

## DEPARTMENT OF AUTOMOBILE ENGINEERING

### FACULTY JOURNAL PUBLICATIONS

| S.No | Name of the Faculty                  | Title of the Paper                                                                                                                                                                                                                                                                    | Name of the Journal                                                                  | Volume / Issue / Page No. | Publisher                         | Month and Year |
|------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------|-----------------------------------|----------------|
| 1.   | Dr P B Senthilkumar                  | Mechanical Performance Enhancement of Sustainable Fiber Composites Using Tamarind Seed Powder as Bio-Filler                                                                                                                                                                           | Sigma Journal of Engineering and Natural Sciences                                    |                           | Accepted                          | August 2026    |
| 2.   | Dr P Jagan<br>&<br>Dr Jayanth Joseph | Combustion Physics-Informed Neural Network (C-PINN) with Explainability Analysis and MOGWO Multi-Objective Optimisation for A CI Engine Fuelled On Citrus-Derived Biofuel Blend with Hot and Cold EGR                                                                                 | <b>Thermochimica Acta</b><br><b>Q2</b><br><b>Impact Factor - 3.6</b>                 | 180462                    | Elsevier                          | August 2026    |
| 3.   | Dr P Jagan                           | Waste tyre pyrolysis oil-hemp biodiesel ternary blends with graphene oxide and thermal barrier coating: CI engine performance and machine learning prediction.<br><a href="https://www.nature.com/articles/s41598-026-62177-z">https://www.nature.com/articles/s41598-026-62177-z</a> | <b>Scientific Reports</b><br><b>Q1</b><br><b>Impact Factor - 4.9</b>                 | Article in Press          | Nature Publishing Group UK        | July 2026      |
| 4.   | Dr P Jagan                           | Combustion performance and emission prediction of TiO <sub>2</sub> and graphene oxide nanoparticle-enhanced lemongrass oil-diesel blends using ensemble machine learning<br><a href="https://doi.org/10.1007/s10973-026-15758-z">https://doi.org/10.1007/s10973-026-15758-z</a>       | <b>Journal of Thermal Analysis and Calorimetry - Q2</b><br><b>Impact Factor: 4.1</b> | Pages 1-36                | Springer International Publishing | July 2026      |

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| 5.   | Dr P B Senthilkumar | Green nanofuel strategy on performance, emission, and combustion characteristics of graphene-integrated tamanu biodiesel blends<br><a href="https://doi.org/10.1093/ijlct/ctag044">https://doi.org/10.1093/ijlct/ctag044</a>           | <b>International Journal of Low-Carbon Technologies</b><br><b>Q1, Impact Factor: 2.6</b>                                      | Volume 21, 2026, ctag044           | Oxford University Press                           | May 2026       |
| 6.   | Dr P B Senthilkumar | Synergistic Improvements in Mechanical and Tribological Properties of Al 7075 with TiB2 and MoS2 Optimization Using Grey Relational Analysis                                                                                           | Sigma Journal of Engineering and Natural Sciences                                                                             |                                    | Accepted                                          | Mar 2026       |
| 7.   | Dr P Jagan          | Machine learning-assisted multi-objective optimisation of A premixed-assisted CI engine fueled with CITRUS-derived biofuels<br><a href="https://doi.org/10.1016/j.applthermaleng.2026.130673">10.1016/j.applthermaleng.2026.130673</a> | <b>Applied Thermal Engineering - Q1, Impact Factor: 7.5</b>                                                                   | Volume: 296<br>Page Number: 130673 | Elsevier                                          | March 2026     |
| 8.   | Dr.V.Dillibabu      | AI-Enabled Multiscale Feature Fusion for Accurate Biocompatibility Evaluation in Smart Tissue Engineering Applications                                                                                                                 | Proceedings of the <b>2025 International Conference on Recent Innovation in Science, Engineering and Technology (ICRISET)</b> | 979-8-3315-5833-8                  | Institute of Electrical and Electronics Engineers | August 2025    |
| 9.   | Dr.V.Dillibabu      | AI-Driven Real-Time Monitoring and Prediction Framework for Surface Degradation and Corrosion Resistance Assessment                                                                                                                    | Proceedings of the <b>2025 International Conference on Recent Innovation in Science, Engineering and Technology (ICRISET)</b> | 79-8-3315-5833-8                   | Institute of Electrical and Electronics Engineers | August 2025    |

