KONGUNADU COLLEGE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS)

NAMAKKAL – TRICHY MAIN ROAD, THOTTIAM, TRICHY

DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2025-2026

FACULTY PUBLICATIONS - International/National Journals

1. Subramanian, Mohankumar, Raju, Naveen Kumar, Rathanasamy, Rajasekar and Velu Kaliyannan, Gobinath "Tribological and Mechanical behavior of Al359 Composites reinforced with B4Cp, SiCp and flyash", Material Testing, Vol. 60, No. 7, pp. 1223—1231.
2. L.Selvarajan, Prakash B, Niranjan T., Madhava Reddy S., Singaravel B., and Periasamy K "A critical insight into the use of EDM for machining advanced ceramic composites – a review", Machining Science and Technology, 29 (5): 723–46.
3. A. K. Chaturvedi, T. Jagadeesha, Santosh Kumar Tamang, R. Thanigaivelan, and R. Periyasamy, "Optimization of Cutting Parameter in turning of Super duplex Stainless Steel-SDSS2507 with textured tools under MQL Conditions", Surface Review and Letters, (Published Online).
4. Arulpandian Palanisamy, Nagaraj Chelliah Machavallavan, Dhanasekar Ramalingam, Kumaravel Sundaram, "Microstructural and Mechanical Improvements in A356 Composites on Incorporating Polymer Derived Ceramics Through Ultrasonication at Semi-solid and Liquid State", Silicon, 17, 2715–2727.
5. V. S.Shaisundaram, Sengottaiyan, Saravanakumar, Raji Gunasekaran and S.Kumaravel, M.Chandrasekaran, Basumatary Sanjay, "Machine Learning Driven Energy Efficiency Enhancement and Emission Reduction in Diesel Engine Using pumpkin seed Bio Diesel Blends and CeO_2 Nano Particles", International Journal of Energy Research, (Published Online).

6. Nadanasabapathi Sivashankar, Kadhiresan Santhanam, Shikandar Prasad, Mamidala Jawahar, Rajasekaran Thanigaivelan, “Electrochemical Micromachining of Galvanized iron Sheets: process optimization and Performance Evaluation”, Journal of Electrochemical Science and Engineering, (Published Online).
7. S. Saravanan, Saravanakumar Sengottaiyan, Ra. Aravind , S. Krishnakumar , “Assessment of the Tribological Behavior of WAAM-Fabricated SS316L through Advanced Ensemble Machine Learning Predictions and RSM-Based Optimization”, Journal of Materials Engineering and Performance, (Published Online).
8. G. Mahendran, R. Ramadoss, C. Rajendran, G. Selvakumar, V. Jayaseelan , “Influence of Solution Treatment and Artificial Aging on the Strength of LM13 Reinforced with Titanium Diboride Metal Matrix Composite”, Journal of Materials Engineering and Performance, (Published Online).
9. Sivakumar Viswanathan, Saravanakumar Sengottaiyan, Muthukumar Veerappan, Shaisundaram Veerasamy Shamprasshaath,“Assessment of Mechanical Strength, Thermal Stability, and Moisture Resistance of AA6061-Alumina-Banana Fiber Epoxy Fiber Metal Laminates”, Fibers and Polymers, 26, 4497–4512 (2025).
10. Dhanapalan Lavanya, Dhavamani Chinnathambi, Venkatesan Subramanian, Ravikumar Natarajan., “Biosilica and Clove Oil-Modified Banana Fiber Epoxy Composites: Mechanical, Thermal, Wear, and Drilling Performance with Machine Learning and RSM Optimization”, Composite Interfaces, (Published Online).
11. Periyasamy Dhiravidamani, Duraisamy Jagadeesh, Prabagaran S, Srinivasan R, “Hemp-PEEK composites: surface treatment, processing, and performance”, International Polymer Processing, vol. 40, no. 5, 2025, pp. 517-524.
12. P Suresh, Kumaravel S, Saravanakumar Sengottaiyan, Muthukumar P, “Influence of friction stir processing passes on microstructure , mechanical and tribological performance of Al5083/FeCoCrCuTi high-entropy alloy surface composites”, Composite Interfaces, (Published Online).
13. N. Santhosh, S.M. Vinu Kumar, R. Sundar, V. Vadivelvivek, C. Dineshbabu, “Hybrid FED former-LSTM model for enhanced heave displacement prediction in offshore buoys”, Ocean Systems Engineering, Vol. 15, No.3, pages 271-295.

