Multi-Objective Genetic Algorithm, Building Model, Active Tuned Mass Damper, Simulation.

310. GENETIC ALGORITHM-OPTIMIZED PID CONTROL OF A PENDULUM

1. DR. IRAVIATHUL BASIRA A
2. Vijayalakshmi G
3. Valamathi P

Abstract:

In this study a Proportional-Integral-Derivative (PID) controller is designed for the pendulum system. PID controller is preferred because it is widely used in industry. On the other hand it is not easy to tune its gains especially for the nonlinear systems. Therefore the gains of the PID controller are obtained by a genetic algorithm optimization procedure in this study. Then the performance of the controller is verified via simulations. The designed controller is also compared with the classical PID controller. The numerical results indicate that the performance of the genetic algorithm-optimized PID controller in terms of maximum overshoot and settling time reduction is better than the classical PID controller.

Keywords: PID Controller, Genetic Algorithm Optimization, Pendulum, Simulation

311. MICROWAVE ENERGY FIXATION FOR DISCHARGE PRINTING ON COTTON FABRIC

1. DR. IRAVIATHUL BASIRA A
2. Saran Kumar J
3. Sharon Esther Jessica C

Abstract:

Discharge printing is a printing method based on dye stripping from the previously dyed fabric at desired areas. It is widely used for furnishing and apparel textiles. In this study, the usage of microwave energy for fixation of discharge printing paste on cotton fabric was investigated in comparison to conventional steam fixation. Reactive dyed cotton samples were printed with neutral discharge printing paste and fixed with both conventional steam process (at 102°C for 10 minutes) and microwave energy (for 1, 3 and 5 minutes at 720 and 900 Watt). Afterwards, color strength (K/S) properties of printed fabrics have been evaluated. It was observed that microwave fixations resulted in quite similar discharging effects with classical steam fixation. In other words, microwave energy could be used in fixation process of discharge printing on cotton fabrics.

Keywords: Discharge Printing, Steam, Microwave, Fixation, Color, Printing, Cotton

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312. POTASSIUM PERMANGANATE BLEACHING OF NATURAL PINEAPPLE FIBERS

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2. Sharmila Devi S
3. Mavithra K

Abstract:

Pineapple fiber is a kind of ligno-cellulosic fiber extracted from pineapple plant leaves. Pineapple fiber is abundant in the tropical or subtropical countries due to weather conditions. Pineapple fibers can also be categorized as agro waste fibers. In this paper, the usage of potassium permanganate as a bleaching agent for pineapple fabrics has been investigated. Pineapple fabrics were bleached with potassium permanganate in various conditions (at pH 4 and pH 7; 60 and 90°C; 10 minutes with 1, 3, 5, 7, 10, 20 g/l potassium permanganate concentrations) and then treated with oxalic acid in various concentrations (8, 16, 24 g/l). Bleached pineapple fabrics were evaluated according to their whiteness and yellowness indexes and lightness (L^*) properties. Whiteness index of pineapple fabrics increased with an increase in applied potassium permanganate concentration up to 7 g/l, however, higher concentrations resulted in a decrease in whiteness values. The best whiteness and yellowness indexes were observed on pineapple fabrics treated with 7 g/l potassium permanganate at 90°C and pH 7 and followed by 8 g/l oxalic acid treatment.

Keywords: Natural Fiber, Pineapple Fiber, Lignocellulosic Fiber, Agro Waste Fiber, Bleaching, Pretreatment, Potassium Permanganate

313. AN EFFECTIVE MODELLING METHOD BASED ON MLP-BASEDARTIFICIAL NEURAL NETWORKS FOR OBTAINING V-CURVE CHARACTERISTICS OF SYNCHRONOUS MOTOR

1. DR. IRAVIATHUL BASIRA A
2. Sathishkumar S
3. Pavidura G

Abstract:

System models are created based on the data obtained from applications or mathematical expressions. Modelling plays a vital role in the determination of dynamic behaviors in a system. Artificial neural networks have been widely used in the modelling of complex and non-linear systems. Various studies have focused on the use of artificial neural networks for system identification and modelling. Multilayered artificial neural networks with a feed- forward and non- linear structure are often used in various applications such as image recognition, classification, system modelling, function approximation, and the estimation of chaotic time series. Multilayered artificial neural networks is the most commonly used type of artificial neural networks in the solution of non-linear problems. Synchronous motor is an alternative current motor in which rotor rotational speed is equal to the rotational speed of the stator rotating field and the rotation speed does not vary in loading. When excitation current of the synchronous motor changes, it absorbs ohmic, inductive and capacitive current from the grid. In a synchronous motor operating at a constant load and voltage, the characteristic which yields the relationship between excitation current and stator current is called V- current. This study proposes an effective modelling method via multilayered artificial neural networks by obtaining excitation current and current load data comprising V-curve characteristics of the synchronous motor in Matlab/Simulink. The proposed modelling method can be applied to all characteristics of the synchronous motor.

Keywords: Modeling, Synchronous Motor, Artificial Neural Network



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314. NOISE REDUCTION OF EMG SIGNALS USING WAVELET TRANSFORM

1. DR. TRAVIATHUL BASIRA A
2. Meiyanamoorthy K
3. Santhiya P

Abstract:

Electromyography (EMG) is a technique for evaluating and recording the small electrical signals produced by skeletal muscles. An electromyograph detects the small electric potentials created by muscle cells, when these cells are neurologically activated. The signals can be used to detect abnormalities, activation level in muscles. EMG signals can be contaminated during measurement because of broken cables, weak cable connections, quality of electrodes, fluorescents in the measuring room. It is necessary to amplify EMG signals because of their small voltage range. That's why amplification is a main part of EMG signals to understand and diagnose. It is quite important to filter signals effectively before amplification otherwise any noise can be amplified with the pure signals during amplification and affect negatively accuracy of measurement. The main purpose of this paper is to make it cleaner contaminated EMG signals using wavelet transform to provide efficient and effective ways of understanding of signal and its nature. In this study, arm muscle F12 Extensor Digitorum communis has been measured with a needle EMG method in a hospital with patient's permission and denoised with filters. Wavelet Transform Methods are used to design a filter. Signal To Noise Ratio is a method for evaluating performance of filter by comparing their uncontaminated values. Contaminated signals and filtered signals are exhibited together to point out the difference. Performance of filter is measured using Filter To Noise Ratio (SNR) method. In conclusion, filter works efficiently and signal is uncontaminated according to SNR results.

Keywords: Wavelet Transform, EMG Signals, Signal To Noise Ratio (SNR)

315. THE IMPORTANCE OF SYSTEM SIMULATION SOFTWARES AT INDUSTRIAL ENGINEERING EDUCATION: A CASE STUDY FROM TURKEY

1. DR. MOHANA
2. Abinaya N
3. Akash G

Abstract:

Simulation is the general name of the methods and applications used to imitate real systems. Systemsimulation is mathematical modeling of real systems. System simulation is one of the most preferred method by the private sector and one of the most important methods of industrial engineering. It is usually done using computer and special simulation software.

The purpose of this study is to investigate the content of system simulation undergraduate courses in industrial engineering departments as well as the share of the simulation software in the undergraduate education and the given importance. For this purpose, all private universities that has industrial engineering department in Istanbul the city with the most universities in Turkey, were selected. The detected 27 universities were sent an email to heads of industrial engineering departments to ask questions about the contents of their system simulation undergraduate courses. The given answers were examined and, when it is necessary, discussed with other academicians via email. By examining the correspondences, the content of the system simulation training of each university is categorized by the theoretical, software, application, and software name dimensions.

Only 9 universities were able to provide the requested information. 4 of these 9 universities' industrial engineering departments are mainly teaching simulation software. The rest make up theoretical lecture on weight. However, in all of them, a system simulation software is mentioned. The simulation software described and used in the lessons are the Arena at six of them, Simio at two and Promodel at one of them.

As a result, it is seen that training of system simulation software is an important part of the undergraduate education of industrial engineering departments at the private universities in Istanbul. In the further studies, the research population will be extended throughout Turkey.

Keywords: Simulation Software, Industrial Engineering, System Simulation, Undergraduate


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316 COMPRESSION PROPERTIES OF WOVEN CARPET PERFORMANCE
UNDER DYNAMIC LOADING

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2. Amalraj A
3. Atchaya R

Abstract:

Carpet is predominantly used in home floor covering as an indispensable decorative product and also preferred by its heat and sound insulation feature. Compression performance in general terms of mechanical properties influences carpet performance based on usage are dynamic or static loads. Thickness loss of carpet is affected negatively under dynamic and static load which are created by walking and furniture, respectively. During use of carpet thickness loss is directly affected by raw material, pile thickness, carpet construction, pile density. There are a lot of studies focused on effects of these parameters on carpet performance. In this study, the influences of pile thickness and pile density on woven carpet compression performance under dynamic loading are investigated. Woven carpet samples were produced as Wilton face-to-face with two different pile density as 2400 piles/dm² and 2880 piles/dm² and three different pile thickness as 7 mm, 11 mm and 16 mm. Raw material of pile was selected as acrylic fiber with 5.6 denier linear density. All carpet production parameters were kept constant such as machine speed, weft and warp yarns used, construction. Dynamic loading tests were achieved by WIRA dynamic loading machine. Thickness of carpet samples were measured after 50,100,200 and 1000 impacts. Test results were analyzed to determine the significance effect of pile density and pile thickness on thickness loss of carpet performance by SPSS package program. Statistical analysis showed that the pile density and pile thickness have a significant effect on thickness loss of carpet samples.

Keywords: dynamic loading, woven carpet, face-to-face, acrylic

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317. DETERMINING THE EFFECT OF HARDENING TYPE ON CYCLIC PLASTICITY MODELING USING FINITE ELEMENT ANALYSIS

1. DR. MOHANA
2. Bala Subhiksha B
3. Dharaanishan S

Abstract:

Determining fatigue life of a material has an importance from industrial and academic perspectives. Calculations of stress and strain values must be accurate to perform a sensitive fatigue life analysis of a material. However, there are numerous plasticity models to determine cyclic behavior. Selection of a plasticity model has an important role on sensitivity of fatigue life estimations in finite element analysis. Generally, isotropic and kinematic hardening models are used as plasticity models. Determination of kinematic hardening parameters is a crucial and time consuming process.

In this study, displacement, stress and strains on a supported beam structure under dynamic loading will be determined by finite element analysis using different plasticity models. Isotropic and kinematic hardening models will be used in cyclic plasticity modelling, von-Mises and Chaboche material models will be investigated as isotropic and kinematic hardening models respectively. Chaboche parameters will be identified using Hollomon equation. Besides, results will be compared with two different commercial finite element analysis software.