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| 10.  | Dr.V.Dillibabu      | Surface Roughness Classification Using Attention-Guided Convolutional Neural Networks on Real-Time Machining Sensor Data                         | Proceedings of the <b>2025 International Conference on Recent Innovation in Science, Engineering and Technology (ICRISET)</b> | 979-8-3315-5833-8          | Institute of Electrical and Electronics Engineers | August 2025    |
| 11.  | Dr.A. Arivazhagan   | Experimental Investigation on Genetic Algorithm Optimized Proportional Integral Derivative Based Active Suspension System                        | SAE International                                                                                                             | 2025-01-0014               | SAE International                                 | May 2025       |
| 12.  | Dr.T. Mothilal      | Optimized Energy Management in Renewable Energy Integrated Microgrids Using Pyramidal Dilation Attention Convolutional Neural Networks           | Journal of Environmental Nanotechnology                                                                                       | Vol. 14(1), 444-452 (2025) | Institute for Environmental Nanotechnology        | March 2025     |
| 13.  | Mr.R Balamurugan    | Design and Fabrication of Automated Yarn Spool Handling System                                                                                   | AIP Conference Proceedings                                                                                                    | 3204, 020014 (2025)        | AIP Conference Proceedings                        | February 2025  |
| 14.  | Mr.R Balamurugan    | Performance Analysis of conventional two wheeler versus plug in hybrid Electric two wheeler for light goods Transportation                       | SAE International                                                                                                             | 2025-28-0199               | SAE International                                 | July 2025      |
| 15.  | Dr.T. Mothilal      | Optimizing Surface Roughness in Turning of Al7072 with Nano particles of Carbon Metal Matrix Composite using Taguchi Analysis and ANN Prediction | International Conference on Recent Advances in Waste Minimization & Utilization-2024 (RAWMU-2024)                             | Volume 556, 2024           | Web of Conferences                                | August 2024    |

| S.No | Name of the Faculty | Title of the Paper                                                                                                                                                     | Name of the Journal                                                                               | Volume / Issue / Page No. | Publisher                                                                      | Month and Year |
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| 16.  | Dr.T. Mothilal      | A Comparative Analysis of ANN and taguchi for Enhancing Predictive modelling and optimisation for Al-Base Metal Matrix Composites reinforced with nanoparticles of SiC | International Conference on Recent Advances in Waste Minimization & Utilization-2024 (RAWMU-2024) | Volume 556, 2024          | Web of Conferences                                                             | August 2024    |
| 17.  | Mr.R Balamurugan    | Optimization of the microelectrochemical drilling response variable of Inconel 718 alloy by grey relational analysis                                                   | Materials Today Proceedings                                                                       | Publishedonline           | ELSEVIER                                                                       | April 2024     |
| 18.  | Dr.T.Mothilal       | Evaluation of Lightweight Cotton Textiles for Durable and Comfortable Automotive Interior Applications.                                                                | SAEMOBILUS                                                                                        | ISSN:0148-7191            | SAE International                                                              | Feb2024        |
| 19.  | Dr.V.Dillibabu      | Anti-Theft Vehicle Tracking and Remote-Control System                                                                                                                  | International Journal of Vehicle Structures & Systems                                             | ISSN0975-3060             | MAFTREE                                                                        | Dec 2023       |
| 20.  | Dr.A.Arivazhagan    | Design and Development of Power Generation using Vehicle Suspension                                                                                                    | International Journal of Vehicle Structures & Systems                                             | ISSN0975-3060             | MAFTREE                                                                        | Dec 2023       |
| 21.  | Dr.A.Arivazhagan    | Performance Evaluation of Passive Suspension System by Varying Damping Coefficient                                                                                     | International Journal of Vehicle Structures & Systems                                             | ISSN0975-3060             | MAFTREE                                                                        | Dec 2023       |
| 22.  | Dr.A.Arivazhagan    | H <sub>∞</sub> Static Output-Feedback Control with Variable Substitution Scheme for Non-Stationary Running Active Suspension Vehicle                                   | International Journal of Vehicle Structures & Systems                                             | ISSN0975-3060             | Mech Aero Foundation for Technical Research and Education Excellence (MAFTREE) | Dec 2023       |