14. Arulpandian Palanisamy, Krishnaveni Anbalagan, Raja Palanivel, J. R. Vinod Kumaar, “Enhanced Microstructure and Mechanical Properties of In Situ Polymer-Derived Ceramic-Reinforced A356 Aluminum Composites Through Cooling Slope Casting”, International Journal of Metalcasting, (Published Online).
15. Premkumar N, Felix Sahayaraj Arockiasamy, R.Arivazhagan, Raghuram Pradhan, “Properties of silane-modified hemp viscose fiber and citrus grandis peel pectin-reinforced vinyl ester composites”, Composite Interfaces, Vol.33, No.6, pp. 1309-1323.
16. Aruchamy, M., Velu Kaliyannan, G., Gunasekaran, Raja Gunasekaran, Mohankumar Subramanian, “High-efficiency monocrystalline silicon solar cells via optimized LaB6 antireflection coatings synthesized by sol–gel technique”, Journal of Materials Science: Materials in Electronics, Vol.36, 2025.
17. ArulPandian Palanisamy, Santhosh Velmurugan, Karthik Ramasundaram, S. Krishnakumar, “Microstructure and Mechanical Response of A206 alloy processed by ultrasonic spray-assisted polymer derived ceramic reinforcement”, Composite Interfaces, (Published Online).
18. Rathish Kumar Thangam, Srinivasan Velmurugun Parameswari, Sudesh Kumar Moranahalli Ponnusamy, Mahendran Jayavel, “Production of rubber seed oil biodiesel using biomass derived catalyst and engine performance, combustion and emission characteristics with hydrogen dual fuel and alumina additive”, Applied Thermal Engineering, Vol. 286, 129402.
19. ArulPandian Palanisamy, Krishnaveni Anbalagan, Rajesh Mohan, Aravind Ramalingam, “Gas-induced semi-solid processing of A356 with in-situ polymer-derived ceramic reinforcement for improved mechanical performance”, Next Materials, Vol.10, 101509.
20. E. Balakrishnan, G. Yuvaraj, Trinath Keerthipalli, Raghuram Pradhan, S. K. Karthikeyan, Srinivas Tadepalli, “Effect of Interfacial Adhesion Enhancement on SS316Foil/ Prestressed Areca Fiber- Nano silica Fiber Metal Laminate Composites”, Silicon, Vol.18, pp. 457-469.
21. Karunakaran Kuppusamy, Gopi Periyappillai, Saravanakumar Sengottaiyan, Periyasamy Rajendran, “Deep Cryogenic Treatment of various electrode for Enhanced electrochemical machining performance of wire Arc Addictive manufactured Stainless steel”, Steel Research International, (Published Online).
22. ArulPandian Palanisamy, K. Periasamy, S. Krishnakumar, N. Shalom, Santhosh Velmurugan “Effect of Polycarbosilane precursor state on in-situ SiC formation and property enhancement in A356 aluminum alloy”, Composite Interfaces, (Published Online).
23. Wasurat Bunpheng, V. M. Rajavel Muthaiah, Sivaprakash Ethiraj, Subhav Singh, R. Dhairiyasamy, C. K. Chan, “Surface-State and Interphase Engineering of Ceramic Boron Carbide–Epoxy Composites: Correlating Oxidation, Functionalization, and Dispersion with Mechanical and Tribological Behavior”, Ceramics International, Vol.52, No.4, pp.5126-5142.