Keywords: Cyclic Plasticity, Finite Element Analysis, Isotropic Hardening, Kinematic Hardening



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318. DESIGN OF IPM SYNCHRONOUS MOTOR FOR GEARLESS ELEVATOR APPLICATIONS

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Durgadevi E

Abstract:

Interior permanent magnet synchronous motors (IPMSM) have been commonly used to meet challenging demands of high performance industrial applications. IPMSM have several advantages such as elimination of rotor copper loss, high power density and efficiency, high starting torque. In this paper, the design of IPMSM for gearless elevator has been investigated. Gearless elevator systems driven by PMSM have many advantages compared to traditional asynchronous motor applications. Due to highly sensitive absolute encoder coupled to motor and closed-loop driver system providing sensitive control, PMSM based gearless elevators show high performance at lifting up, stopping and moving. However, drawbacks of IPM machines are high torque ripple and rising cost of rare-earth permanent magnets such as NdFeB and SmCo. The variation of magnetic reluctance between the flux barriers and teeth causes the torque ripple. In this study, different slot/pole combinations and number of flux-barrier layer have been investigated to reduce torque ripple. Furthermore whole design is based on ferrite magnet which is cheaper and more common. MotorSolve BLDC Finite Element Analysis based software has been used. Eventually attributes such as low cost, high efficiency, high torque density and lowest possible torque ripple have been achieved for the design of IPMSM in gearless elevator applications.

Keywords: : Interior Permanent Magnet (IPM), Machine Design, Gearless Elevator Application, Torque Ripple, Ferrite Magnet.

319. MESENCHYMAL STEM CELL RELEASED FROM CYTOKINES AND CHEMOKINES, ITS EFFECT ON COLON PRIMER, METASTATIC ADENOCARCINOMA AND CANCER STEM CELLS

1. DR. MOHANA
2. Gokulakrishnan S
3. Govindhasamy K

Abstract:

Cancer is a group of diseases involving abnormal cell growth with the potential to invade or spread to other parts of the body. The gastrointestinal cancer is a frequently met malign tumor oriented case and its cure is still uncertain. Cancer stem cells (CSCs) are cells that drive tumorigenesis, as well as give rise to a large population of differentiated progeny that make up the bulk of the tumor.

In this study, the human metastatic colon carcinoma cell line (Colo 741), human primary colon cancer cell line (HCT 116) and Human mesenchymal stem cell string of bone marrow PCS-500-012 were cultured in DMEM containing 10% FCS, 1% L-glutamine and 1% penicillin-streptomycine. Colon carcinoma stem cells were isolated from both types of cells by magnetic-activated cell sorting (MACS) technique and characterized by CD133 surface protein using immunohistochemical analyses. Primary and metastatic colon carcinoma cell line and cancer stem cells obtained from from both types of cells was sprinkled to the bottom of 24 partitioned- culture cups and mesenchymal stem cell line of bone marrow was expected to cling to the cup then, was added to the upper parts of the cups and their cultures was one by one prepared. On the 7. and 14. days of the culture CXCL1, IL-6, IL8 and CCL2 values was examined in supernatant by ELISA, on the 14. day IL-6, IL-8, CXCL1, CCL2 was examined with an immunohistochemical method.

The results indicated that Colo 741, HCT116 and the cancer stem cells separated from them cocultured with human mesenchymal stem cell secreted an increased level of cytokines and chemokines after 14 days. The inflammatory mediators released by mesenchymal stem cells related to the micro-environmental factors survival of the colon cancer cells. Mesenchymal stem cells start a reaction with the new micro-environment and they secrete different mediators.

Keywords: Stem Cells, Cytokine, Chemokine, Cancer


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326 · COMPARISON OF ANALYTICAL AND NUMERICAL CALCULATIONS OF A COLD ROLLING PROCESS

DR. SARAVANAN V

Gunasekaran S

Hariharan G

Abstract:

Cold rolling process increases the strength by strain hardening and holds tighter tolerances. Typical products for cold-rolled materials includes motorcycle exhaust pipes, computer cabinets, hinges, metal containers, fan blades, etc. Cold rolling processes needs more force application than hot rolling so determining rolling force or material strain becomes important. Today, finite element analysis have a wide usage area to determine process parameters.

In this study, rolling process of 7516 IF steel will be investigated by means of rolling force and strain rate via analytical and numerical calculations. As a first step cold rolling process of IF material will be performed and 4 mm initial thickness will be reduced to 0.8 mm, and process values will be recorded during the experiment. Then, rolling force and strain rate values will be calculated by analytical methods. Tselikov and Sims Methods will be used to determine rolling force and strain rate, respectively. Numerical calculations will be performed by finite element analysis. As a result, analytical and numerical calculations will be compared with experimental results.

Keywords: Cold Rolling, Finite Element Analysis, IF Steels

**321. COMPARISON OF DIORAMAS AND 2D RENDERINGS AS DESIGN
EXPRESSION TOOLS**

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Hari Prasath S

Hanipriyan P

Abstract:

The concept of space can be defined as the part of space in which the space and boundaries that distinguish the basic state at a certain scale that surrounds the human being and are suitable for its actions are perceived by the observer and wrap around the existence of the subject. Throughout the history of humanity, space production has been needed as a result of basic needs like accommodation and protection. The design discipline has emerged due to the designing, producing and, accordingly, the concern of generating space. In this context, space production, which meets the needs of the period within the conditions that existed throughout history, constituted the most fundamental concern of the discipline of architecture.

The spaces that are supposed to be produced need to be expressed. Throughout history, ideas for design have been expressed in various means and methods. Design products can exist and be understood in terms of they can be expressed. When the design expression tools are evaluated in the historical process, it seems that they are constantly changing and transforming within technical and technological developments.

In this study, dioramas and 2D renderings were examined as architectural representation tools. Dioramas and 2D renderings have been compared and the strengths and weaknesses of expressing spaces have been examined. The purpose of the study is to express the contribution of the design expression tools examined in the scope of the study to the different phases of the process and the usability of the representation and expression in the design process.

Keywords: Dioramas, 2D Renderings, Architectural Space, Architectural Expression Tools


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322. DESIGN OF A MICROCOMPUTER BASED REALTIME ECG HOLTER DEVICE

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2. Irfan Basith J
3. Karthikeyan M

Abstract:

The main objective of the project is to develop an open source embedded system based ECG Holter device. Due to the limited opportunities and challenges of hospitals, patients are having difficulties for continuous monitoring which is highly vital for the patients. Thereby, portable, easy to use, and mobile devices must be designed for the medical specialists, cardiologists, patients, and engineers that who are willing to contribute developing the system. The project consists of three main parts; a bioinstrumentation amplifier which is responsible for Biosignal detection, an analog filter part and a microcomputer, respectively. At first stage, ECG signals were amplified by a three opamp bioinstrumentation amplifier about 500 times. At the second stage, an analog 50 Hz notch and bandpass filter which has 0.1 and 120 Hz cutoff frequencies were used. Before using the microcomputer, the filtered ECG signals were recorded by an USB data acquisition card for control data. After this stage, an analog-digital converter was controlled by the microcomputer and the digitized data was obtained. The raw data was filtered on the second stage digital fir filter to reduce signal noise as real time. The filtered signal was plotted on a 7-inch touch screen in near real time and recorded to an SD card on the microcomputer. In this project, the algorithm was performed on three different microcomputers and their performances were compared. At first, the sampling rate for ECG analysis was achieved only about 35 Hz of the Beaglebone microcomputer which was not useful for ECG signals. Secondly, the sampling rate of the Raspberry Pi 2 could be about 80 Hz which might only be used for R-R interval detection. Lastly, Odroid microcomputers could achieve about 250 Hz sampling rate which could be shown an important candidate for real-time ECG analyses as holter devices.

Keywords: Ecg, Holter, Biomedical Instrumentation, Open Source, Embedded System



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323. THERAPEUTIC EFFICACY OF HONEY LOADED SCAFFOLDS IN FULL-THICKNESS WOUNDS OF RATS

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Abstract:

The aim of this study was to evaluate the therapeutic efficacy of honey loaded silk fibroin matrices (SFM) on full-thickness cutaneous wound healing of rats. SFM were fabricated by wet electrospinning of silk fibroin of *Bombyx mori* origin and poly(ethylene oxide) aqueous solutions, then treated with ethanol (SFM-E) to increase their stability, and eventually loaded with diluted honey (SFM-HE). The scaffolds had desirable porous and 3D nanofibrous structure for skin tissue engineering. Full-thickness skin wounds in a rat model were treated with scaffolds or left untreated (untreated control: UTC). Wound closure of SFM-HE ($69 \pm 7\%$) was found to be significantly higher than that of UTC ($45 \pm 12\%$) on post-operative 14th day. In biomechanical evaluations, SFM-HE groups were shown to restore only 44% of the tensile strength and 29% of tensile modulus of original unwounded skin of rats, forming the softest, weakest and the most extensible skin. Honey loaded scaffolds had significantly higher re-epithelialization, neovascularization and granulation than UTC according to histopathological scoring. Inflammation level of SFM-HE were also lower than UTC, but the results were not statistically significant. In brief, the utilization of honey as an adequate medication in skin tissue scaffolds might hold a great promise in the future.

Keywords: Silk Fibroin, Honey, Wet Electrospinning, Full-Thickness Rat Skin Wound

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323. ACTIVITY AND STABILITY OF TiO₂ CATALYSTS IN CATALYTIC DECOMPOSITION OF FORMALDEHYDE IN SUPERCRITICAL WATER

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3. Malathi S

Abstract:

Heterogeneous catalytic reaction in the presence of supercritical water (SCW) provides various advantages such as controlling of reaction rate, improvement of activity, stability and lifetime of the catalysts. However, the stability and mechanical strength of catalysts cannot be remained in SCW and these are generally the solid- solid transformations of the conventional catalysts. In addition, the structural changing such as the aggregation of solid catalysts, phase transformation and dissolution of solid can be occurred in SCW. The degree of the structural changing depends on the composition and preparation method of catalysts and operation conditions in the reactor. In this study, a series of TiO₂ has been prepared by sol-gel method using different calcination temperatures in order to determine stability and catalytic activity decomposition of formaldehyde in SCW. The catalysts were characterized by surface area (Brunauer-Emmett-Teller, BET method), TGA, FTIR, SEM and SEM/TEM-EDS, XRD, zeta potential, Temperature-Programmed Reduction (TPR) and Temperature- Programmed Oxidation (TPO) experiments. The reactions were carried out in a batch reactor (Parr 4591) (inner volume of 100 cm³). 50 g of formaldehyde solutions and 0.5 g of the catalyst were loaded in the reactor. After 30 min at 400 oC, gas and liquid samples were analyzed by using an on- line GC and HPLC. Although anatase phase of TiO₂ mostly formed until 600oC of calcination temperature, above this temperature, rutile phase formed. The characterization results show that an increase of calcination temperature from 350 oC to 900 oC decreases surface area of the sample and increases crystallinity and stability of TiO₂ in SCW. All of the formaldehyde (HCHO) was converted to CH₃OH, CO, CO₂, and H₂ at 400oC under supercritical conditions for all TiO₂ morphologies. The highest H₂ yield (57.6 (mole) %) was determined on the TiO₂ catalyst calcined at 550 oC.