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| 23.  | Mr.Balamurugan R    | Application of Taguchi Based ANFIS Approach in Wire Electrical Discharge Machining of Haste Alloy C276 for Automobile Applications<br>DOI: <a href="https://doi.org/10.4271/2023-28-0167">https://doi.org/10.4271/2023-28-0167</a> | Electrical Discharge SAE International                                             | ISSN: 0148-7191, e-ISSN: 2688-3627 | SAE International | 10Nov 2023     |
| 24.  | Mr.Balamurugan R    | Design,ModellingandSimulation of Adaptable Marine and Terrestrial Cleaner<br>DOI: <a href="https://doi.org/10.4271/2023-28-0165">https://doi.org/10.4271/2023-28-0165</a>                                                          | Simulationand Design - SAE International                                           | ISSN: 0148-7191, e-ISSN: 2688-3627 | SAE International | 10Nov 2023     |
| 25.  | Mr.Balamurugan R    | DesignandAnalysisofRetrofit for Root Crop Harvester<br><a href="https://doi.org/10.4271/2023-28-0052">https://doi.org/10.4271/2023-28-0052</a>                                                                                     | Smart Agriculture SAE International                                                | ISSN: 0148-7191, e-ISSN: 2688-3627 | SAE International | 10Nov 2023     |
| 26.  | Mr.Balamurugan R    | DesignandInvestigationofAutomatic TrashCollectingMachinefor Industry<br><a href="https://doi.org/10.4271/2023-28-0179">https://doi.org/10.4271/2023-28-0179</a>                                                                    | SmartIndustry-SAE International                                                    | ISSN: 2688-3627<br>DOI:            | SAE International | 10 Nov2023     |
| 27.  | Dr.V.Dillibabu      | Effect of operating condition on permanentmagnetheatingsystem                                                                                                                                                                      | Lecture Notes in MechanicalEngineering "Recent Advances in Mechanical Engineering" | International                      | NA                | 21July 2023    |
| 28.  | Dr.T.Mothilal       | Mechanical and wear properties of 7075 Al reinforced with graphite particulate metalmatrixcomposites:preparation and evaluation                                                                                                    | AIPConference Proceedings                                                          | International                      | AIP               | 10Sep2023      |

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| 29.  | Dr.T.Mothilal       | Experimental Analysis of Al-SiC-TiB <sub>2</sub> hybrid metal matrix composite                                                                               | AIP Conference Proceedings                    | International                            | AIP       | 10 Sep 2023    |
| 30.  | Dr.T.Mothilal       | Mechanical Characterization of Friction-Stir-Welded Aluminum AA7010 Alloy with TiC Nanofiber                                                                 | Advances in Materials Science and Engineering | Volume 2023, Article ID 1466963, 7 pages | Hindawi   | Apr 2023       |
| 31.  | Dr.T.Mothilal       | Evaluation of Mechanical Behaviour of Multiwalled Nanotubes Reinforcement Particles in Jute-Glass Fibres Hybrid Composites                                   | Advances in Materials Science and Engineering | Volume 2023, Article ID 2219460, 7 pages | Hindawi   | Apr 2023       |
| 32.  | Dr.T.Mothilal       | Three-point bending and ILSS of high lamina bamboo fibre and polyester resin composite                                                                       | Materials Today: Proceedings                  | Published online                         | ELSEVIER  | Mar 2023       |
| 33.  | Mr.S. Mathavan      | Experimental Analysis for Nitrogen Oxide Reduction in a Diesel Engine by the Hydrogen-Assisted Selective Catalytic Reduction Technique                       | Advances in Materials Science and Engineering | Volume 2023, Article ID 8686871, 7 pages | Hindawi   | Jan 2023       |
| 34.  | Dr.T.Mothilal       | Influence of nano titanium oxide reinforced Al-7075 matrix composites in stir casting method                                                                 | Materials Today: Proceedings                  | Vol.No.69/ Part 3/ pp.1381-1386          | ELSEVIER  | Sep 2022       |
| 35.  | Dr.T.Mothilal       | Effect of walnut powder reinforcement on the mechanical properties of biodegradable natural flax/hemp fibre-based composites                                 | Materials Today: Proceedings                  | Vol.No.69/ Part 3/ pp.1387-1393          | ELSEVIER  | Sep 2022       |
| 36.  | Mr.S.Mathavan       | Comparative Analysis of NO <sub>x</sub> Emission Reduction in Engines Using NiCo <sub>2</sub> O <sub>4</sub> Nanoparticles without External Reductant at Low | Journal of Nanomaterials                      | Article ID- 8981350                      | Hindawi   | Sep 2022       |

