

FACULTY PROFILE

Name :Dr.K.MANONMANI

Designation : PRINCIPAL

Qualification: M.E., Ph.D

Gender :Female

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EDUCATION:

S.No.	Degree	Institution/University	Year	Branch of study/ Specialization
1	B.E.	Government College of Technology, Coimbatore / Bharathiar University	April 1989	Mechanical Engineering
2	M.E.	Government College of Technology , Coimbatore / Bharathiar University	Jan 1998	Engineering Design
3	Ph.D.	Coimbatore Institute of Technology, Coimbatore / Bharathiar University	May 2007	Mechanical Engineering

EXPERIENCE:

S.No.	Name o f the College/Industry	Position Held	From	To	Total years
1	Government College of Technology, Coimbatore	Lecturer / Assistant Professor /Associate Professor /Professor(CAS)	16.11.1990	06.04.2017	26 years& 5Months
2	Government College of Engineering, Bargur (on Deputation)	Professor(CAS)	07.04.2017	02.01.2018	9Months
3	Thanthai Periyar Government Institute of Technology, Vellore	Professor(CAS)	03.01.2018	13.02.2018	1½Months
4	Government College of Technology, Coimbatore	Professor(CAS)	14.02.2018	09.07.2018	5Months

5	Government College of Engineering, Thanjavur	Professor and Head	10.07.2018	30.06.2019	1Year
6	Alagappa Chettiar Government College of Engineering and Technology, Karaikudi.	Professor and Head	01.07.2019	04.03.2021	1 year & 8 months
		Principal (FAC)	05.03.2021	30.12.2021	9Months
7	Government College of Engineering, Tirunelveli	Principal	31.12.2021	03.02.2023	1year & 2months
8	Government College of Technology, Coimbatore	Principal	04.02.2023	Till date	
Total Experience					32 Years & 3 Months

Areas of Interest: Welding, Finite Element Analysis, Composite Materials, Tribology, Design

Academic Research (Ph.D Supervision)				
S.No.	Name of the Scholar	Title of Research /Thesis	Status	If completed, Date of Completion
1	Dr.R. Ravindran, Professor, MCET, Pollachi	Studies on Forming Limit Diagram and Void Coalescence of Aluminium – Magnesium alloys	Completed	15.07.2011
2	Dr.S.Gopi, Associate Professor, Govt. College of Technology, Coimbatore	Influence of process parameters on friction stir welded 6082-T6 aluminium alloy of various thicknesses– An experimental and Numerical investigation	Completed	19.11.2013
3	Dr.P.Prathap, Professor, Hindustan Institute of Technology, Coimbatore	Ecodesign studies to enhance the environmental performance of products	Completed	22.12.2014
4	Dr.M.Sureshkumar, Pricol Technologies, Coimbatore	Study of flow characterization in light duty engine lubrication pumping Systems	Completed	11.01.2015
5	Dr.S.Srinivasamoorthy, Associate Professor, Dept. of Production Engg, GCT, CBE	Studies on polyester based E-Glass fibre reinforced particulate filled polymer composite	Completed	24.08.2015

6	Dr.S.Balasubramanian, Associate Professor, Kumaraguru College of Technology, CBE	Investigations on the effect of laser hardening in Textile Bottom rollers for quality yarns	Completed	22.02.2016
7	Dr.S.Praveen, Associate Professor, HCET,Coimbatore	Studies on Gas Metal Arc Welding of SS409M Ferritic Grade Stainless Steels	Completed	16.10.2017
8	Dr.K.Pandian, DGM / SAIL, Salem	Studies on formability of various austenitic, ferritic and low nickel grade cold rolled stainless steel sheets	Completed	15.12.2017
9	Dr. R. Sundaramoorthy, Assistant Professor, HIT, Coimbatore	Experimental Investigations on Mechanical properties, Surface Roughness and Wear behavior of Al-Mg ₂ Si Alloys routes through Stir Casting Process.	Completed	22.12.2020
10	Th.P.Chandrasekaran	Metal forming	OnGoing	NA
11	Th.C.Ganesan	Composite Characterization	OnGoing	NA
12	Th.M.Vimalraja	Friction Stir Welding of hybrid Aluminium metal Matrix composites	OnGoing	NA
13	Th.P.SaravanaKumar	Alternate Materials for Material Handling Equipment to ensure safety in Industries and Construction area.	OnGoing	NA
14	Th. A. Athithanambi	Friction Stir Welding	OnGoing	NA