Keywords: TiO₂, Sol-Gel, SCW, Formaldehyde Decomposition

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324. STABILITY AND ACTIVITY OF ZIRCONIUM OXIDE IN CATALYTIC SUPERCRITICAL WATER GASIFICATION OF FORMALDEHYDE

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2. Nanthakumar M
3. Prakash V

Abstract:

The presence of heterogeneous catalysts in the reaction occurring in supercritical water (SCW) is required to increase the reaction rate and the selectivity of the desired product (such as H₂, CH₄). However, many of the heterogeneous catalysts in the reactions occurring in supercritical water (SCW) do not maintain thermal and hydrothermal stability. Also, in the present studies, there is little information on the changes in the thermal and hydrothermal stability of catalysts in SCW. For this reason, ZrO₂ material, which is transparent, resistant to heat and electrical conductivity, chemically stable and has ionic conductivity at high temperatures, was selected to be tested in the gasification of formaldehyde in SCW. ZrO₂ was synthesized by sol-gel method and calcined at 500, 900 and 1400 °C. Stability of ZrO₂ samples which is fresh and used in the catalytic gasification of formaldehyde in the presence of SCW was determined by various methods such as FTIR, XRD, TEM, SEM, BET, TPO, H₂-TPR, zeta potential. In addition, the effect of catalyst amount, temperature, and reactant concentration and retention time on the yield of SCW gasification of formaldehyde with ZrO₂ catalysts was investigated. ZrO₂ samples calcined at 500 and 1400 °C mostly involve monoclinic and tetragonal phase, respectively and have nano-sized particles. However, ZrO₂ calcined at 900 °C was found to exhibit amorphous structure. Based on formaldehyde activity results, the highest H₂ yield was found at 0.5 g of ZrO₂ for 20 (v/v) % formaldehyde in water at 400 °C.

Keywords: SCW, Formaldehyde, Zirconium Oxide, Gasification, Stability


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325. INHIBITORY EFFECTS OF ZINC OXIDE NANOPARTICLES ON ANAMMOXPROCESS

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2. Puraviraj P
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Abstract:

Nowadays, biological nitrogen removal in wastewater is commonly achieved by conventional nitrification denitrification processes. Nitrification is a process that requires large volumes due to slow growing nitrifiers and high energy for aeration. In addition, organic carbon is needed for the denitrification process. Wastewaters containing low organic carbon require the addition of carbon externally, which increases the cost of treatment. For these reasons, new microorganisms have been discovered as a result of researches and Anammox (Anaerobic Ammonia Oxidation) species have been nominated to find application area as an innovative technology instead of conventional nitrification denitrification processes. Anammox is a process that oxidizes ammonium nitrogen to nitrogen gas in anoxic environment where nitrite is used as an electron acceptor. Compared to conventional nitrification denitrification processes, the Anammox process requires less energy, does not require external carbon addition and produces less sludge. Therefore, the Anammox process is an innovative, effective and low-cost alternative for the treatment of wastewaters containing high nitrogen. In recent years, application of nanotechnology rapidly increased and the use of nanoparticles is now very common in industrial products. Because of their small size (1-100 nm), nanoparticles can be more toxic than the larger particles in the bulk material. Nanoparticles after being used are discharged to domestic wastewater treatment plants and they effect the biological processes. Although there are numerous nanoparticles which are frequently used in industrial applications (ZnO, TiO₂, Ag, CuO, Al₂O₃, SiO₂, ClO₂, etc.) zinc oxide nanoparticles are most common. The objective of this study is to investigate the zinc oxide nanoparticle inhibition in enriched Anammox culture in both batch and continuous systems. In this context, inhibition levels of zinc oxide nanoparticles will be demonstrated in batch systems. Thereafter, inhibition effects on continuous systems will be observed by increasing the nanoparticle concentration gradually.

Keywords: Anammox, Inhibition, Nitrogen Removal, Zno Nanoparticles


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326 A MATHEMATICAL MODEL FOR ALLOCATION AND DISTRIBUTION OF HUMANITARIAN RELIEF TO DISASTER AREA

1. MR. RAJUL BARATH S
2. Sakthivel A
3. Sams Winson A

Abstract:

Natural, technological or man-induced events that have the unpredictability in time, the intensity and the location are called as disaster. Disasters have a serious disruption on the functioning of a society and affect human life negatively due to destruction they create in the region. Existing local resources are often inadequate to remove these effects. Preparing societies and communities to crisis is a crucial task before and after the disasters and people are in the center of these preparation processes. Today, societies are aware of the need on developing efficient disaster management systems to minimize the loss of life and property caused by the disaster. Humanitarian logistics includes post disaster management activities such as search and rescue, evacuation, allocation of humanitarian relief and the establishment of the temporary shelter areas. The relief need by exposed people are met from the logistics warehouses established in different cities by the authorized institutions. A mixed integer linear programming model is developed to allocate relief to disaster area points from the warehouse in the transportation network with the aim of minimization of service time. Numerical results show that the developed model may be very useful in effectively planning distribution of humanitarian relief after disasters. Thus, the relief items can be delivered to the exposed people as early as possible.

Keywords: Humanitarian Logistics, Disaster, Relief, Mathematical Model



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**327. VARIABLE NEIGHBORHOOD SEARCH FOR THE HETEROGENEOUS
FIXED FLEET VEHICLE ROUTING PROBLEM**

1. MR. RAHUL BARATH S
2. Saravanan P
3. Sathish S

Abstract:

The vehicle routing problem (VRP) is a well-known transportation problem where a fleet of homogenous vehicles deliver goods from the depot to a number of customers. The ~~heterogeneous fixed fleet vehicle routing problem (HFFVRP) is a more practical variant of~~ vehicle routing problem. While the classical VRP assumes that the fleet owner has unlimited number of vehicles from one type, it is assumed that the fleet owner has various types and fixed number of vehicles in the HFFVRP variant. In practice, this variant may commonly be seen in designing daily service network of beverage, food and dairy transportation. Similar to VRP, this problem variation allows vehicles to make the delivery operations by visiting all clients at once with the aim of minimization of total travel distance. In this study, an efficient hybrid approach is proposed to solve the problem. In this approach, variable neighborhood search (VNS), savings heuristic and perturbation mechanism are combined with the help of efficient neighborhood strategies. The numerical results of a well-known number of benchmark instances show that the developed approach achieved best-known solutions reported in the literature. Additionally, the findings of this study indicate that the approach has the potential of enabling the decision maker to make effective decisions related to design of transportation networks.

Keywords: Vehicle Routing Problem, Heterogeneous Fixed Fleet, Variable Neighborhood Search


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328. DETERMINING THE LOCATION OF A WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) RECYCLING PLANT IN THE AGEAN REGION OF TURKEY

1. MR. RAHUL BARATH S
2. Senthamizhselvan S
3. Shalini N

Abstract:

Recycling electronic waste has become an important research area in recent years due to its potential benefits to economy and sustainable environment. The recycling of WEEE is also crucially important since it handles hazardous waste according to regulations and retrieves the valuable materials. One of the important issues in creating appropriate infrastructure to recycle WEEE is the selection of optimal location for the recycling plants. Although, there is a growing interest in the related literature, there are limited studies in developing countries to manage WEEE based on scientific findings. In order to contribute to the fulfillment of this need, a mixed integer linear programming (MILP) model is proposed to determine the optimal location of a WEEE recycling plant. The MILP model is applied to the case of Aegean Region of Turkey.

Keywords: WEEE, Recycling, Facility Location, Mixed Integer Linear Programming


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329. REVIEW OF ESTIMATION METHODS FOR E-WASTE QUANTITIES AND THE APPLICATION OF SIMPLE DELAY METHOD FOR THE CASE OF TURKEY

1. MR. RAHUL BARATH S
2. Shafini S
3. Subiksha G

Abstract:

Electronic waste or e-waste is the fastest growing waste stream in the world. Both governments and civil initiatives are working together to create social awareness to struggle with sharply increasing e-waste production and to develop necessary management practices. Due to environmental, social, health and legal outcomes of e-waste, it has become important to construct sustainable e-waste management systems. In order to create such an efficient system, the crucial data are related to the quantities of various type of e-waste coming into the waste recovery system. Therefore, estimation of these quantities becomes valuable. This study aims to review different estimation methods which mainly depend on input output analysis. The methods are evaluated in terms of their advantages, disadvantages and information needed to implement them for e-waste estimation. Then, in the study, The Simple Delay Method is used to estimate the quantities of waste white goods in Turkey. Refrigerators, washing machines, dishwashers, dryers, ovens and freezers are taken into account as white goods. The study contributes to the advancement of the e-waste related literature and adds benefit to understanding the e-waste potential of Turkey.

Keywords: E-Waste, Estimation, White Goods, Simple Delay Method


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330. PROPERTIES OF PIEZOELECTRIC LEAD ZIRCONATE TITANATE CERAMIC FIBER CEMENT COMPOSITES

1. MR. RAHUL BARATH S
2. Thachinamoorthy K
3. Thenmozhi K

Abstract:

Lead zirconate titanate (PZT) fibres have attracted engineers by being an active material, which is capable to transform mechanical energy into electrical signals and vice versa. Furthermore, these fibres can easily be integrated into composite structures. Availability of these materials has enabled the development of Fiber Composites, comprised of piezoceramic fibers embedded in a matrix. It is predicted that when these piezoelectric fiber composites are integrated into cement, piezoelectric characteristic of fiber composite layer will allow us to have an idea about the applied applied mechanical stress. In this study, the effect of the mechanically applied load on the piezoelectric properties has been investigated experimentally using a lead zirconate titanate (PZT) piezoceramic fibres. Mechanical loads were applied to PZT ceramics composite sample under compressive stress. The phase composition and microstructure properties were investigated by SEM analysis.

