



**KONGUNADU COLLEGE OF ENGINEERING AND TECHNOLOGY
(AUTONOMOUS)**

NAMAKKAL – TRICHY MAIN ROAD, THOTTIAM, TRICHY

DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2024-2025

FACULTY PUBLICATIONS - International/National Journals

1. Chinnadurai Dineshbabu, Nallasamy Shivasankaran, Krishnan Venkatesh Raja, Rathinavelu Venkatesh, “Experimental and Comparative Heat transfer Analysis of Heat Exchanger with Surface Modification”, Heat Transfer Engineering, (Published Online).
2. Kumaravel S, Suresh P, “Optimization of Friction Stir Processing parameters to improve Mechanical properties and Microstructure of Al5083 Aluminium Alloy reinforced with AlCoCr - FeNiSi high-entropy alloy”, Physica Scripta, Vol.99, No.10.
3. N. Sivashankar, R. Thanigaivelan , L. Selvarajan, K. Venkataramanan, “Investigation of Electrochemical micromachining on magnesium alloy using hollow tool electrode”, Ultrasonics, Vol.147, (2025),107526.
4. Kanulla Karthik, Ranjith R, Venkatrami Reddy Vedur, Kawin Nallasivam, “Experimental investigation on electrochemical discharge machining of hastelloy”, Materials Research Express, Vol. 11, (2024), 116516.
5. Ponnuswamy Palanikumar, Duraisamy Jagadeesh, Nadarajan Parthipan, Rathinavelu Venkatesh, “Effect of copper rectangular fin and hybrid PCM configuration on thermal characteristics of solar air heater: performance study”, Environment, Development and Sustainability, (Published Online).
6. K Sivakumar, S Manoj Kumar, G Saravanan, G Mahendran, “Mechanical, wear, fatigue, water absorption and flammability of silane-treated Indian squid chitin powder-dispersed pineapple fiber-polyester composite”, Polymer Bulletin, (Published Online).

7. R Prabu, DVelmurugan, S R Vijayakumar, M Maniyarasan, “Influence of Fe ₂ O ₃ and La ₂ O ₃ nanoparticles on the performance of domestic refrigerator functioning with R134a refrigerant”, Physica Scripta, Vol. 100, (2025), 01595.
8. Gopal Deepanaa, Logesh Kamaraj, Saravanan Ganapathi, R.Venkatesh, Mohana Krishnan Amarnath, Pethuraj Manickaraj, “Synthesis and machining characteristics study of agro-waste coconut shell powder incorporated aluminium alloy composite via the squeeze cast technique”, International Journal of Cast Metals Research, (Published Online).
8. Dineshbabu Chinnadurai, Shiva Sankaran Nallasamy, Venkatesh Raja Krishnan, Venkatesh Rathinavelu, “Comparative Evaluation and Performance Analysis of Heat Exchangers Featured with Peened Surface”, Journal of Thermal Science, (Published Online).
9. S.Kumaravel, P.Suresh, “Ensemble machine learning for predicting and enhancing tribological performance of Al5083 alloy with HEA reinforcement”, Proceedings of the Institution of Mechanical Engineers, Part J:Journal of Engineering Tribology, (Published Online).
10. Managula Naveen Srinivas, Parthiban Krishnan, Veerapan Selvam, Itha Veeranjanyalu, Nidamanuri Srinivasa Rao, Anusha Peyyala, Nagari Satheesh, Ram Subbiah “An investigation on the mechanical and corrosion characteristics of magnesium-zinc alloy nano composites manufactured via ultrasound – assisted stir squeeze casting”, Metallurgical research & Technology, Vol.121, NO.621.
11. Saravanakumar Sengottaiyan, S.Sathiyamoorthy, G.Selvakumar, R.Haridass, “Influence of treatment and flyash filler on the mechanical and tribological properties of banana fiber epoxy composites: experimental and ANN-RSM Modeling”, Composite interfaces, (Published Online).
12. M.Balamurugan, Sivakumar Subramani, Venkatasundhar Murugaesan, Sivaprakash Ethiraj, Ratchagaraja Dhairiyasamy, Depika Gabriel, “Spray characteristics of non-edible oils in MQL systems for improved material machining”, Revista Materia, Vol.30, No.1.

