



HINDUSTAN
INSTITUTE OF TECHNOLOGY & SCIENCE
(DEEMED TO BE UNIVERSITY)

Department of Mechanical Engineering

Research Publication- Faculty

(Journal Article-23, Conference Articles-5)

2025

Publication details – Mechanical Engineering

indexed in Scopus Database



Department of Mechanical Engineering

Research Publication Details – Faculty

2025

Scopus Indexed Journal articles

1. Hariram, V.; Sathishbabu, R.; Godwin John, J.G.; Kailiappan, N.; Vijayakumar, K.; Kumar, E.S.; K, K.K. Maximizing the combustion phenomenon with reduced emission of a compression ignition engine fuelled with Dunaliella salina biodiesel and hydrogen blends. 2025. Scientific Reports 15(1), 3037, 10.1038/s41598-025-16285-x
2. Kishore, L.; Rajesh, M.; Hariram, V.; Gobinath, V.M.; Godwin John, J.G.; Loganathan, P.; Sivasankar, S.; Sachuthananthan, B. Investigation of Mechanical, Microstructure Evolution and Corrosion Behaviour of AA7175/TiB2 Composite, 2025, International Journal of Vehicle Structures and Systems, 17 (3), 388-394. 10.4273/ijvss.17.3.05
3. Padmanaba Sundar, S.P.; Vijayabalan, P.; Kaliappan, V.K.; Sathyamurthy, R.; Kabeel, A.E.; Kamalakkannan, K. Emission reduction and performance enhancement of diesel engine fuelled using palm oil biodiesel and nanoparticle as additive, 2025, Environment, Development and Sustainability, 27(9), 22691-22710, 10.1007/s10668-022-02467-4
4. Gnanasekaran, K.; Arunkumar, A.; Rajesh, M.; Saracyakupoglu, T.; Loganathan, P.; Vijayakumar, R.; Ramprakash, S.; Vijayabalan, P. Experimental investigation on mechanical and vibrational analysis of kevlar/jute fiber stacked titanium sheet-based metal fiber laminates, 2025, Journal of Polymer Research, 32(9) 317, 10.1007/s10965-025-04577-9
5. Hariram, V.; Senthamaraiannan, S.; Mohan, R.; Karthick, R.; Kaliappan, N.; Barathiraja, K.; Godwin John, J.G.; K, K.K. Performance and emission analysis of CI engine fuelled with Dunaliella salina biodiesel and TiO₂ nanoparticle additives: Experimental and ANN-based Predictive Approach, 2025, Results in Engineering, 27, 106458, 10.1016/j.rineng.2025.106458
6. Jacob, S.; Saravanan, A.; Presin Kumar, A.J.P.; Sathish, S.; Seralathan, S. Hydrothermal Liquefaction of Terrestrial Biomass Waste for Sustainable Biodiesel Production in CI Engines 2025, Indian Journal of Environmental Protection, 45(8), 745-751