24. S. Navaneethasanthakumar, Santhosh Velmurugan, S. Sugunarani, Karthik Ramasundaram, “Enhancement of Mechanical and Tribological Properties of AA5052 Aluminium Alloy via Hybrid Si_3N_4/BN Nanoparticle Reinforcement Using Friction Stir Processing”, Composite Interfaces, (Published Online).
25. D. Shanmuga Sundaram, L. Dhanapalan, K. Kavitha, N. Ravikumar, “Enhancement of Mechanical, Wear, Corrosion and Wettability Properties of AZ61/FeCoCrMnNi High-Entropy Alloy Surface Composites through Multi-Pass Friction Stir Processing”, Journal of Materials Engineering and Performance, (Published Online).
26. A. Prasad, Prathap Paulraj, K. Periasamy, S. Kannan, “Wool Fiber-Based Polycarbonate Epoxy Hybrid Composites as Sustainable Materials for Automotive Structures”, Journal of Macromolecular Science, Part B: Physics, (Published Online).
27. Ravikumar Natarajan, Kavitha Kalidass, Viswanathan Rangasamy, Mugundhan Kuppusamy, “Enhanced Mechanical and Machinability of AZ91D Hybrid Composites via TOPSIS and Machine Learning Models”, Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, Vol.240, No.8, pp.2713-2734.
28. Aravind Ra, G.Saravanan, “Microstructural Evolution and Enhancement of Mechanical, Tribological and Corrosion Properties in AA6061/AlFeCrCuMnNi High Entropy Alloy Composites through Multi-Pass Friction Stir Processing”, Materials Chemistry and Physics, Vol.356, 132339.
29. P. Rasagopal, P. Dhiravidamani, D. Jagadeesh, C. Rajendran, “Corrosion Behaviour of Heat-Treated ZrB_2-Reinforced AA2014 Aluminium Matrix Composites for Marine Applications”, International Journal of Metalcasting, (Published Online).
30. R. T. Ajaykarthik, B. E. Jebasingh, J. N. Nair, M. Dineshkumar, “Sustainable Chitosan–Basalt–Bamboo Epoxy Composites for Prosthetic Use: Mechanical, Fatigue, and Creep Analysis”, Chemical Papers, (Published Online).
31. P. Vivekanandan, Raghuram Pradhan, V. Muthukumar, “ Mechanical and drilling studies on interfacial adhesion improved hemp and agave hybrid fibre & biosilica reinforced vinyl ester composite”, Journal of Composite Materials, (Published Online).
32. S.Vinodha, G.Yuvaraj, V.Selvam, E.,Balaji, “Valorisation of Citric fruit Peel ceramic Biosilica and Coconut Husk fibre for the development of Biocomposites for safe environmental Application: Fabrication and Characterization” Silicon, (Published Online).
33. Nagaraj Gopalakrishnan, Sabbah Ataya, Jeremiah Reveendran, Saravanan Kanakasabapathi Karthikeyan, “Structure-Property Relationship of carbon-Kenaf-Hemp-Reinforced Sandwich Composites for Impact-Resistant Automotive Panels”, Journal of Materials Engineering and Performance, (Published Online).