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|      |                              | Temperatures: An Experimental Investigation                                                                                             |                                                       |                                  |                                     |                |
| 37.  | Dr.V.Dillibabu               | Investigation Of Gasification Reactions and H <sub>2</sub> /CO Ratio Analysis for Rice Husk Air Gasification Simulation                 | Thermal Science                                       | Vol.27, No.1B, pp.881-890        | Vinca Institute of Nuclear Sciences | Aug 2022       |
| 38.  | Dr.V.Dillibabu               | Investigation of Biomass Gasification Simulation Using Air, Steam and Oxygen As Gasifying Agent                                         | Thermal Science                                       | Vol.26, No.6B, pp.5109-5119      | Vinca Institute of Nuclear Sciences | Aug 2022       |
| 39.  | Mr. V.A. Shridhar            | A Comparative Study with J48 and Random Tree Classifier for Predicting the State of Hydraulic Braking System through Vibration          | SAE Technical papers                                  | Article ID-2021-28-0254          | -                                   | Aug 2021       |
| 40.  | Dr. T. Mothilal              | Experimental investigation on physical properties of banana/E glass fiber reinforced hybrid interpenetrating polymer network composites | Materials Today: Proceedings                          | Vol.No.45/ Issue.6/ pp.5029-5033 | ELSEVIER                            | Feb 2021       |
| 41.  | Dr. T. Mothilal              | Mechanically toughened EMI shielding natural rubber composite in microwave frequency bands                                              | Plastics, Rubber and Composites                       | Vol.No.50 / Issue.5/ pp.241- 248 | Taylor & Francis                    | Feb 2021       |
| 42.  | Mr.S.Mathavan Dr.T. Mothilal | Experimental Investigation on Emission Characteristics of Diesel N-Pentanol Blend in Homogeneous Charged Compression Ignition Engine    | International Journal of Vehicle Structures & Systems | Vol.No.13/ Issue.3/ pp.309 - 313 | -                                   | Aug 2021       |

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| 43.  | Dr.T.MothilalMr.S.Mathavan  | Performance and emission characteristics of diesel blended with sweet lime peel oil and corn oil                                                      | AIP Conference Proceedings                               | Article ID 2283,020036                  | -         | Oct2020        |
| 44.  | Dr.T.MothilalMr.S.Mathavan  | Analysis on mechanical properties of wood plastic composite                                                                                           | AIP Conference Proceedings                               | Article ID 2283, 020037                 | -         | Oct2020        |
| 45.  | Dr.T. MothilalMr.S.Mathavan | Emission characteristics study of Gasoline-Diesel and Gasoline-Diesel/pentanol blend                                                                  | IOP Conference Series: Materials Science and Engineering | Vol.No.988, Article ID- 012050, 8-pages | -         | July2020       |
| 46.  | Dr.T. Mothilal              | Thermal and flexural properties of Caryota urens palm fiber-reinforced polyester composites                                                           | A Journal Of Composition Theory                          | Vol.No.13/ Issue.1/ pp.301-312          | -         | Jan 2020       |
| 47.  |                             |                                                                                                                                                       |                                                          |                                         |           |                |
| 48.  | Dr T Mothilal               | Performance of solar parabolic dish thermoelectric generator with PCM                                                                                 | Materials Today: Proceedings                             | Vol.No.37/Issue .2/ pp.929-933          | ELSEVIER  | Nov 2020       |
| 49.  | Dr.T. Mothilal              | Heat transfer analysis of thermoelectric generator at the focus of solar parabolic dish                                                               | Journal of Xi'an University of Architecture & Technology | Vol.No.12/ Issue.5, pp.275-281          | -         | May 2020       |
| 50.  | Dr.T. Mothilal              | Effect of Silicon Coupling Grafted Ferric Oxide and E- Glass Fibre in Thermal Stability, Wear and Tensile Fatigue Behaviour of Epoxy Hybrid Composite | Silicon                                                  | Vol.No.12, Issue.11, pp.2533-2544       | Springer  | Dec 2019       |