Keywords:Cement, Composite, PZT, Piezoelectric Ceramic Fibers



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330. PROPERTIES IN THE COMPOSITES OF EPOXY-CEMENT-PZT CERAMIC POWDER

MR. RAHUL BARATH S

Vaishnavi S

Viji G

Abstract:

Lead zirconate titanate (PZT) is one of the most widely studied ceramic materials for various areas. This ceramic material can be produced as a piezoelectric material which makes it desirable for many applications. Its extraordinary behavior has been known since mid 20th century. It is slightly a new material civil engineering but a good candidate for many applications. In this work, PZT was mixed with normal Portland cement at different ratio to produce composites. The influences of filler content and composite thickness on the composite properties were investigated. Morphology of the composites was characterized by scanning electron microscopy, mechanical properties of the samples were studied by uniaxial tension.

Keywords: Cement, Epoxy, Lead Zirconate Titanate Ceramic Powder, Composite.

331. CORRELATING SURFACE POTENTIAL WITH IRREGULAR PLASTIC DEFORMATION

1. MR. PRABAHAR KN

2. Vishalini V

3. Karthikeyan M

Abstract:

Surface potential of AA 3204 undergoing a serrated plastic flow (PLC effect) was monitored in a dilute brine electrolyte under various strain rates at 30 oC. Significant potential bursts at the launch of the stress drop regimes of the flow were revealed. The serration counts and frequency of the PLC effect matched with that of the bursts precisely, and average burst magnitude (ΔV) was found to be directly proportional with that of the stress drops ($\Delta \sigma$). The bursts were attributed to the electrons in strain fields of the slip steps exposed to the electrolyte during the local banding events. The utility of the electrochemical set-up for investigation of the PLC effect and monitoring deformation and damage progress of materials were affirmed.

Keywords: Plastic Deformation, PLC Effect, Surface Potential, Surface Films, Dislocations.

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332. AN EXAMINATION OF DAYLIGHT USAGE OF FIRAT UNIVERSITY FACULTY OF ARCHITECTURE BUILDING WITH BIM

1. MR. PRABAHAR KN
2. Divyasree G
3. Gokulan S

Abstract:

The surfaces of building envelope are the intersections that create connections between buildings and external environment in terms of aesthetics, physics, and chemistry. The interior spatial conditions of a building are determined by the visual, thermal; and radial permeability of the building envelope. Daylight taken from the surfaces of building envelope has an effect on the indoor spatial comfort conditions like the users' health and the building's energy use. The use of daylight should be in sufficient amount especially for the needs of the places used during the day. In cases in which daylight is deficient, the need of artificial lighting and heating arises. Therefore, the users face the places that are uncomfortable in terms of interior spatial comfort and that consume a lot of energy. The effect of the use of daylight is a lot especially on the user comfort in education buildings. Benefiting from daylight is important for the users who spend most of their times at school in terms of mental efficiency and psychology. On the other hand, the need for an efficient building envelope design emerges in order to avoid physical problems' occurring among the users because intensive daylight tires their eyes and heats the place a lot. Firat University Architecture Faculty Building, still under construction, was chosen as a sample case in this study. Sixty- five percent of the rough framing of the building has been completed. The building envelope was designed by considering construction and operation cost. The analyzes were made on the effect of the building envelope on the indoor daylight usage. The faculty building was modelled in Revit depending on the project assumptions such as like the building's plan layout, floor heights, envelope...i.e factors. Daylight analysis of the created model was made with BIM on the date of equinox.

Keywords: Educational Building Design, Daylighting Analysis, Revit, Bim


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333. THE COMPARISON OF MONE'S BUILDING TYPES PROJECTS WITH MONE'S EDUCATION BUILDING STANDARDS AND THE EVALUATION OF THEIR CONSISTENCY

1. MR. PRABAHAR KN
2. Bharanitharan D
3. Kiruthiga G

Abstract:

The right to education that is guaranteed by several laws of the constitution reaches the individuals through the state's executive power. The executive tries to fulfill its actions depending on the mechanisms of equality and justice in education. The right to plan buildings and facilities belonging to education institutions of every level and kind was given to the Ministry of National Education (MoNE) by the Basic Law of National Education. The Ministry developed standards under the light of education standards and produced building types projects in order to meet the need of educational buildings around the country quickly and economically. By taking manufacturing cost, management, function, aesthetics, and the level of efficiency in education into consideration, the improved standards are definitely important for the students' and teachers' spatial comfort. In this study, the consistency between the Ministry's current project preparation regulations and its 2000.07- numbered sixteen-classroom high school building type project was evaluated by comparing them with each other.

Keywords: Educational Building Design, Project Standarts


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334. ISOLATION AND CHARACTERIZATION OF TOTAL ENZYMATIC BIOACTIVE POLYPEPTIDES FROM SULUSARAY HOT SPRING

1. MR. PRABAHAR KN
2. Banusree K
3. Harish V

Abstract:

The aim of this project is to examine Sulusaray hot spring, which is particularly preferred for dermatological diseases, in terms of bioactive polypeptides and to identify the active compounds in the therapeutic polypeptide structure. For this purpose, water samples from the Sulusaray hot spring were first filtered using 0,45 μm and 0,22 μm pore sized membranes followed by 1 and 30 kDa cut off nitrocellulose membranes. The concentration of protein extract, extracted from the filter papers was determined by the Bradford method. Extracted proteins were screened for their bioactivity. In this context, their antimicrobial activity against *S. enteritidis*, *P. aeruginosa*, *S. pyogenes*, *K. pneumoniae*, *S. aureus*, *C. utilis*, *C. albicans*, *E. coli*, *B. subtilis* and *P. vulgaris* were tested by spot on lawn method. Lipase, amylase, protease, oxidase and catalase enzymatic activities of the extracted polypeptides were also investigated. The bioactive polypeptides are displayed to be separated by SDS- PAGE method. Identification of polypeptide producer microorganisms were done by metagenomic analysis. As a result of the studies, it was found that the polypeptide mixture having a concentration of 65.5 $\mu\text{g} / \text{ml}$ was effective against strains of *S. enteritidis*, *C. utilis*, *C. albicans*, *E. coli*, *B. subtilis* and *P. vulgaris* strains, and that have 1.384 U / ml amylase, 0.263 U / ml lipase and 1.64 U / ml protease enzyme activities. It has been found that the polypeptide mixture contains two separate polypeptides, predominantly 70 kDa and 35 kDa in size. Sequence analysis results revealed that the hot spring contains bacteria from the classes Proteobacteria, Bacteriodes, Chloroflexi, Deinococcus thermus and Cyanobacteria and fungi from the family Ascomycota. As a result, it is predicted that the bioactive polypeptide sources contained in the water are produced by these organisms.

Keywords: Bioactive Polypeptides, Sulusaray Hot Spring, Antimicrobial Activity, Sds-Page, Metagenomic



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335. IMPROVING THE COLOR YIELD AND WET FASTNESSES BY SYNTHESIZING THE NEW DISPERSE AZO DYE

1. MR. PRABAHAR KN
2. Fazluddeen M
3. Kalpana S

Abstract:

The most important class of organic dyestuffs are azo dyestuffs. Azo dyes are characterized by the azo group, which is a chromophore group in their structure. The nitrogen atoms in this group are bonded to carbon atoms by sp^2 hybridization. One of the carbon atoms attached to the azo group is the aromatic cyclic heterocyclic ring. The other is; an enolizable aliphatic group. The color yield and fastness properties of azo disperse dyes containing aliphatic groups are low. The purpose of this study is to improve the color yield and wet fastness of the azo dye by synthesizing the new azo disperse dyestuff. For this purpose; a new dyestuff has been synthesized in acidic medium which can be used instead of disperse blue 321 which is one of the most used dyestuffs in textile. The synthesis was carried out in two steps, namely diazotization and chelation. The absorbance values of the dyes synthesized in standard and acidic media were measured by UV-visible spectrophotometer. Color yield values were obtained from these values by the calculation method. According to standard dyes, a 44% increase in the color yield of the disperse blue 321 dyes synthesized was obtained. It has been found that the new dye synthesized has less contamination of the multifiber fabric as a result of washing fastness according to ISO 105 C06, B2S standard.

As seen in the structure of newly synthesized Dispers Blue 321 dye; there are two interconnected benzene rings connected to the azo group at the clamping part. This leads to increased unsaturation and color yield in the structure. At the same time it causes less pollution in washing fastnesses.

Keywords: Organic Dyestuff, Azo, Color Yield, Wet Fastness



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336. CONSTRAINT-BASED DESIGN AND DEPENDENCY ANALYSIS

1. MR. PRABAHAR KN
2. Guruprakash N V
3. Mathiyarasan P

Abstract:

An engineering design problem is usually represented by a set of constraints which are expressed as functions of specifications and decision variables. Design may be defined as the process of determining appropriate values of the decision variables provided that constraints and design specifications are given. The aim is to generate a design that satisfies all constraints. Constraint-based design represents and operates upon constraints. It has been recognized as a strong tool for achieving intelligent support of design, particularly the design of mechanical parts or assemblies. In this study, a methodology is presented to find feasible solutions for constraint-based designs. A network model is used to represent relationships among design variables.

Keywords: Constraint-Based Design, Dependency, Feasibility


337. OPTIMIZATION AND VALUATION OF EXPANSION FLEXIBILITY IN MANUFACTURING INDUSTRY

MR. KASIRAJAN S
Mavithra K
Dhanu U

Abstract:

Flexibility allows firms to compete more effectively in a world of substantial price and demand uncertainty, product variety, short product life cycles, and rapid product development. Throughout the life of a project, managers must react to events as they unfold. Real options approach seeks to quantify the value of flexibility and to determine the optimal managerial decisions. In this study, real options approach is presented to evaluate the flexibility to expand the capacity using a case study for a cell phone manufacturing firm that is unsure of the market demand of its new products. Valuation of the option is demonstrated using binomial trees. Optimal decisions for each state are shown on the tree.

Keywords: Flexibility, Real Options, Decision Making, Valuation, Optimization


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**338. INVESTIGATION OF RENEWABLE ENERGY RESOURCES POTENTIAL
INTRACE REGION**

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Jai Surya D

Kalpana S

Abstract:

Thrace within the borders of Turkey that is called Eastern Thrace in the international public is the name given to the northwest of Turkey that it is also the part of Southeastern Europe. The Trakya region includes three provinces in Marmara region (Edirne, Kırklareli, Tekirdag) and as well as those territories on the European Continent of the provinces of Çanakkale and Istanbul. The Thrace region within the borders of Turkey has a surface area of 23,764 km². It accounts for 3% of Turkey's land area.