FACULTY PUBLICATIONS - International / National Conferences

1. Mr.E.Sivaprakash, "Solar Energy Integration in EV Charging Networks", International Conference on Advances in Aerospace and Navigation Systems on August 2025.
2. Mr.E.Sivaprakash, "Recent development in Pervoskite-Silicon Hybrid Solar Cells", International Conference on Advances in Aerospace and Navigation Systems on August 2025.
3. Dr.G.Saravanan, "Experimental Analysis of a Water flow Enhancement System", International Conference on Interdisciplinary Technologies in Research and Artificial Intelligence on November 2025.
4. Mr.E.Sivaprakash, "Achieving Zero Defect in the production Line through the use of Poka Yoke Techniques", International Conference on Futuristic Trends in Science, Engineering and Management on February 2026.
5. Mrs.V.Selvam, "Large Scale IOT Based Green House Dryer", International Conference on Futuristic Trends in Science, Engineering and Management on February 2026.
6. Dr.G.Saravanan, "Experimental Investigation on a Water Pressure Enhancement", International Conference on Futuristic Trends in Science, Engineering and Management on February 2026.
7. Dr.N.Sivashankar, "Optimizing Manufacturing Performance by Minimizing waste using lean Practices", International Conference on Futuristic Trends in Science, Engineering and Management on February 2026.
8. Dr.D.Jagadeesh, "Foot Ease Pro: Smart Massaging Insole", International Conference on Futuristic Trends in Science, Engineering and Management on February 2026.
9. Mr.N.Kawin, "Design and fabrication of Sensor-Based Weighing and Packing Machine for Granular Materials", National Conference on Integrating Life Sciences and Engineering: Innovations in Bioenergy for Sustainable Development on March 2026.
10. Dr.S.Kumaravel, "Design & Detailing emergency exit steel tower for an industrial Building", National conference in Innovation in Civil Engineering on March 2026.
11. Mr.N.Kawin, "Design and Detailling of Roof Top Plateform for Mechanical Units as per AISC Design", National conference in Innovation in Civil Engineering on March 2026.
12. Mr.Ra.Aravind, "Design and Implementation of an Energy Efficient Mechanical Speed Control System for Sustainable VFFs Packaging Machine", National Conference on Integrating Life Sciences and Engineering: Innovations in Bioenergy for Sustainable Development on March 2026.
13. Mr.S.Chandrakumar, "Utilization of Modified Bellmer Mesh in twin roll pith press for improved dewatering", National Conference on Integrating Life Sciences and Engineering: Innovations in Bioenergy for Sustainable Development on March 2026.
14. Dr.N.Ravikumar, "Study the Performance of Andritz pith Press by Reusing of Winkle Pith Press", National Conference on Integrating Life Sciences and Engineering: Innovations in Bioenergy for Sustainable Development on March 2026.
15. Dr.R.Karthik, "CFD Analysis of Shell and Tube Heat exchanger", International Conference on Modern Trends in Engineering, Science, Management and Technology on March 2026.
16. Mr.V.Muthukumar, "Industrial Conveyor", International Conference on Modern Trends in Engineering, Science, Management and Technology on March 2026.

17. Mr.V.Muthukumar, “Development of Automatic Tailstock drilling Attachment in Lathe Machine”, International Conference on Modern Trends in Engineering, Science, Management and Technology on March 2026.
18. Dr.P.Muthukumar, “Fabrication and Testing of Sugarcane Bud Cutting Machine”, International Conference on Modern Trends in Engineering, Science, Management and Technology on March 2026.
19. Mr.R.Periyasamy, “CFD Analysis of Plate Heat Exchanger”, International Conference on Modern Trends in Engineering, Science, Management and Technology on March 2026.
20. Mr.J.Mahendran, “Optimization of Hole Positioning using a Custom designed drill Jig for Cylindrical Component”, International Conference on Modern Trends in Engineering, Science, Management and Technology on March 2026.
21. Mr.S.K.Karthikeyan, “Investigation of Tool Tip Fracturing during Facing and Grooving Operations of Hard faced Valve seat rings”, International Conference on Modern Trends in Engineering, Science, Management and Technology on March 2026.
22. Dr.N.Ravikumar, “Experimental Study of Mechanical Properties of AZ91D Magnesium Alloy Composite under Cold Working”, International Conference on Modern Trends in Engineering, Science, Management and Technology on March 2026.
23. Mr.S.Mohankumar, “Experimental Analysis of Gear based Work Holding Jig for Drilling Operations”, International Conference on Modern Trends in Engineering, Science, Management and Technology on March 2026.
24. Mr.G.Selvakumar, “Drilling Characteristics evaluation and Optimization of Hybrid AMMC with various End point Angle”, International Conference on Modern Trends in Engineering, Science, Management and Technology on March 2026.
25. Mr.G.Selvakumar, “Enhancement of Heating Value of Sugarcane Bagasse at different Moisture contents using Unburnt Coal Blending”, International Conference on Modern Trends in Engineering, Science, Management and Technology on March 2026.
26. Dr.K.Periasamy, “Analysis of Mechanical properties of Magnesium Al_2O_3 under Hot Working”, International conference on Innovative Research in Engineering Sciences on March 2026.
27. Mr.R.Periyasamy, “Sheraton Taiba-Drainage System in Typical Floor”, International conference on Innovative Research in Engineering Sciences on March 2026.
28. Mr.R.Arivazhagan, “Analysis and control of Distortion pulper machine Welding”, International conference on Innovative Research in Engineering Sciences on March 2026.
29. Mr.M.Dinesh Kumar, “Design and Development of a lightweight Composite Automotive Frame Panel for Enhanced Vehicle Efficiency”, International conference on Innovative Research in Engineering Sciences on March 2026.
30. Mr.S.Chandrakumar, “Design and Analysis of Drainage System at Sheraton Taiba Hotel”, International conference on Innovative Research in Engineering Sciences on March 2026.
31. Mr.C.Dineshbabu, “Effect of Cold Wire Addition on improvement in Productivity by Submerged Arc in Pulper machine”, International Conference on Innovations in Thermal Manufacturing, Structural and Environmental Engineering on March 2026.

