

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 of 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 & 5 Months
2	Government College of Engineering Bargur (on Deputation)	Professor (CAS)	07.04.2017	02.01.2018	9 Months
3	Thanthai Periyar Government Institute of Technology Vellore	Professor (CAS)	03.01.2018	13.02.2018	1 ½ Months
4	Government College of Technology Coimbatore	Professor (CAS)	14.02.2018	09.07.2018	5 Months
5	Government College of Engineering Thanjavur	Professor and Head	10.07.2018	30.06.2019	1 Year
6	Alagappa Chettiar Government College of Engineering and Technology, Karaikudi.	Professor and Head	01.07.2019 to	04.03.2021	1 year & 8 months
		Principal (FAC)	05.03.2021	30.12.2021	9 Months

7	Government College of Engineering, Tirunelveli	Principal	31.12.2021	Till Date	9 Months
Total Experience					31 Years & 10 Months

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

Academic Research (Ph.D Thesis supervision)				
S.No.	Name of the Scholar	Title of Research / Thesis	Status	If completed, Date of completion
1	Dr.R.Ravindran, Associate Professor, MCET, Pollachi	Studies on Forming Limit Diagram and Void Coalescence of Aluminium – Magnesium alloys	Completed	15.07.2011
2	Dr.S.Gopi Assistant 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	Eco design 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 Tech, GCT, CBE	Studies on polyester based E-Glass fibre reinforced particulate filled polymer composite	Completed	24.08.2015
6	Dr.S.Balasubramanian, Associate Professor, SNS 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	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	On Going	NA
11	Th.C.Ganesan	Composite Characterization	On Going	NA
12	Th.M.Vimalraja	Friction Stir Welding of hybrid Aluminium metal matrix composites	On Going	NA
13	Th.P.SaravanaKumar	Alternate Materials for Material Handling Equipment to ensure safety in Industries and construction area.	On Going	NA
14	Th.A.Athithanambi	Friction Stir Welding	On Going	NA

List of publications:

Published in International Journal

- 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, 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
- 3) 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
- 4) 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", The International Journal of Advanced Manufacturing Technology 43 (1-2), 78-94, 2009
- 5) 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

- 6) N Siva Shanmugam, G Buvanashakaran, 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
- 7) 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
- 8) 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
- 9) 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
- 10) 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
- 11) MS 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
- 12) 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
- 13) 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
- 14) 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
- 15) 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
- 16) 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
- 17) SS Moorthy, **K Manonmani**, “Fabrication and characterization of TiO₂ particulate filled glass fiber reinforced polymer composite”, *Mater. Phys. Mech* 18, 28-34, 2013
- 18) MS Kumar, **K Manonmani**, B Parasuram, S Karthikeyan, “Composites Reinforced with Carbon Nanotubes-A Review”,*J. Environ. Nanotechnol* 2 (3), 67-80, 2013

- 19) 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
- 20) MS 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
- 21) 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.
- 22) 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
- 23) 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
- 24) 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
- 25) S Balasubramanian, **K Manonmani**, "Laser-treated Bottom Roller", Textile Accessories, 11, 2014
- 26) S Balasubramanian, **K Manonmani**, RM Hemalatha, "Lasers in Green Manufacturing Processes", Applied Mechanics and Materials 592, 473-478, 2014
- 27) 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
- 28) 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
- 29) 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
- 30) 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

- 31) 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
- 32) K Pandian¹, **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
- 33) S Madhankumar, **K Manonmani**, S 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

Published in National Journal

- 1) **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
- 2) Murugan.N, **Manonmani.K**, and Buvanashakaran.G, Prediction of weld bead parameters by Neural Networks for Laser Beam Welding of Stainless Steel Sheets, IWS Journal, pp 28 – 34, March 2007.

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

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.

Guest Lectures delivered:

Sl.No	Name of the Institution	Topic Presented	Date	Department	Nature of the Programme
1	SriKrishna College of Engineering and Technology, CBE,	Kinematics of Machinery	01.07.2011 FN	Mechanical Engineering	AUT, Coimbatore sponsored FDP
2	United Institute of Technology, Coimbatore, CBE	Finite Element Analysis	26.12.2011, FN	Mechanical Engineering	AUT, Coimbatore sponsored FDP
3	United Institute of Technology, Coimbatore, CBE	Finite Element Analysis – Lab Session- Hands on training	29.12.2011, AN	Mechanical Engineering	AUT, Coimbatore sponsored FDP
4	SVS College of Engineering, CBE	High Energy Welding Processes	07.01.2012 AN	Mechanical Engineering	One day Workshop, IWS, Students Chapter
5	Alagappa Chettiar College of Engineering and Technology, Karaikudi	FE Simulations in Laser Welding Process	07.12.2012, FN	Mechanical Engineering	TEQIP sponsored One week FDP
6	Aditya Institute of Technology, CBE	Design of Experiments	25.07.2014 FN	Mechanical Engineering	2 Days workshop on, “Concepts of research and its techniques”
7	SVS College of Engineering, CBE	Advanced Welding Processes	27.08.2014 AN	Mechanical Engineering	One day Workshop, IWS, Students Chapter
8	Kings College of Engineering, Thanjavur	Problem Identification, planning the prerequisites and methodology for research	26.09.2014	Research and Development Section	Workshop on research methodology & statistical Tools for research
9	Aditya Institute of Technology, CBE	Kinematics and Design of Machines	13.06.2015	Mechanical Engineering	For newly recruited Faculty Adithya Academy
10	PSG College of Technology, CBE	Finite Element Simulation of Welding Processes	13.07.2016	Mechanical Engineering	FDP on FEM and its Applications

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 Principal (Full Additional Charge) at Alagappa Chettiar Government College of Engineering & Technology, Karaikudi for a period of 9 months.
12. Served as Chairman of Autonomous functioning of Alagappa Chettiar Government College of Engineering & Technology, Karaikudi
13. Serving as Academic Council member for MEPCO SCHLENK Engineering College, Sivakasi & Muthayammal Engineering College, Rasipuram.
14. Serving as Nominee of Commissioner of Technical Education for Finance Committee of Coimbatore Institute of Technology, Coimbatore.
15. Serving as Zonal Coordinator (Zine XVI) 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)