LIST OF PUBLICATIONS:

Published in Journals

1. **K Manonmani**, N Murugan, G Buvanasekaran, "Effects of process parameters on the weld bead geometry of laser beam welded stainless steel sheets", International Journal for the Joining of Materials 17 (4), 103, 2005
2. **K Manonmani**, N Murugan, "Integration of Robust Design And Simulation to Predict Optimum Parameters for Laser Beam Welding", INDIAN WELDING JOURNAL 38 (4/1), 24, 2005

3. **K Manonmani**, N Murugan, G Buvanasekaran, "Effects of process parameters on the bead geometry of laser beam butt welded stainless steel sheets", The International Journal of Advanced Manufacturing Technology 32 (11-12), 2007
4. R Narayanasamy, R Ravindran, **K Manonmani**, J Satheesh, "A crystallographic texture perspective formability investigation of aluminium 5052 alloy sheets at various annealing temperatures", Materials & Design 30 (5), 1804-1817, 2009
5. NS Shanmugam, G Buvanasekaran, K Sankaranarayanan, **K Manonmani**, "Some studies on temperature profiles in AISI 304 stainless steel sheet during laser beam welding using FE simulation", International Journal of Advanced Manufacturing Technology 43 (1-2), 78-94, 2009
6. R Ravindran, **K Manonmani**, R Narayanasamy, "An analysis of void coalescence in AL 5052 alloy sheets annealed at different temperatures formed under different stress conditions" Materials Science and Engineering: A 507 (1-2), 252-267, 2009
7. N Siva Shanmugam, G Buvanasekaran, K Sankaranarayanan, **K Manonmani**, "Influence of beam incidence angle in laser welding of austenitic stainless steel using finite element analysis" Multidiscipline Modeling in Materials and Structures 5 (3), 257-262, 2009
8. M Suresh Kumar, **K Manonmani**, "Computational fluid dynamics integrated development of gerotor pump inlet components for engine lubrication", Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile, 2010
9. R Ravindran, **K Manonmani**, R Narayanasamy, "An analysis of wrinkling limit diagrams of aluminum alloy 5005 annealed at different temperatures", International Journal of Material Forming 3 (2), 103-115, 2010
10. R Ravindran, **K Manonmani**, R Narayanasamy, "Effect of annealing on formability and crystallographic textures of aluminium 5052 alloy sheets", International Journal of Materials Research, 101 (7), 877-886, 2010
11. R Ravindran, **K Manonmani**, R Narayanasamy, "Effect of mechanical properties of annealed Al 5005 sheets on void formation and growth during metal forming", Materials Science and Technology 26 (8), 925-934, 2010
12. M Suresh Kumar, **K Manonmani**, "Numerical and experimental investigation of lubricating oil flow in a gerotor pump", International Journal of Automotive Technology 12 (6), 903-911, 2011