13. B.Babu, S.K.Karthikeyan, Bachina Harish babu, S.Nanthakumar, S.Sakthui, P.Vijayalakshmi, R.Girimurugan, E.Elango, M.Mathanbabu, “Optimization on the Tool parameters in Friction stir lap Joining of AA2219 Response surface Methodology”, International journal of Vechicle structures & Systems, Vol16, No.5, pp.663-670.
14. Jagadeesh Duraisamy, Vivekanandan Mahendran, Kawin Nallasivam, Ashok Manivasagan, “Augmenting Heat Transfer of Shell and Tube Heat Exchanger- A CFD Analysis Approach”, Tanz, Vol.19, No.11
15. Saravanakumar Sengottaiyan, Sathiyamurthy Subbarayan, Ravikumar Natarajan, Vishnupriya Gurunathan, “Synergistic Effects of NaOH Treatment and Ceramic Fillers on the Mechanical and Tribological Behavior of Roselle Fiber-Reinforced Epoxy Composites”, Fibers and Polymers, (Published Online)
16. Saravanakumar Sengottaiyan, Sathiyamurthy Subbarayan, Ravikumar Natarajan, Vishnupriya Gurunathan, “Enhancing mechanical, degradation, and tribological properties of biocomposites via treatment and alumina content”, Journal of Reinforced Plastics and Composites, (Published Online).
17. Dhiravidamani Periyasamy, Jagadeesh Duraisamy, Sami Al Obaid, Venkatesh Rathinavelu, “Aluminium Alloy Nanocomposite Featured with Barium and Silicon Carbide Nanoparticles: Mechanical and Wear Studies”, Silicon, (Published Online).
18. Rajarajan R, Parthiban A, R.Venkatesh, Karthigairajan M , S. Prabakaran, N. Kawin, “Improving tribological performance and structural analysis of aluminium hybrid nanocomposites with nano ZrO ₂ /SiC reinforcement via stir casting assisted with ultrasonic vibration”, International Journal of Cast Metals Research, (Published Online).
19. G. Tharanitharan, C. Saravanan,P. Raja, R. T. Ajaykarthik, “Investigation of temperature and water aging effects on epoxy composites reinforced with natural fibers and surface-modified cellulose filler”, Polymer Bulletin, (Published Online).
20. S.Kumaran, S.Navaneethan, G.Nagalalli, K.Kalaiaarasi, M.Dineshkumar, “Fabrication of 2D rGO decorated In ₂ O ₃ hybrid sensor for efficient NO ₂ detection”, Journal of Materials Science: Materials in Electronics, (Published Online)
21. Selvarajan L, Prakash B, Niranjana T, Madhava Reddy S, Singaravel B, Periasamy K, “A critical insight into the use of EDM for machining advanced ceramic composites – a review”, Machining Science and Technology, (Published Online)

22. C. Suresh, D. R. P. Rajarathnam, A. P. Sivasubramaniam, G. Saravanan, “Investigation of the Wear-Resistance Characteristics of Alumina-Zirconia-Titania-Coated Al-6061 Alloy for Different Processing Parameters”, <i>Materiali in Tehnologije</i> (Materials and Technology), Vol. 59, No. 2, pp. 307-314.
23. Mohankumar Subramanian, Naveenkumar Raju, Rajasekar Rathnasamy, Gobinath Velu Kaliyannan, “Tribological and Mechanical behavior of Al359 Composites reinforced with B ₄ C _p , SiC _p and flyash”, <i>Material Testing</i> , Vol. 60, No.7, pp.12315-1223.

FACULTY PUBLICATIONS - International / National Conferences

SL. NO	DETAILS
1.	Mr.S.Kumaravel, “AI Driven Fault Detection in Vacuum Conveyors for Industrial Automation”, International Conference on Advances in Automobile, Manufacturing, Automation and Mechanical Engineering on 19.03.2025
2.	Mr.M.Maniyarasan, “Characteristic Analysis of Machining Parameters on Surface Finish in Textile Machine Components”, International Conference on Advances in Automobile, Manufacturing, Automation and Mechanical Engineering on 19.03.2025
3.	Mr.S.Kumaravel, “Experimental Studies on the Enhancement of Optical and Oxygen Barrier Properties of Biodegradable PLA/PBAT Films for Food and Garments Packaging applications”, International Conference on Advances in Automobile, Manufacturing, Automation and Mechanical Engineering on 19.03.2025
4.	Dr.P.Muthukumar, “Heat Recovery from Boiler blowdown using Heat Exchanger Systems”, International Conference on Advances in Automobile, Manufacturing, Automation and Mechanical Engineering on 19.03.202
5.	Dr.P.Muthukumar, “Optimizing CNC Machining Parameters and Coated Tool Inserts for Textile machine roller Manufacturing”, International Conference on Advances in Automobile, Manufacturing, Automation and Mechanical Engineering on 19.03.2025
6.	Dr.N.Sivashankar, “Improving the heat Transfer of Shell and Tube Heat Exchanger by using Copper tube inserts-CFD Approach”, International Conference on Advances in Automobile, Manufacturing, Automation and Mechanical Engineering on 19.03.2025