When viewed from the perspective of renewable energy sources, this region seems to be in good position in terms of Wind Energy and Biomass Energy respectively. On the wind maps, the region was found to be in the favorable condition in terms of wind speed and elevation. According to the Turkish Wind Energy Association (TWEA), the Thrace region accounts for about 25% (350 MW) of the wind energy production in Turkey. Thrace region is available for biogas production, because of the livestock activities and suitable for energy forests because of the forests in the region. According to Electric Generation Inc., although the region of Thrace has a 430MW biogas power energy potential the installed power of the biogas energy is 11MW currently.

In this study, the potential of renewable energy resources of the Trakya region will be examined firstly. It will be argued that how much of the existing potential has been gained to the economy of the country by the establishment of a power plant.

Keywords: Thrace, Renewable Energy, Wind, Biomass, Biogas, Turkey


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339. NOVEL USE OF WEB 2.0 TECHNOLOGIES TO ACQUIRE 21ST CENTURY TECHNOLOGY LITERACY SKILLS: CASE STUDIES

MR. KASIRAJAN S


Kiruthiga G

Priyanka P

Abstract:

This reach suggests a general approach for productive use of Web 2.0 technologies during the educational journey of high schoolers and college students. Technology literacy is defined as "the ability to responsibly use appropriate technology to communicate, solve problems, access, manage, integrate, evaluate, design and create information to improve learning in all subject areas, and acquire lifelong knowledge and skills in the 21st century" by The Colorado Department of Education (CDE). The starting point of our research was using two online technologies, Voice Thread and Google Documents, for the instruction of an authentic Mathematics curriculum and exploring impacts on high school students' attitudes and learning. In that study students used Voice Thread, an interactive presentation tool, to present their solution to short questions as a part of bigger mathematics problems; and they worked as groups on Google Documents to solve more complex decision making problems. Voice Thread participations aimed to encourage asynchronous communication between teacher and students, while group work on Google Documents enhanced opportunities for student-student dialogue and collaboration. The effort to help students acquiring technology literacy skills continued with pre-service teachers at College of Education at a public university in Turkey. Several Web 2.0 technologies including presentation tools, e-book creation tools, online tools, concept mapping and other tools for creating visual educational materials, like cartoons and animations, etc. In-class sessions, instructor was demonstrating each single step to use the tools and students followed from the big screen, and students had weekly homework to create learning materials related a topic from their particular field of study, which included Science and Technology Education, Mathematics Education, Elementary Education and English Education departments, using the tools. Despite of which department they were in, teacher candidates demonstrated higher competency levels for all content development areas.

Keywords: Web 2.0, Education, Online



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340. MULTI-OBJECTIVE ARTIFICIAL BEE COLONY ALGORITHM TO ESTIMATE TRANSFORMER EQUIVALENT CIRCUIT PARAMETERS

MR. KASIRAJAN S

Durgadevi E

Karthikeyan M

Abstract:

Real world problems such as scientific, engineering, industrial problems are in the form of the multi-objective optimization problems. In order to achieve optimum solutions of such problems, multi-objective optimization algorithms are utilized. In this study, the problem is estimation of single-phase transformer parameters which is one of the engineering problems. This estimation is provided by artificial bee colony (ABC) algorithm. ABC is developed as a metaheuristic method and simulates foraging of bees. Since the problem is a multi-objective optimization problem, multi-objective ABC (MOABC) is proposed to estimate parameters in the study. This study aims to estimate equivalent circuit parameters using current and voltage values at any known load. Through algorithm, difference between actual and estimated parameter values that is the error has been tried to minimize. The successful results show that the proposed method can be used for a single-phase transformer parameters estimation.

Keywords: Multi-Objective Artificial Bee Colony Algorithm, Multi-Objective Optimization, Transformer Parameter Estimation


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341. USE OF SILVER NANOPARTICLES IN PLANT BIOTECHNOLOGY


1. MR. KASIRAJAN S
2. Hari Prasath S
3. Lavanya Shree L

Abstract:

Nanotechnology is being used effectively in many areas contemporarily. Silver nanoparticles are one of the most used materials in antibacterial and antiseptic practises. They are also eco-friendly and have relatively low toxicity towards humans. They can be synthesised by chemical, physical, photochemical and biological procedures. In all methods, nanoparticles are formed by reducing of the silver ions to silver elements using reducing agents. In biological synthesis, silver nanoparticles have been synthesized by using plant extracts by a method named "green synthesis" or "green bio-reduction". This method eliminates expensive and toxic substances as reducing and stabilizing agents.

In plant biotechnology, silver nanoparticles have been used in elicitation of cell and tissue cultures of medicinal plants in order to trigger metabolic pathways and enhance secondary metabolite production. Moreover, biologically synthesised silver nanoparticles have been used in surface sterilization of plant explants prior to cultivation. They showed no adverse effects (such as browning, prevention of cell division, germination, growth and callus formation) towards seeds and explants. This surface sterilization method may be more helpful than currently used methods, especially for delicate plant explants which are easily damaged by commonly used surface sterilizing agents such as sodium hypochloride. These studies about nanoparticles associate plant biotechnology and nanotechnology for better, more practical and beneficial applications.

Keywords: Silver Nanoparticles, Plant Biotechnology, Elicitation, Surface Sterilization



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342. THE FIRST PROTOTYPE OF SELECTIVE LASER MELTING MACHINE IN TURKEY

MR. KASIRAJAN S

Rubavathi G

Subiksha G

Abstract:

Selective laser melting (SLM) is an additive manufacturing (AM) method which uses a laser power source to produce 3D desired parts using powder materials (PM). The technological advantages that may be achieved during product design, development and manufacturing have made this production technology popular. Unlike conventional production methods, AM requires no additional tooling during the production process and it allows the production of parts in complex geometries. For this reason, studies on this subject have increased considerably in the world. The aim of this work is to design and manufacture a prototype SLM machine which has open architecture to produce 3D metallic parts. Using this prototype, it will be possible to make research or production with any requested materials. Experimental studies have been carried out to perform machine capabilities. Results are very promising for producibility of three dimensional metallic parts. Furthermore, this prototype is the first SLM machine built in Turkey.

Keywords:Additive Manufacturing, Slm, 3d Printing

343. NEW RESEARCH PERSPECTIVES IN REVERSE LOGISTICS

1. **MRS. RAJATHI D**

2. **Atchaya R**

3. **Hariharan G**

Abstract:

Reverse logistics may be defined as the flow of end-of-life products from customers to producers in order to recover value using appropriate methods. Reverse logistics takes attention both in the literature and in application due to the cost advantages it serves for the companies and also the legislative requirements. Reverse logistics is an efficient way of decreasing solid waste, collecting resources and use them again in production. In this study, the basic issues and problems in reverse logistics is considered and new research perspectives are discussed based on recent literature.

Keywords:Reverse Logistics, Value Recovery

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**344 A HIGH RESOLUTION DDFS DESIGN ON VHDL USING BIPARTITE
TABLEMETHOD**

**MRS. RAJATHI D
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Irfan Basith J**

Abstract:

In this study, a Look Up Table (LUT) based Direct Digital Frequency Synthesizer (DDFS) is designed on VHDL. Bipartite Table Method, an advance memory compression method, is used together with quadratic compression method. 23 mHz frequency resolution is achieved with 100MHz clock input. The required memory is obtained 585 times smaller than traditional DDFSs. A MATLAB code is revealed to select the best design which provides the smallest required memory for 100 dB Spurious Free Dynamic Range (SFDR) level. The contents of the LUTs are also evaluated by using MATLAB software. The design is simulated for multiple frequencies between 23mHz-30MHz with VIVADO 2016.3 software. The simulation results perfectly match with calculations.

Keywords:Bipartite Table Method, Quadratic Compression, Ddfs, Dds, Vhdl.


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345. FPGA REALIZATION OF EKF BASED SPEED-SENSORLESS DRIVE WORKING IN FIELD-WEAKENING REGION

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Abstract:

This study presents a field programmable gate array (FPGA) implementation of the extended Kalman filter (EKF) for speed-sensorless direct vector control (DVC) of the induction motor (IM) in a wide speed range including the field weakening region. A Hardware in the Loop (HIL) platform is set for the control and estimation performance tests of the EKF-based speed-sensorless DVC system with utilization of Very high speed integrated circuit Hardware Description Language (VHDL). The EKF-based estimator developed for the estimations of $\alpha\beta$ -stator stationary axis components of the stator currents ($i_{s\alpha}$ and $i_{s\beta}$), $\alpha\beta$ -stator stationary axis components of the rotor fluxes ($\phi_{r\alpha}$ and $\phi_{r\beta}$), rotor angular velocity (ω_m), rotor resistance (R_r), and magnetizing inductance (L_m) is implemented on the Xilinx Virtex 5 FPGA. The FPGA provides efficient design and implementation of the EKF based speed-sensorless DVC system since it helps to decrease the computation/sampling time of the whole system due to its parallel signal processing ability. The space vector pulse width modulation (SVPWM) method is also implemented on the FPGA platform for switching the voltage source inverter (VSI). The estimation and control performance of the proposed sensorless drive system is tested by varying R_r , L_m , and load torque (T_L) in HIL simulations for a wide speed range including zero speed and field-weakening region. The obtained results prove the effectiveness of the proposed EKF based speed-sensorless drive and its FPGA implementation.

Keywords: FPGA; Field-Weakening Region; Extended Kalman Filter


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346 REDUCED-ORDER UNSCENTED KALMAN FILTER BASED LOAD TORQUE AND ROTOR RESISTANCE ESTIMATIONS FOR SPEED-SENSORLESS CONTROL OF INDUCTION MOTORS

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2. Karthikeyan M
- 3 Senthamizhselvan S

Abstract:

In this paper, the simultaneously estimations of rotor fluxes, rotor mechanical velocity, load torque including viscous friction term, and rotor resistance are performed by using a novel reduced-order-unscented-Kalman filter (ROUKF) for speed-sensorless-vector-control of induction motors (IMs). The estimation performances of speed-sensorless IM drives are affected by frequency dependence variations in electrical model such as rotor resistance and unknown mechanical parameters of mechanical model such as load torque. In order to obtain high performance estimations, those variations must be updated or included to the estimation algorithms. For this purpose, novel ROUKF algorithm which is firstly introduced in the literature is developed and tested with simulations for a wide speed range including zero speed under load torque and rotor resistance variations.

Keywords: Induction Motor, Reduced-Order Unscented Kalman Filter, Rotor Resistance Estimation, Speed-Sensorless Control


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347. EFFECTS OF MALEIC ANHYDRIDE GRAFTED RECYCLED LOW DENSITY POLYETHYLENE ON BITUMEN

MRS. RAJATHI D

Shalini S

Thenmozhi K

Abstract:

Modification of bitumen is a widespread phenomenon around the world mainly on the purpose of acquiring better performance properties by decreasing temperature dependency of bitumen which leads to diminish permanent deformation on highways such as rutting.