13. S Gopi, **K Manonmani**, "Predicting tensile strength of double side friction stir welded 6082-T6 aluminium alloy", Science and Technology of Welding and Joining 17 (7), 601-607, 2012
14. S Gopi, **K Manonmani**, "Influence of shoulder profile and shoulder penetration on joint strength; of friction stir welded AA6082 in conventional milling machine" European Journal of Scientific Research 73 (1), 20-32, 2012
15. S Gopi, **K Manonmani**, "Study of friction stir welding parameters in conventional milling machine for 6082-T6 aluminium alloy", Australian Journal of Mechanical Engineering, 10 (2), 129-140, 2012
16. S Gopi, **K Manonmani**, "Optimization of process parameters on joint strength of friction stir welded 6082-T6 aluminium alloy", International Journal of Materials Science 7 (3), 223-232, 2012
17. S Balasubramanian, **K Manonmani**, KK Arun, "A Study to Predict the Hardness of Drafting Rollers for Quality Textile Yarns" ,European Journal of Scientific Research 84 (1), 64-74, 2012
18. SS Moorthy, **K Manonmani**, "Fabrication and characterization of TiO₂ particulate filled glass fiber reinforced polymer composite", Mater. Phys. Mech 18, 28-34, 2013
19. MS Kumar, **K Manonmani**, B Parasuram, S Karthikeyan, "Composites Reinforced with Carbon Nanotubes-A Review", J. Environ. Nanotechnol 2 (3), 67-80, 2013
20. S Gopi, **K Manonmani**, "Microstructure and mechanical properties of friction stir welded 6082-T6 aluminium alloy", Australian Journal of Mechanical Engineering 11 (2), 131-138, 2013
21. S. Srinivasa Moorthy and **K. Manonmani**, "Preparation and Characterization of Glass Fiber Reinforced Composite with TiO₂ Particulate", SENT GAKKAISHI, Vol.69, No. 8, 2013.
22. M Sathish Kumar, **K Manonmani**, S Karthikeyan, "Multivariate Optimization of Carbon Nanotubes Synthesis from Nonconventional Precursor using Box-Behnken Design towards Higher Yield" , J. Environ. Nanotechnol 3 (1), 72-78, 2014.
23. SS Moorthy, **K Manonmani**, "Research on Sliding Wear Behavior of TiO₂ Filled Glass Fiber Reinforced Polymer Composite", Research Journal of Applied Sciences, Engineering and Technology 7 (16), pp 3356 – 3361, 2014.

24. S Srinivasamoorthy, **K Manonmani**, "Research on Experimental Investigation and Predictive Learning Of (TiO₂) Particulate Filled Polyester Based GFRP Composite", Academic Journal of Manufacturing Engineering 12 (3), 2014.
25. SS Moorthy, **K Manonmani**, "Statistical Analysis and Predictive Learning of Mechanical Parameters for TiO₂ Filled GFRP Composite" ,World Academy of Science, Engineering and Technology, 1(8), pp 128 – 132, 2014.
26. R Ravindran, **K Manonmani**, R Narayanasamy, "Erratum to: An analysis of wrinkling limit diagrams of aluminum alloy 5005 annealed at different temperatures",International Journal of Material Forming, 1-1, 2014.
27. S Balasubramanian, **K Manonmani**, "Laser-treated Bottom Roller", Textile Accessories, 11, 2014.
28. S Balasubramanian, **K Manonmani**, RM Hemalatha, "Lasers in Green Manufacturing Processes", Applied Mechanics and Materials 592, 473-478, 2014.
29. SS Moorthy, **K Manonmani**, MS Kumar, "Preparation and Characterization of TiO₂ Particulate Filled Polyester Based Glass Fiber Reinforced Polymer Composite", Advanced Materials Research 984, 360-366, 2014.
30. SS Moorthy, **K Manonmani**, "Research on Dry Sliding Wear Behaviour of (TiO₂) Particulate Filled Polyester-Based Polymer Composite", Journal of the Balkan Tribological Association 20 (2), 217-226, 2014.
31. Martin Vinoth, S.; **Manonmani, K.** and Gopi, S. "FSW of Contradictory Ingredients among Alloy Mixtures and Copper" International Journal of Computer Sciences and Engineering, Vol. 2; pp. 80-86. E-ISSN: 2347-2693, 2014.
32. S Balasubramanian, **K Manonmani**, "Laser Heat Treatment of the Steel Bottom Rollers of Textile Machines Used for Producing Quality Yarns", Lasers in Engineering (Old City Publishing) 32, 2015.
33. SS Moorthy, **K Manonmani**, T Elangovan, "An optimization approach to the dry sliding wear behavior of particulate filled glass fiber reinforced hybrid composites" ,Journal of Engineered Fibers and Fabrics 10 (2), 155892501501000213, 2015.
34. T. Praveen, **K. Manonmani**, "Application of Response Surface Methodology for Predicting Weld Distortion and % of Dilution in Gas Metal Arc Welding of SS 409 M", Materials Science, 2015.

