

Dr. M. SANTHI

Plot No: 44, Raja Rajeshwari Nagar, Airport,

Tiruchirappalli-620007.

Phone: +91 9944930763

EmailID:msanthihod@gmail.com



SUMMARY OF QUALIFICATION: Result oriented, dynamic faculty having 22 years of experience in the field of **teaching**. To be good in handling priorities, with a bias for action and a genuine interest in professional development along with innovative management strategies.

OBJECTIVE: To work in a challenging environment and to be known for depth of knowledge, quality, hard work, timeliness of service and honoring the commitments.

EDUCATIONAL QUALIFICATION:

- **Doctor of Philosophy** in the field of **Optimization** from **Anna University-Chennai**, November 2014.
- **Master of Technology (Manufacturing Technology)** from **National Institute of Technology Tiruchirappalli**, May 2007.
- **Bachelor of Engineering (Mechanical)** from **Alagappa Chettiar College of Engineering and Technology**, Karaikudi, affiliated to Madurai Kamaraj University, April 1997.

WORK EXPERIENCE:**Teaching: 22 Years**

- Working as **professor in the Department of Mechanical Engineering, Indra Ganesan College of Engineering** from May 29th 2023 to till date.
- Worked as **Assistant Professor in Debre Markos University, Debre Markos, Ethiopia** from oct 2017 to 4 th Feb 2020.
- Worked as **Professor/Head of the Department of Automobile Engineering in the Mookambigai College of Engineering**, Tamilnadu, India.
- Worked as **Associate Professor/Head of the Department of Automobile Engineering in the Mookambigai College of Engineering**, Tamilnadu, India since May 2012.
- Worked as **Assistant Professor in Mookambigai College of Engineering**, India from January 2008 to April 2012.
- Worked as **Lecturer in Mookambigai College of Engineering** from December 1997 to December 2007.
- Worked as **Lecturer in Dr.MGR Engineering College, Chennai** from **June 1997 to Novemebr 1997**.

SOFTWARE PROFICIENCY:

CAD Packages	:	IDEAS, PRO-E, Solid Works and AUTOCAD.
FEM Packages	:	ANSYS and ABACUS
Graphic Software	:	CNC Programming

PROJECTS:**Ph.D Thesis:****Title: Optimization of Process Parameters in Electro Chemical Machining for Titanium Alloys**

This research work is done to investigate the effects of the various ECM process parameters such as electrolyte concentration, current, applied voltage and feed rate on the Material removal rate (MRR) and Surface roughness (SR) and to obtain the optimal sets of process parameters. This work presents a logical and systematic procedure using Grey relational analysis (GRA), Multiple regression models, Desirability function analysis (DFA), fuzzy set theory with trapezoidal and triangular membership function, Technique for Order Preference BY Similarity to Ideal Situation (TOPSIS) and Simulated annealing algorithm approach (SAA) approach to optimize the operating parameters of ECM for Titanium alloy grade 5 and grade 2.

M. E. Thesis:**PHASE I:****Title: Optimization of Process Parameters in Electro Chemical Machining using Multiple Regression Models and Artificial Neural Network for Hardened Steel**

This project was done to find out the optimal process parameters of ECM for hardened steel using multiple regression models and ANN.

PHASE II**Title: Optimization of Process Parameters in Electro Chemical Machining using Adaptive Neuro Fuzzy Inference System**

This project was done to find out the optimal process parameters of ECM for hardened steel using ANFIS.

B. E. Project:**Title: Automatic temperature control system**

This project was developed to suggest a new and efficient method to maintain the constant temperature for an electro chemical process. A vapour compression refrigeration system was designed to control the electro chemical process temperature.

SUBJECTS HANDLED SO FAR:

- Engineering Mechanics
- Design of Machine Elements
- Design of Transmission System
- Mechanics of Machines
- Computer Aided Design
- Engineering Drawing
- Solid Mechanics

- Automobile Engineering
- Automotive chassis
- Engineering Metrology and Measurements
- Engineering Materials
- Manufacturing Engineering
- Design of jigs, fixtures and press tools.
- Process Planning and Product Costing

LIST OF PUBLICATIONS:

International Journals:

- Asokan. P, Ravi Kumar. R, Jeyapaul. P & **Santhi. M** 2008, 'Development of multi-objective optimization models for electrochemical machining process', International Journal of Advanced Manufacturing Technology, vol.39, issue 1-2, pp 55-63.
- Ravi Kumar. R & **Santhi. M** 2011, 'Experimental Investigation on Electro Chemical Machining Process using Grey Relational Analysis and Multiple Regression Model for Titanium Alloy', International Journal of Production Technology and Management Research, vol.2, issue 1, pp.1-8.
- **Santhi. M**, Ravi Kumar. R & Jeyapaul. P 2013, 'Optimization of Process Parameters in Electro Chemical Machining (ECM) using DFA-Fuzzy Set Theory-TOPSIS for Titanium Alloy', International Journal of Multidiscipline in Modeling in Materials and Structures, vol.9, issue 2, pp.243-255.
- R.Ravi Kumar, P.Asokan, J.Jerald & M.Santhi 2008, 'Optimization of Parameters in Electro Chemical Machining Using Non Traditional Techniques', National Journal of Manufacturing Technology Today, Vol.7, No.4, ISSN: 0972-7396, pp.10-12.