32. Dr.K.Periasamy, “Experimental and CFD investigation of a Tube – Fixed Air Heater for Hot Air Measurement”, International Conference on Innovations in Thermal Manufacturing, Structural and Environmental Engineering on March 2026.
33. Mr.Ra.Aravind, “Analysis and Correction of Ovality in Machined Cylindrical Parts”, International Conference on Innovations in Thermal Manufacturing, Structural and Environmental Engineering on March 2026.
34. Mr.R.Arivazhagan, “Design and Development of an Energy Efficient Packing Machine for Small Scale Industries”, International Conference on Innovations in Thermal Manufacturing, Structural and Environmental Engineering on March 2026.
35. Mr.M.Maniyarasan, “Structural design of steel joints for Industrial Mixer Plant using AISC Guidelines”, International Conference on Sustainable Materials, Automotive Technologies and Artificial Intelligence on March 2026.
36. Mr.P.Raja, “Root Cause Investigation and Correction of drill Misalignment in Fixtures”, International Conference on Sustainable Materials, Automotive Technologies and Artificial Intelligence on March 2026.
37. Mr.S.K.Karthikeyan, “CFD Analysis of hot Air Generator”, International Conference on Sustainable Materials, Automotive Technologies and Artificial Intelligence on March 2026.
38. Mr.C.Dineshbabu, “Design of 3D Printed Modular Fixtures for complex Geometries using Vertical Machining Centres”, International Conference on Sustainable Materials, Automotive Technologies and Artificial Intelligence on March 2026.
39. Mr.M.Maniyarasan, “Performance Analysis of Luffa based Hybrid Helmet”, International Conference on Computational Intelligence and Industry 5.0 on March 2026.
40. Mr.P.Raja, “Analysis the Steel Members with shear Hole and Simple Shear Connections”, International Conference on Computational Intelligence and Industry 5.0 on March 2026.
41. Dr.P.Muthukumar, “Experimental Study on the Thermal Performance of a Dome-Shaped Solar Air Heater”, International conference on Innovations in Materials science, Technology, Engineering and Management for Sustainable Development on March 2026.
42. Dr.G.Saravanan, “Performance Study of Automated Bottle Filling and Capping Machine”, International Conference on Computational Intelligence and Industry 5.0 on March 2026.
43. Mr.E.Sivaprakash, “Design and estimation of LED Billboard structures using Tekla Software”, International Conference on Computational Intelligence and Industry 5.0 on March 2026.
44. Dr.N.Sivashankar, “Optimization of Error Evaluation by using CNC Turning Process on HDPE”, International Conference on Innovative Research in Engineering on March 2026.