35. S Balasubramanian, R Thirumalai, **K Manonmani**, "A Study on Laser Surface Hardening of Cylindrical Components in Manufacturing Process", Asian Journal of Research in Social Sciences and Humanities 6 (10), 421-432, 2016
36. K Pandian, **K Manonmani**, "Void Coalescence and Texture Analysis of Various Indian Stainless Steel Sheets Formed Under Different Stress Conditions", International Journal of Applied Chemistry 12 (2), 139-156, 2016.
37. Madhankumar S, **Dr. K. Manonmani**, "Design of Bore Well Rescue System using Morphological Chart", IJSTE - International Journal of Science Technology & Engineering, Volume 3, Issue 06, December 2016.
38. S Madhankumar, **K Manonmani**, DS Periyasamy, S Rajesh, S Kannaki, "Experimental Study of Effect of Parameters on Material Removal Rate for Electrochemical Machining of Aluminium Matrix Composite", International Journal of Creative Research Thoughts (IJCRT) 5 (4), 2017.
39. TA Selvan, S Madhankumar, **K Manonmani**, "Optimization of Material Removal Rate and overcut in Micro Electrochemical Machining of Inconel 718 using Taguchi Analysis" International Journal of Pure and Applied Mathematics 119 (12), 869-877, 2018
40. S Madhankumar, **K Manonmani**, S Rajesh, R Balamurugan, "Optimization of micro electrochemical machining of Inconel 625 using Taguchi based Grey relational analysis", International journal of applied engineering research, 13 (9), 6771-6779, 2018.
41. S Madhankumar, **K Manonmani**, V Karthickeyan, N Balaji, "Optimization of ultimate tensile strength of welded Inconel 625 and duplex 2205", Journal of Mechanical Engineering and Sciences, Vol no. 15, Issue no. 1, Page no. 7715-7728, 2021.
42. P Chandrashekar, **K Manonmani**, "Improved Mechanical Properties of Fibre Reinforced Polymer Composite for Environmental Engineering Applications", Journal of Environmental Protection and Ecology, Vol no. 22, Issue no. 3, Page no. 1054-1063, 2021.
43. R Maniram, **K Manonmani**, "Modeling and Simulation of Hybrid Aluminium Alloy based Composite Pressure Vessel using ANSYS Software" Advancement in Mechanical Engineering and Technology, 4 (2, 3), 1-9, 2021.
44. C Ganesan and **K Manonmani**, "Experimental investigation and optimization of mechanical properties on combination of higher and lower strength of aluminum

alloys” Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, vol. 236, Issue 3, Page no. 1–13, 2021.

45. M Vimal Raja, **K Manonmani**, “Mechanical and Tribological Characteristics of Aluminium Hybrid Composites Reinforced with Boron Carbide and Titanium Diboride”, *Ceramics–Silikáty*, Vol no. 66, Issue no. 3, Page no. 396-406, 2022.
46. Saravana Kumar Palanisamy & **Manonmani Krishnaswamy**, “Optimization of torsion and wear characteristics on reinforced steel wire rope”, *Mechanics Based Design of Structures and Machines*, (Published online) DOI: 10.1080/15397734.2022.2122502, 2022.

Presented in International Conferences

1. **Manonmani.K** and N.Murugan, Three dimensional finite element analysis on heat flow and residual stresses in arc welding, Proceedings of the International Conference on Digital Aided Modelling and Simulation, Coimbatore Institute of Technology, Coimbatore, Abstract pp.53, 6th – 8th January, 2003.
2. **Manonmani.K**, Murugan.N and Buvanashakaran.G, Sensitivity analysis of process parameters in laser beam welding of stainless steel sheets, Proceedings of the International Congress , Mumbai, Indian Institute of Welding. Abstract pp.121, 16th – 19th February, 2005.
3. Murugan.N, **Manonmani.K** and Buvanashakaran.G, Prediction of weld bead geometry by neural networks for laser butt welding of stainless steel sheets, presented in the “The first South-East Asia IIW Congress – Welding in South East Asia: A Challenge for the future”, **Bangkok**, Nov. 21 – 22, 2006.
4. M.Sureshkumar, **K.Manonmani**, CFD Evaluation of slurry flow in Gerotar Pump, presented in International conference on Latest trends on modeling, simulation and Analysis, National Institute of Technology, Calicut, 17 – 19 December 2009. Proceedings pp 378 – 383.
5. S.Srinivasamoorthy, **K.Manonmani** and A.Athijeyamani, Comparative Study of Tensile, Impact, Hardness and Chemical Behaviour of Nano (TiO₂) Particulate Filled Hybrid Reinforced Composite in Second International Conference on Advances in Materials Processing and Characterization in Anna University,

Department of Mechanical Engineering, College of Engineering, Guindy, Chennai,
February 6-8, 2013, ISBN: 978-81-8424-820-3.