This paper is aimed to investigate the modification of bitumen maleic anhydride (MAH) grafted recycled low density polyethylene (LDPER-MAH). Maleic anhydride was dissolved and mixed with recycled polyethylene which was observed by the Fourier infra-red (FT-IR) spectrum. Subsequently, Six different binders (one base and five modified) were prepared with pre-treated LDPER granules to investigate the effects of the modifier on properties of bitumen.

Conventional tests such as penetration, softening point and ductility were conducted on base and LDPER-MAH modified binders to examine physical changes in bitumen after modification. Rolling thin film oven test (RTFOT) was applied to base and modified bitumen to investigate effects of LDPER-MAH on short term aging properties of bitumen. Rotational viscometer (RV) and dynamic shear rheometer (DSR) was used to determine viscosity of the binders.

Complex shear modulus (G^*) and phase angle (δ) parameters of base and modified bitumens were measured with frequency sweep test by means of dynamic shear rheometer (DSR). The tests results reveal that a gradually increment in LDPER-MAH modification leads to a decrease in penetration and an increase in softening point which is evidence of an increased stiffness of bitumen. An increment in rutting parameter after modification observed by DSR test is a clear indication of better rheological properties of bitumen which means permanent deformation occurred in flexible pavement can be restrained by LDPER-MAH modification.

Keywords: Recycled Polyethylene, Bitumen, Modification, Maleic Anhydride, Graft

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348. STRENGTH PROPERTIES OF KAOLIN TREATED BY GUAR GUM

MRS. RAJATHI D

Saras Winson A

Vishalini V

Abstract:

Soil improvement methods are generally preferred to achieve the desired engineering properties of weak soils. Within the developments in technology, the ground improvement methods and binder additives must be environmentally friendly and economical. Therefore, eco-friendly additives are recommended to prevent pollution. Biopolymers are natural polymers produced by living organisms and are considered eco-friendly additives. However, biopolymer treated soil behavior is relatively unknown because the physical and chemical properties of biopolymers widely vary depending on their compositions and types. In this study, the effect of guar gum on mechanical properties of kaolin clay was investigated. Guar gum is a galactomannan and the ground endosperm of guar beans. To prepare the specimens for testing, necessary amount of guar gum (0.5, 1 and 1.5) was initially mixed with kaolin and then water is added. Specimens were compacted using standard proctor energy at four different water contents. A dimension of 50×100 mm was selected for unconfined compression tests. After 7 and 28 days curing period, specimens were subjected to unconfined compression test. According to the results obtained from this experimental study; at lower water contents, unconfined compression strength increases with guar gum increment. Furthermore, guar gum contained specimens with high water content showed more ductile behavior.

Keywords: Guar Gum, Kaolin, Unconfined Compressive Strength

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349. AN INVESTIGATION OF ELECTRICAL RESPONSE ON INTERLEAVEDBUCKCONVERTERS USING DIFFERENT TYPE CURRENT CONTROLMETHODS

MRS. RAJATHI D

Dharaanishan S

Puraviraj P

Abstract:

DC converters are widely used in industrial area. Rapidly advancing technology is increasing the expectation of more efficient and smaller size power electronics systems. Adjusted DC voltages required by electrical loads are often provided by DC converters. The coexistence of the same converter types brings advantages such as increased system durability and fault tolerance due to current sharing capability. The use of interleaved switching signals in parallel-connected power converters is one of the preferred methods because it reduces the overall system size by reducing filter element size. In this study, the continuous transfer mode of the vine buck converter; The unit power factor (UPF) and the total harmonic distortion (THD) of the input current are investigated using proportional-integral (PI) control and average sliding mode control (ASMC). The Buck-boost Converter simulates Matlab / Simulink at 100W power and 20 kHz switching frequency and analyzes the control methods. In the analyzes, the THD effect of the converter's response to the load changes in the control methods and other parameter changes was investigated.

Keywords:Proportional-Integral (PI) Control; Average Sliding Mode Control (ASMC); Unit Powerfactor (UPF); Total Harmonic Distortion(THD)

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350. DESIGN OF AN INTELLIGENT CONTROL SYSTEM TO PREVENT THE FERRORESONANCE EFFECT IN MEASURING TRANSFORMERS

MRS. SARASWATHI B

Kaviya M

Viji G

Abstract:

Voltage and current transformers used for measurement and protection are one of the most used elements of the power system. The B-H characteristic of the transformers provides electromagnetic energy conversion in a linear region with a high efficiency. With the transformer's ferromagnetic core saturating, the energy conversion efficiency begins to fall. Nonlinear inductance of the transformer and elements such as resistance and capacitance in the nonlinear loads of the power system connected to the current transformer has the potential to interfere suddenly and cause a ferroresonance phenomenon. In this study, it has been determined that transformers, especially those operating in high voltage systems and compensation plants, produce destructive electrical parameters in the system due to the fact that they work together with the continuous closing-opening switches. It has been determined that it is possible to remove randomly operated switch-off openings which cause this destructive condition by means of a control system operating at appropriate times using semiconductor switches.

Keywords: Current Transformer, Voltage Transformer, Ferruresonance, Switch Position Control, Power Systems

351. EVALUATION OF FT-PARAFIN MODIFIER ON PHYSICAL PROPERTIES OF BITUMEN

MRS. SARASWATHI B

Abinaya G

Vignesh P

Abstract:

Modification of bitumen is a widespread phenomenon around the world mainly on the purpose of acquiring better performance properties by decreasing temperature dependency of bitumen which leads to diminish permanent deformation on highways such as rutting. In addition to performance enhancer modifiers, there are some other types of modifier such as mixing and compaction temperature reducer of bitumen so as to decrease cost and energy consumption during hot mix asphalt preparation.

In this study, it was aimed to investigate the effects of FT-Parafin (FT)/Sasobit® a warm mix asphalt modifier, on physical properties of bitumen. To this end, FT-Parafin (FT)/Sasobit® was added to bitumen having 160/220 penetration grade by amounts of 3%, 4%, 5%, 6% total weight of mixture. After preparation of modified binders, pure and FT-Parafin (FT)/Sasobit® modified bitumens were applied to a testing program. Conventional tests such as penetration, softening point and ductility were conducted on the binders in order to examine physical changes after modification.

Rotational viscosity test was used to determine viscosity of pure and FT-Parafin (FT)/Sasobit® modified binder. Mixing and compacting temperature of binders were also calculated to investigate flow properties. Dynamic shear rheometer (DSR) was employed to determine high temperature performance grade of base and modified binders.

Tests results indicate that the using FT-Parafin (FT)/Sasobit® modified in bitumen increase flow properties of bitumen that might provide cost and energy savings which is also important for environmental awareness.

Keywords: Bitumen, Modification, FT-Parafin, Rotational Viscometer, Dynamic Shear Rheometer


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**352. PERFORMANCE BASED SEISMIC DESIGN OF STEEL FRAMES
USING TLBO AND JAYA**

MRS. SARASWATHI B

Arunkumar R

Ashwin J

Abstract:

In this paper, a performance-based optimal seismic design of steel frames are presented utilizing Teaching-Learning Based Optimization (TLBO) and JAYA. These meta-heuristic optimization algorithms have been recently developed and employed in many optimization problems showing a high capability in structural optimization. In the analysis process, Determination of the performance levels of structural systems by the Displacement Coefficients Method, which are used to determine performance levels of structures by considering structural capacity obtained from pushover analysis is intended. At the push over step where target displacement is calculated by the Displacement Coefficient Method. Plastic rotations of beams, columns and relative displacements at story levels are determined. Two numerical examples which have been previously considered in literature are studied and the results illustrate significant improvement in structural weight compared to the conventional design methods. The capabilities of the TLBO are compared to with JAYA.

Keywords: Pushover, Performance Based, Seismic Design, TLBO, Jaya



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353. COMBINED NATURAL CONVECTION AND THERMAL RADIATION IN AN INCLINED CUBICAL CAVITY WITH A RECTANGULAR PINS ATTACHED TO ITS ACTIVE WALL

MRS. SARASWATHI B

Devaraj S

Dhivya S

Abstract:

Three dimensional combined natural convection and thermal radiation in an inclined cubical cavity with pins attached on the active wall is investigated numerically. The vertical opposing walls are heated and cooled while the other walls are assumed to be adiabatic. The governing flow, momentum equations and the radiative transfer are solved using Fluent 6.3 CFD software. In the discretization of the convection terms, the second order upwind scheme and for the solution algorithm SIMPLE is used. The cavity is filled with air and is considered to be laminar; the properties of air are assumed to be constant except for the density variation for which the Boussinesq approximation is used. The surface to surface (S2S) heat model is used for radiation. The computations are performed for Rayleigh number in the range $10^3 \leq Ra \leq 10^6$, the surface emissivity (ϵ) $0 \leq \epsilon \leq 1$ while the inclination angle is varied $0^\circ \leq \phi \leq 75^\circ$. The mean Nusselt number for convection and radiation were evaluated as a function of Ra number and for some cases, fluid flow patterns and the temperature distributions were analyzed. The results showed that the mean total and radiative Nu number increases monotonically with increasing Ra number and the surface emissivity.

Keywords: Heat Transfer, Inclined Cubical Cavity, Natural Convection, S2S Radiation



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**354. EFFECTS OF NITROCARBURIZING ON THE CORROSION BEHAVIOR
OF AISI 4140 STEEL**

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Dineshkumar J

Helina Trathy G

Abstract:

The aim of this study is to investigate the corrosion resistance of AISI 4140 steel surface coated by nitrocarburizing technique, more commonly known as tennifer. AISI 4140 steel samples were coated with nitrocarburizing technique in a sodium cyanide salt bath for 1, 2 and 3 h. The electrochemical corrosion behaviors of the uncoated and coated samples were investigated with potentiodynamic polarization technique in an air-saturated 3.5 wt% NaCl solution at pH value of 7 at room temperature. Scanning electron microscopy (SEM) with energy dispersive spectroscopy (EDS) and X-ray diffraction (XRD) were used for the characterization of the samples. The effect of nitrocarburized coating on the corrosion characteristic of AISI 4140 steel surface was determined and results were compared with results of the corrosion rates of the uncoated steel surfaces.