7.	Mrs.V.Selvam, “Fabrication and Testing of Sugarcane Bud Cutting machine”, International Conference on Advances in Automobile, Manufacturing, Automation and Mechanical Engineering, on 19.03.2025
8.	Mr.Ra.Aravind, “Development of PLA/PBAT based New Generation Biodegradable Plastics with enhanced Thermal Stability and Mechanical Properties”, International Conference on Advances in Automobile, Manufacturing, Automation and Mechanical Engineering on 19.03.2025
9.	Mr.R.Periyasamy, “Design and Analysis of Cleated type Plastic Belt Conveyor for Broke Pulper”, International Conference on Advances in Automobile, Manufacturing, Automation and Mechanical Engineering on 19.03.2025
10.	Mr.M.Dineshkumar, “CFD Analysis and Evaluation of Performance for Centrifugal Fan using Wind Tunnel Testing”, International conference on Computational Intelligence and Industry 5.0 on 21.03.2025 and 22.03.2025
11.	Mr.G.Selvakumar, “Manufacturing of Titanium Power Cell Enclosures for High Performance Applications”, International conference on Computational Intelligence and Industry 5.0 on 21.03.2025 and 22.03.2025.
12.	Mr.S.Mohankumar, “Defect Analysis in CNC Turning of Top Bearing Housing Components using the 4M Approach”, International Conference on Engineering Technology and Science on 28.03.2025.
13.	Dr.K.Periasamy, “Design and Fabrication of Automatic Toll Gate System”, International Conference on Engineering Technology and Science on 28.03.2025.
14.	Mr.S.K.Karthikeyan, “Enhancing the Efficiency of Juice Heater by utilizing Waste Hot Water”, International Conference on Engineering Technology and Science on 28.03.2025.
15.	Mr.S.K.Karthikeyan, “Design and Fabrication of Flame Stabilization Technique using Conical Flame Holder”, International Conference on Engineering Technology and Science on 28.03.2025.

16.	Mr.M.Maniyarasan, “Analysis of Mechanical Properties in SMAW Welded Material”, International Conference on Engineering Technology and Science on 28.03.2025.
17.	Mr.N.Kawin, “Investigation of Heat Transfer rate in Shell and Tube Heat Exchanger”, International Conference on Engineering Technology and Science on 28.03.2025.
18.	Mr.S.Chandrakumar, “Experimental Investigation of Hybrid Epoxy Filler Composites with Kevlar and Pineapple Fibers”, International Conference on Engineering Technology and Science on 28.03.2025.
19.	Mr.V.Muthukumar, “Experimental Analysis for Optimizing Cutting Parameters on Horizontal CNC Turning Machine”, International Conference on Engineering Technology and Science on 28.03.2025.
20.	Mr.C.Dineshbabu, “Improving Quality and Reducing Rejects in the production line Via Poka-Yoke Techniques”, International Conference on Innovations in Engineering, Computing and Smart Technologies on 29.03.2025.
21.	Mr.R.Arivazhagan, “The Design of Electric Induction Steam Boiler”, International Conference on Innovations in Engineering, Computing and Smart Technologies on 29.03.2025.
22.	Mr.Ra.Aravind, “Elimination Drill Offset in Bush Fixtures using Root Cause Analysis”, International Conference on Innovations in Engineering, Computing and Smart Technologies on 29.03.2025
23.	Mr.R.Karthick, “Innovative Design of Jigs and Fixtures for precision Machining on 3-axis Vertical CNC Machining Centres”, International Conference on Innovations in Engineering, Computing and Smart Technologies on 29.03.2025.
24.	Mr.P.Raja, “Fabrication of Décor Windows from Broken Solar Panel Glass”, International Conference on Innovations in Material Science, Technology, Engineering and Management for Sustainable Development on 31.03.2025.

25.	Dr.G.Saravanan, "Influence of nano Sized SiC and Flax Fiber on Characteristics study of Polyethylene hybrid Composites", AIP Conference Proceedings, (https://doi.org/10.1063/5.0258624)
26.	Dr.G.Saravanan, "Merging actions and functional behaviour of Epoxy Composite made with e-glass fiber for non structural applications", AIP Conference Proceedings, (https://doi.org/10.1063/5.0258623)
27.	Mr.R.Arivazhagan, "Enrichment of polyester matrix by the action of abaca fiber and silicon carbide particle: Characteristics study", AIP Conference Proceedings (https://doi.org/10.1063/5.0258607)
28.	Mr.R.Arivazhagan, "Featuring with sodium hydroxide processed bast fiber made polypropylene composite: Behaviour investigation", AIP Conference Proceedings (https://doi.org/10.1063/5.0258609)