6. S.Srinivasamoorthy, **K.Manonmani** and M.Shankarkumar, 'Preparation and Characterization of TiO₂ Particulate Filled Polyester Based Glass Fiber Reinforced Polymer Composite', in International Conference on Recent Advances in Mechanical Engineering and Interdisciplinary Developments, in Department of Mechanical Engineering, Ponjesly College of Engineering, Nagercoil, March 7&8, 2014. ISBN: 978-1-4799-3158-3.

Presented in National Conferences
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1. **Manonmani.K**, Murugan.N and Buvanashakaran.G, Modelling and analysis of heat flow and temperature distribution of laser beam welding, Proceedings of One day seminar on Innovative Approaches in Industrial Automation, Karpagam College of Engineering, Coimbatore, pp 57 – 61, 13th September, 2002.
2. **Manonmani.K**, Murugan.N and Buvanashakaran.G, Finite element analysis for the prediction of temperature distribution and residual stresses in laser beam welding process, Proceedings of the UGC Sponsored National Conference on Modeling and Simulation in Manufacturing, Annamalai University, Chidambaram, pp C30 – C35, 15 – 16th March, 2003.
3. **Manonmani.K**, Murugan.N and Buvanashakaran.G, Effect of process variables on bead geometry in laser beam welding using finite element simulation and robust design concept, Proceedings of the National Conference on Modeling and Analysis of Production Systems, National Institute of Technology, Trichy, pp 168 – 173, 22nd and 23rd January, 2004.
4. M.Sureshkumar, **K.Manonmani**, Design optimization of Gerotar pump using CFD, National conference on advances in mechanical sciences, Kumaraguru College of Technology, Coimbatore, 26 – 27 March 2009.
5. Arun, **K.Manonmani**, "Thermal Analysis on Laptop Cooling system using loop heat pipe technology", National conference on emerging trends in Mechanical Engineering, SNS college of Technology, Coimbatore , March 07, 2014.

ACADEMIC & ADMINISTRATIVE RESPONSIBILITIES HELD:

1. Served as Assistant Controller for a period of 3 years at Government College of Technology, Coimbatore
2. Served as Assistant Chief Superintendent of Examinations for a period of 2 years at Government College of Technology, Coimbatore
3. Produced 9 Ph.D holders from 2011 onwards.
4. Served as subject Expert members in Board of Studies, Kumaraguru College of Technology, SRIT, HCET, MCET Coimbatore and KSR College of Technology, Tiruchengode.
5. Doctoral Committee member for Ph.D. Scholars in Anna University, Chennai
6. Served as Time-Table in-charge for around 10 years at Government College of Technology, Coimbatore
7. AICTE, Southern Region, Expert visiting committee member, Nominee of state Government to evaluate granting of fresh autonomous status and for the extension of Autonomous status.
8. Served as Controller of Examinations for a period of 10 months at Government College of Engineering, Bargur.
9. NBA co-ordinator at Alagappa Chettiar College of Engineering and Technology, Karaikudi
10. Served as State Government Nominee to the Board of Governors of MCET Pollachi, SREC, Coimbatore, Syed Ammal Engineering College, Ramanathapuram.
11. Served as Chairman of Autonomous functioning of Alagappa Chettiar Government College of Engineering & Technology, Karaikudi
12. Serving as Academic Council member for MEPCO SCHLENK Engineering College, Sivakasi, Muthayammal Engineering College, Rasipuram and Coimbatore Institute of Technology, Coimbatore.
13. Serving as Nominee of Commissioner of Technical Education for Finance Committee of Coimbatore Institute of Technology, Coimbatore.
14. Served as Zonal Coordinator (Zone XVI) of Anna University, Chennai
15. Serving as Zonal Coordinator (Zone X) of Anna University, Chennai

MEMBERSHIPS IN PROFESSIONAL SOCIETIES:

1. Life Member in Indian Society for Technical Education (ISTE).
2. Life Member in Indian Institute of Welding (IIW)
3. Life Member in Indian Welding Society (IWS)