Keywords: Nitrocarburizing, AISI 4140 Steel, Potentiodynamic Polarization, Corrosion



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355. SYNTHESIS, CHARACTERIZATION AND OPTICAL PROPERTIES OF THE PMMA BASED NANOCOMPOSITES

MRS. VANISRI K

Kabiikalan K3.Kalamithi G S

Abstract:

In this study, the characterization and optical properties of the polymethyl methacrylate (PMMA) based nanocomposites were investigated. For this purpose, zinc oxide, iron oxide and mixture of zinc oxide iron oxide(hybrid) nanoparticles were reinforced PMMA polymers with a solution casting method. Production of the hybrid zinc-iron oxide nano particles were obtained by the mechanical milling with zinc oxide and iron oxide that have the equal ratios. To produce PMMA based nanocomposites, nano particles and PMMA granules were mixed with acetone and poured onto a glass mold and kept under vacuum for curing. These obtained composites were characterized by using a scanning electron microscopy (SEM) and an X-ray diffraction (XRD). Additionally, the optical properties of the PMMA based nanocomposites were investigated with an UV-visible spectroscopy.

Keywords:PMMA, Optical Properties, Zinc Oxide Nanoparticles, Iron Oxide Nanoparticles

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356. INVESTIGATION OF SURFACE AREA OF NICKEL-COATED MULTI-WALLED CARBON NANOTUBES AT DIFFERENT PH CONDITIONS

MRS. VANISRI K
Karthika K
Mohamed Ashik Y

Abstract:

Multi-walled carbon nanotubes are highly preferred materials in applications where physical adsorption is required due to their high chemical stability, large surface areas, regular nanometric microstructures. Multi-walled carbon nanotubes are doped in various metals in order to increase the adsorption by increasing the surface area of the nanotubes. This study was designed based on this phenomenon, multi-walled carbon nanotubes were coated with Nickel in parallel to increase the surface area of the carbon nanotubes porosity. The carbon nanotubes which was coated with nickel were treated with solutions at different pH conditions. Then, changing of surface area of these carbon nanotubes was observed, and the correlation between them was shown. Moreover, the structure of carbon nanotubes treated with solutions having $\text{pH} < 2$ and $\text{pH} > 12$ showed different morphology from other multi walled carbon nanotubes. The nature of the nanotubes which was treated with different pH values was studied using high-resolution transmission electron microscopy (TEM) and energy-dispersive X-ray spectroscopy (EDX). Consequently, in the light of the data obtained from this experimental study, these nanotubes, whose surface areas are increased, can more effectively adsorb heavy metals such as iron, cleaning of water, storage of hydrogen energy, and construction of biosensors.

Keywords: Ni Coated Carbon Nanotubes, pH, Physical Adsorption


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357. MECHANICAL CHARACTERISATION OF GLASS/FLAX WOVEN FIBRE REINFORCED HYBRID COMPOSITES

MRS. VANISRI K

Monika S

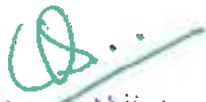
Narmatha P

Abstract:

Tensile and flexural behaviour of flax fibre and glass fibre reinforced polyester matrix composites were studied and fracture surface of the composites were characterised by electron microscopy. An aim of the study is to investigate the effect of fabric stacking sequence and hybrid concentrations of natural and synthetic fibres on mechanical behaviour of the composites. The properties of the hybrid composites were also compared with pure glass and pure flax reinforced composites. Bi-directional flax fabrics and glass fibre fabrics were used with thermoset polyester matrix by hand layup method for laminates manufacturing. It was found that the fabric sequence effected both the tensile, flexural strength failure strain except Young's modulus of the composites. The composites with a sequential fabric array showed significantly higher strength than those in composites with block fabric array. The highest tensile and flexural properties were obtained (250 MPa, 350 MPa) in pure glass fabric composites. However, pure flax fibre composites gives lower tensile strength and modulus (76

MPa - 6.7 GPa) and significantly higher strain to failure (8 %) compared to other fibre composites. Hybrid composites with flax/glass fibres showed comparable specific modulus with pure glass composites.

Keywords: Glass, Flax, Polyester, Hybrid, Composites, Tensile, Flexural


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358. TENSILE PROPERTIES OF CARBON/JUTE WOVEN FIBRE REINFORCED POLYESTER COMPOSITES

MRS. VANISRI K

Ranjitha S

Sarani V

Abstract:

Carbon fibre/Jute fibre reinforced polyester composites were manufactured by compression moulding. Tensile behaviour of jute/polyester, carbon fibre/polyester, and carbon/Jute polyester composites were studied and fracture surface of the composites were characterised by electron microscopy. The study aims to analyse the influence of fabric type, fibre volume fraction of carbon fibres and hybrid combination of synthetic and natural fibres on tensile behaviour of the composites. The properties of carbon fibre reinforced polyester composites were obtained in different fibre volume fractions. The result showed that fabric type affected tensile properties of the composites. The highest tensile strength and modulus were obtained in unidirectional plain weave of carbon fibre composites at 32 vol% fibre content (505 MPa, 69 GPa). When neat unsaturated polyester matrix panels was reinforced with jute fibres with 23 vol% fibre content, composites showed higher tensile strength of 30 MPa and Young's modulus of 5.3 GPa. The performance of the jute fibre composites were increased. Tensile strength and Young's modulus of carbon/jute fibre hybrid composites was found to 90 MPa and 10 GPa, respectively.

Keywords: Carbon, Jute, Polyester, Hybrid, Woven, Volume Fraction, Tensile Testing



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349. MOLECULAR DYNAMICS SIMULATION OF MECHANICAL PROPERTIES OF HYDROXYAPATITE AND CARBON NANOTUBE-REINFORCED HYDROXYAPATITE NANOCOMPOSITE

MRS. VANISRI K

Selvaravivek S

Seraphin Sheela S

Abstract:

We present, for the first time, a classical MD simulation of the stress-strain properties of the pure Hydroxyapatite (HAP) molecule, $\text{Ca}_{10}(\text{PO}_4)_6(\text{OH})_2$ and also nanocomposite made from HAP and carbon nanotube (CNT) without the use of any functional groups. HAP molecule is one of the most important and stable calcium phosphate bioceramic minerals and forms the primary structural component of the bone and materials for bone implant. Despite these excellent properties, HAP is mechanically quite weak and brittle, having a rather low tensile, compressive and flexural strength, which severely limits its use in applications in which load bearing is important. Several methodologies have been proposed to offset these mechanical weaknesses. Amongst these, the suggestion to reinforce HAP with CNT is particularly attractive since it has also been shown experimentally that tissue engineering scaffolds made of CNT can promote the proliferation of the bone-forming cells, namely the osteoblasts. We determine the Young modulus and the yield points of both pure and nanotube-reinforced HAP.

The computed values of Young modulus for pure HAP from all these simulations are well within the range of the experimental data. It is seen that while there is no enhancement of the magnitude of the Young modulus of the reinforced HAP, vis-a-vis the pure HAP, there is, however, a significant change in the yield strain of the reinforced nanocomposite. This increase in ductility can be usefully exploited in HAP-based bioceramics employed in such areas of medical nanotechnology as bone-replacing tissue engineering. Furthermore, to investigate the effect of nanotube functionalization on brittle-ductile transition behavior of CNT/HAP composites, a system with different amount of cross-links (functional groups) will be presented and discussed.

Keywords: Hydroxyapatite, Carbon Nanotube, Mechanical Properties, Nanocomposites, Molecular Dynamics, Ductility



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360. EFFECTS OF A NEW VIRTUAL REHABILITATION SYSTEM AFTER ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION – MARVAJED

MRS. VANISRI K

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Vignesh P

Abstract:

Improvements in technology have made virtual rehabilitation (VR) popular and available in various rehabilitation systems. In recent years, many different technologies on VR have been produced and used in research. However, these technologies have been generally studied in neurological patients. Thus, it is necessary to investigate the effects of a new VR system in orthopaedic patients. The purpose of this study was to investigate the effects of VR system using MarVAJED which provides visual and auditory stimulus aimed for educating and controlling the joint on patient outcomes in individuals with ACL injury. Eighteen patients with ACL reconstruction were participated in this study. In addition to conventional physiotherapy, VR treatment applied with visual and auditory stimulus for a total of eight weeks, three sessions per week. Visual and auditory stimulus were applied via MarVAJED, which was developed by Mamara University, to aim for educating and controlling the joint as VR system. Before and after intervention, proprioception was measured with Biodex System Pro 4 Isokinetic Dynamometer, activity level and functional status were measured with Tegner Activity Scale, Lysholm Scale, respectively. Muscle stiffness and tone were measured with Myoton Muscle Pro device. There were statistically significant improvements in measures of proprioception, activity level, and functional status between pre- and post- treatment ($p < 0.05$). No significant differences in measures of muscle stiffness and tone after the treatment ($p > 0.05$). We concluded that this new VR system known as MarVAJED effectively treat ACL patients by improving proprioception, activity level, and functional status. Integration of technology into rehabilitation programmes may enhance assessment and rehabilitation. New technology systems may be more effective in increasing quality of life of patients.

Acknowledgement: This study was supported by Mamara University, Scientific Research Research Projects Committee (Project Number: SAG-C-DRP-200716-0374) and TUBITAK, The Scientific and Technological Research Council of Turkey (Project Number: 115E351).

Keywords: Virtual Rehabilitation, Anterior Cruciate Ligament, Physiotherapy


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361. INTER-RATER AND INTRA-RATER RELIABILITY AND VALIDITY OF MARVAJED TECHNOLOGICAL SYSTEM FOR MEASURING KNEE JOINT POSITION SENSE

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Sivakumar P.

Abstract:

Although the assessment of JPS has become a common measure in research, no one standard method for measuring it has been established. Typically, studies have used isokinetic dynamometer or video analysis systems to perform this test; however, this involves expensive tools or a laborious process. However, the current technological instruments to measure this ability use sophisticated and non-portable tools, or involve very labour-intensive measurements to obtain the necessary proprioceptive values. The main objective of the research was to develop a technological system called MarVAJED for assessing joint position sense and to analyse the reliability and validity of this new method in assessing the knee joint position sense. Thirty-two healthy subjects voluntarily participated in this study. In this study, the active reproduction of the joint position (ARJP) was used for measuring the joint position sense by MarVAJED. MarVAJED is an electronic goniometer that allows continuous evaluation of the deviation angle of 0.10. MarVAJED operates under both direct and smart phone.

Intraclass correlation coefficient (ICC) and standard error of the mean (SEM) were calculated to determine the validity and reliability of the MarVAJED. Interrater and intrarater intraclass correlation coefficients ranged 0.82 to 0.88 for rater 1 and 0.84 to 0.94 for rater 2 in measurements of three different angles. There was excellent reliability in the measurements of all three different angles for MarVAJED technology system. In addition, MarVAJED showed strong validity. MarVAJED technology system are reliable and can be used by clinicians during rehabilitation of knee injuries. Using these portable and electronic technological systems could take advantage to monitor proprioceptive deficits in athletes.