International Conferences:

- Ravi Kumar. R & **Santhi. M** 2010, 'Electrochemical Machining Process: Technology for the Future', International Conference on Innovative Research in Engineering and Technology at Park College of Engineering, Coimbatore, pp. 27.
- **Santhi. M** & Ravi Kumar. R 2011, 'Optimization of ECM Parameters for Titanium Alloy using Grey Relational Analysis and Multiple Regression", International Conference on Recent Advances in Mechanical Engineering at Dr.MGR Educational and Research Institute University, Chennai, pp.63 on April 21-22, 2011.
- P.Asokan, R.Jeyapaul, R.Ravikumar & M.Santhi, 'Optimization of Operating Parameters in ECM Process based on Grey Relational Analysis and Multiple Regression Model', National Conference on Recent Advancements in Surface Engineering at Annamalai University, Annamalai Nagar, Chidambaram on March 15-16 2007.

- M.Santhi & L.Chandrasekaran, ‘ Optimization of ECM Machining Parameters for Aluminum Composites using ANFIS’, International Conference on Recent Trends in Materials and Mechanical Engineering at Dr.Mahalingam College of Engineering and Technology, Pollachi on 18-20 December 2008.
- M.Santhi, ‘Optimization of Operating Parameters in ECM Process based on Grey Relational Analysis and Linear Regression Model’, National Conference on Emerging Trends in Materials, Manufacturing and Design at Mepco Schlenk Engineering College, Sivakasi on 8th & 9th February 2007.
- M.Santhi, ‘Optimization of WEDM Process Parameters using DFA and TOPSIS for Inconel 600’, International Conference on Advances in Applied Engineering & Technology at Syed Ammal Engineering College on May 14-16 2015.

SEMINAR PRESENTATION:

- Seminar presented for the faculty members of Debre Markos University titled “Research Latitude in Non-Traditional Machining Processes”, on March 2018.
- Seminar presented for the fifth year students of Debre Markos University titled “Landfills for Project Report Preparation”, on Dec 2020.

Details of Faculty Development Programme/ Seminars/Workshops attended:

Type of Programme	Topic	Conducted by	Date of Programme
International workshop	Smart Manufacturing and Metrology	Indian Institute of Technology Madras, Chennai	25 th -26 th July, 2019
Workshop	Quality Engineering in Manufacturing	National Institute of Technology, Trichy.	21-22 July'06
Workshop	Optimization Algorithms for Manufacturing Applications	National Institute of Technology, Trichy.	9-10 June'06
Workshop	Excel for Scientists and Engineers	National Institute of Technology, Trichy.	20-21, January 2006
Workshop	Computer Aided Manufacturing	National Institute of Technology, Trichy.	2-3 December 2005
Short Term Training	Low Polluting Fuels for Automobiles	Annamalai University, Chidambaram.	10-21, June'02
FDP	Energy Conversion, Conservation and Environment Engineering Towards Next Millennium	Bharathidasan University, Trichy.	20, Oct'99 to 15, November'99
Short Term Course	C programming	Mookambigai College of Engineering, Pudukkottai.	24 April 1998 – 02 May 1998.
SDP	Advances in Welding technology	Mookambigai College of Engineering,	3 rd -14 th Dec 2007

		Pudukkottai.	
National Seminar	Fuzzy Mathematical Modelling and Optimization Techniques	Anna University of Technology, Tiruchirappalli.	27 th -28 th July 2011
Workshop	Finite Element Method and Applications in Engineering using ANSYS	Mookambigai College of Engineering, Pudukkottai.	26 th -27 th November 2007
Workshop	Mission 10X	Mookambigai College of Engineering, Pudukkottai.	18 th -22 nd January 2010
FDP	Wear, Wear Testing and Characterization(Hands on Training)	M.Kumarasamy College of Engineering, Thalavapalayam, Karur.	29 th May 2017.
National Seminar	Recent Trends in Renewable Energy	Mookambigai College of Engineering, Pudukkottai.	17-18 April 2009.
Workshop	Design of Experiments and Response Surface Methodology	M.A.M College of Engineering, Siruganur, Trichy.	25 th sep 2010.
Workshop	ANSYS	Anna University , Trichy.	27 th & 28 th September 2008.
National Seminar	ANSYS	Mookambigai College of Engineering, Pudukkottai.	18-19 Sep 2009

No. of projects guided at Under Graduate level : 41

No. of projects guided at Graduate level : 09

ACHIEVEMENTS:

- **Received Academic Proficiency** while doing PG at National Institute of Technology, Trichy.
- **Got Post Graduate degree with distinction.**
- Conducted Programmes on ‘**Effective Class Room management**’ for faculty members.
- **Developed the Automobile Engineering Department with full requirements** in Mookambigai College of Engineering.

I do hereby declare that all statements made in this application are true, complete and correct to the best of my knowledge and belief.

PLACE: Trichy

DATE : 20.04.2023

M. SANTHI