Acknowledgement:

This study was supported by TUBITAK, The Scientific and Technological Research Council of Turkey (Project Number: 115E351).

Keywords: Joint Position Sense, Technological System



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362. THE EFFECTS OF INTERCRITICAL ANNEALING TEMPERATURE ON THE HARDNESS OF STEEL MATERIALS IN ACCORDANCE WITH TRIP CONCEPT IN DIFFERENT COMPOSITIONS

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Ashwin J Seraphin
Sheela S

Abstract:

In recent years, interest in TRIP steels has increased progressively. TRIP steels, an advanced steel type, have become a center of attention in the automotive industry with excellent strength and ductility. For the passenger safety, vehicle lightness and fuel emissions, TRIP steels, the last 20 years of steel type, are utilized in the vehicles.

The excellent mechanical properties of this steel grade generation are the result of multiphase microstructures. This multiphase microstructure comprises ferrite, bainite and residual austenite phases. The most important characteristic distinguishing this type of steel from other advanced steel types is the transformation of residual austenite into martensite under load. The combination of ductility and strength features is based on this attribution.

In this paper, the effects of intercritical annealing temperature on the hardness of steel materials in accordance with TRIP concept in different compositions was investigated. Two different sample groups were obtained from these steel specimens by critical annealing + rapid cooling and critical annealing + isothermal holding + cooling processes at bainitic temperatures. Microstructure and hardness formation are interpreted on these samples. By this way, to enrich of the TRIP knowledge concept is aimed.

Keywords: Intercritical Annealing Temperature, Isothermal Holding, TRIP Steels, Residual Austenite, Bainitic Temperatures


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363. DIAGNOSIS OF DIABET DISEASE BY USING DIFFERENT MACHINE LEARNING TECHNIQUES

1. MR. RAHUL BARATH S
2. Devaraj S
3. Selveravivek S

Abstract:

In today's world, diabetes is one of the most dangerous and most frequent diseases in the world that hits people's life. In the last few decades there have been developed many ways of predicting diabetes. This paper helps in predicting diabetes by applying data mining techniques and some machine learning algorithms. The aim of data mining is to extract knowledge from information stored in dataset and generate clear and understandable description of patterns. Since diabetes is mayor disease in people's life, in this paper it has been given effort to improve prediction of diabetes using a population of woman who were at least 21 year old of Pima Indian heritage living in Phoenix. In this research, Python with Anaconda3 was used to implement Naïve Bayes, Logistic Regression and Random Forest to classify our dataset and tried to do as more as it is possible to predict and improve prediction for this very important field in medicine and help people to do something in order to prevent or decrease the chance of getting diabetes.

Keywords: Pima Indian Dataset, Diabetes, Classification, Logistic Regression, Naïve Bayes, Random Forest



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364. NEOANTIGEN BASED IMMUNOTHERAPY IN PERSONALIZED CANCER TREATMENT

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Dhivya S

Sarani V


Abstract:

Recent advances in sequencing technologies and personalized medicine enable new approaches in cancer treatment by utilizing immune system. One of these applications is the vaccination with tumor-specific antigens, so called neoantigens, described by peptides containing amino acid substitutions caused by nonsynonymous mutations. The biggest advantage of neoantigens is that they are not subjected to immune tolerance. Groundbreaking studies demonstrate in vitro and in vivo success for T cell response and tumor eradication. Despite of the success of the human vaccination based on neoantigens, they need to pass clinical trials and regulatory issues in order to be fully available in medical care. Moreover, they largely depend on sequencing technologies and computational analysis so with the improvement of these two components, neoantigen vaccination will also be improved. This review brings insight into current mechanism of neoantigen recognition and methods used to identify them. Another aim of this review is to emphasize the importance of research on neoantigens which might bring new era of cancer treatment.

Key words: Neoantigens, personalized medicine, tumor infiltrating lymphocytes, T cells, MHC complex



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365. DETERMINATION OF HEAVY METAL TOXICITY OF CHROME TANNED AND ALUMINIUM TANNED FINISHED LEATHER SOLID WASTE

1. DR. MOHANA
2. Helina Trathy G
3. Vignesh P

Abstract:

It is reported that 90% of all global production of tanned leathers is tanned using chromium sulfates. The remainder are tanned using other metal sulfates, mostly aluminium, vegetable tannins or a combination of both. However, the tanning process alone can not provide the characteristics and quality expected of finished leather. Therefore, tanned hides are tanned a second time with either the same metal sulfate as used in the tanning process or a different one. Except in some special situations, a lower ratio of metal salts is used in the secondary tanning process. During subsequent coloring and finishing processes, the leathers are treated with pigments and dyes containing heavy metals. The finished leathers are put through mechanical processes such as trimming before being passed on to the garment industry. These mechanical processes result in the generation of unusable solid waste. In order to determine the effects of heavy metals on biological systems, the MetPLATE method was used. This recent development allows quick evaluation and shows only heavy metal toxicity. This test is sensitive to several metals and has been used successfully in determining the metal toxicity of waste in various industrial sectors. In this study, the heavy metal concentrations of chromium tanned and finished tanned leathers were determined using ICP-OES; The toxicity of samples was investigated using the MetPLATE bioassay. While heavy metal concentration results of chrome tanned leather are heavy metal concentration results of aluminum tanned leather are 0 Sb, 0 As, 0 Cd, 0 Cr, 0 Cu, 0 Pb, 0 Hg, 0 Ni, 21033.45 Al, 70.54 Zn and 461.52 Zr. As a results; Chromium and aluminium were found to constitute 98% of the total concentration of heavy metals in finished leather tanned with chromium and aluminium salts. The average inhibition values for chromium and aluminium were 98.08% and 97.04%.

Keywords: Heavy Metals, Tanning, Leather, Metplate


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366. INFLUENCE OF POURING TEMPERATURE ON THE FORMATION OF SPHEROIDAL AND LAMELLAR GRAPHITE IN CAST IRON

DR. MOHANA

Kabilkalan K

Ranjitha S

Abstract:

The objective of this research is to investigate the effect of pouring temperature on the microstructure of the cast iron. The pattern was designed with 300 mm of width and the thickness variations are 1.25 mm and poured at five different temperatures; 1300, 1325, 1350, 1375 and 1400°C. Several cast irons, prepared with different chemical compositions and microstructures (three lamellar and three spheroidal structures) have been examined by extensive mechanical testing and optical microscopy. The fluidity of spheroidal and lamellar graphite in cast iron increases with the pouring temperature. The numbers of nodules were decreased by increasing pouring temperature for spheroidal structures. Whereas, the numbers of flakes of lamellar structures changed by both pouring temperature and chemical composition. In general, with increasing pouring temperature, the amount of pearlite in the internal structure of both lamellar and spheroidal graphite cast iron materials were increased.

Keywords: Spheroidal Graphite Cast Iron, Lamellar Graphite In Cast Iron, Pouring Temperature, Tensile Test, Impact Test


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**367. INVESTIGATION OF THE FADING TIME EFFECTS ON
MICROSTRUCTURE AND MECHANICAL PROPERTIES IN VERMICULAR CAST
IRON**

DR. MOHANA
Kalanithi G S
Narmatha P

Abstract:

In this study, the fading time affecting the mechanical properties and microstructures of vermicular cast iron were studied. Pig iron and steel scrap weighing about 12 kg were charged into the high frequency induction furnace crucible and completely melted for production of vermicular cast iron. The slag was skimmed using a common flux. After fading time was set at 1.3 and 5 minutes. In this way three vermicular cast iron was produced that same composition but different phase structures. The microstructure of specimens were investigated and uni-axial tensile test and the Charpy impact test were performed and their micro-hardness measurements were done in order to characterize the mechanical behaviours of vermicular cast iron.

Keywords: Vermicular Cast Iron, Fading Time, Hardness, Tensile Test, Impact Test

**368. NEW APPROACHES TO THE PEPTID SYNTHESIS &
CHARACTERIZATION**

1. DR.
MOHANA
2. Karthika K
3. Monika S

Abstract:

The continuous technological developments increase the variety of the studies in the scientific field. Further, these improvements keep on to add knowledge and new explanation about to definitions, physiological functions, structures and sources of known and unknown many substances. Proteins and peptides play a central role in numerous physiological and biological processes in living organisms. Peptides are synthesized for a variety of applications and research interests. For peptide synthesis applications; Library synthesis sequence, peptide synthesis for biological or separation assays, and separation of reaction conditions. One of the peptide synthesis methods is Solid Phase Peptide Synthesis (SPSS). Therefore in this work, it is take aimed to review new methods for synthesis and characterization of peptides and developments of peptide resins.

Keywords: Characterization, Peptide Synthesis, Resin, Solid Phase Peptide Synthesis

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269.COMPARISION OF MECHANICAL AND THERMAL PROPERTIES OFDIFFERENT AGRICULTURAL PLASTIC MULCH FILMS

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Mohamed Ashik Y

Selveravivek S

Abstract:

Mulch films are used to control the environmental conditions of plants such as temperature, moisture, growing weeds etc. In addition, mulch films enhance product yield of vegetables and fruits such as tomatoes, peppers and strawberries. These films are classified as synthetic and biodegradable plastic materials. Biodegradable mulch films have some advantages because of mulch film degradation after harvesting and do not require cost of collection. Low density poly(ethylene) (LDPE) is used traditionally in agricultural mulch applications. They have varied with different colors such as white, black and grey or transparent ones according to climate conditions and plant. In this study, mechanical and thermal properties of synthetic mulch films produced from LDPE with different colors was determined and their performances were evaluated.

Keywords: Mulch, Biodegradable, Synthetic

270. USE OF QUICK COUPLINGS IN DESIGN OF WORK DIES

DR. SARAVANAN V

Sivakumar P


Selveravivek S

Abstract:

Work dies are generally equipment with complete machine and equipment, enhance their function, enable integrity of measurement and location and ease the production and make it possible for a work to be carried out more easily and effectively. In this study a clamping work dies was designed by using quick couplings in bonding plastic or metal plates with friction stir welding (FSW) in high- speed CNC machine. In the design specific criteria were considered such as input-output direction of welding set, shoulder width measurement, equal distribution of the pressure applied on metals, light and portable dies, rapid assemble and disassemble of the plates. With the designed work dies, friction stir welding practices were done on Poly ethylene (PE) plates for trial. It was observed that the work dies which was created as a result of design is compatible with its aim and with what was expected at the beginning of design and can be used successfully in friction stir welding practices. Especially in. It was determined that quick couplings which are used in the design would provide us convenience and practicability for they can be used together with both work dies and fixtures in such practices.

Keywords: Work Dies, Manufacturing, Welding, Quick Couplings, Automotive Industry,

ISBN: 978-81-970087-3-3


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