7. Sakthinathan, S.A.; Jaikumar, M.; Ramanathan, V.; Hariram, V.; Elumalai, E. Assessing the Engine Behaviour when Fuelled with Zinc Oxide Nano-particle Infused Waste Cooking Biodiesel, 2025, International Journal of Vehicle Structures and Systems, 17(2), 263-272, 10.4273/ijvss.17.2.14
8. Sakthinathan, S.A.; Jaikumar, M.; Ramanathan, V.; Hariram, V.; Kumar, E.S. Influence of Nano Fluids on CI Engine Fuelled with Waste Cooking Oil - A Comprehensive Assessment 2025, International Journal of Vehicle Structures and Systems, 17(2), 282-290, 10.4273/ijvss.17.2.16
9. Gnanasekaran, K.; Rajesh, M.; Hariram, V. Advanced Material Processing: Optimization of Abrasive Water Jet Parameters for Metal-Stacked Hybrid Fiber Laminate. 2025. Journal of Materials Engineering and Performance. 34(14) 1470-14721, 10.1007/s11665-024-10198-y-
10. Hariram, V.; Godwin John, J.G.; Saravanan, A.; Sangeeth Kumar, E.; Vinoth Kumar, M.; Ramanathan, V.; Balachandar, M.; Baskar, S. Optimized Biodiesel Production from Dunaliella Salina, A Unicellular Green Algae through Artificial Neural Network , 2025, Turkish Journal of Engineering, 9(2) 179-188, 10.31127/tuje.1525407
11. Hariram, V.; R, S.; Godwin John, J.G.; Kailiappan, N.; Vijayakumar, K.; E, S.K.; K, K.K. Enhanced combustion and emission characteristics of diesel-algae biodiesel-hydrogen blends in a single-cylinder diesel engine. 2025. Results in Engineering. 26, 104676, 10.1016/j.rineng.2025.104676
12. Manishraj, R.; Rajesh, M.; Saravanan, A.; Hariram, V.; Allen Jeffrey, J.A.; Sivasankar, S.; Loganathan, P.; Presin Kumar, A.J.P. Optimizing the Machining Parameters for Manufacturing the Automotive Components: An Assessment Study on Austenitic 316L Stainless Steel. 2025. International Journal of Vehicle Structures and Systems, 17(1) 36-41, 10.4273/ijvss.17.1.06
13. Hariram, V.; Godwin John, J.G.; Saravanan, A.; Gajalakshmi, B.; Allen Jeffrey, J.A.; Balachandar, M.; Sivasankar, S.; Vinoth Kumar, M. Synergetic Effect of Hydrogen Supplementation in a CI Engine Fuelled with Diesel-Jatropha Biodiesel Blends on the Environmental Aspects. 2025. International Journal of Vehicle Structures and Systems. 17(1) 65-72. 10.4273/ijvss.17.1.10
14. Gnanasekaran, K.; Rajesh, M.; Hariram, V. Optimizing Abrasive Water Jet Parameters for Enhanced Interactivity in Metal-Stacked Hybrid Fiber Laminates. 2025. Turkish Journal of Engineering. 9(1)28-36, 10.31127/tuje.1503990
15. Pughazhraj, S.; Balaji, D.; Hariram, V.; Kumaraswamy, R.; Godwin John, J.G.; Naveen, P.; Ravikumar, T.S. Chlorella vulgaris - A Potential Biodiesel Feedstock's Effect on the Performance, Emission and Combustion Phenomenon of a CI Engine with Hydrogen Inductance. 2025. Nature Environment and Pollution Technology. 24, 315-330. 10.46488/NEPT.2024.v24iS1.024
16. Reddy, M.S.; Vinoth Kumar, M. Friction stir welding parameters optimization of naval grade AA5083 alloy: RSM. 2025. International Journal on Interactive Design and Manufacturing. 19(1) 143617. 25-36. 10.1007/s12008-023-01410-9

17. Arunkumar, G.A.; Balaji, D.; Lawrence, P.; Saravanan, D.; Hariram, V. Investigation on the effects of hydrogen addition with watermelon seed oil biodiesel in a ci engine operated with different compression ratio: an analysis of combustion, performance and emission properties. 2025. Bulletin of the Chemical Society of Ethiopia. 39 (10) 1949-1960. 10.4314/bcse.v39i10.6
18. Arunkumar, G.A.; Balaji, D.; Lawrence, P.; Saravanan, D.; Hariram, V. Exposing the interdependence effect of hydrogen addition with watermelon seed biodiesel blend as a fuel in a compression ignition engine – an experimental assessment 2025. Bulletin of the Chemical Society of Ethiopia. 39 (9) 1859-1876. 10.4314/bcse.v39i9.15
19. Hariram, V.; Ramanathan, V.; Presin Kumar, A.J.P.; Allen Jeffrey, J.A.; Christu Paul, R.C.; Manigandan, A.; Raja, S.; Balaji, D. Influence of TiO₂ Nanoparticles on Engine Parameters at Varied Compression Ratio of CI Engine Fuelled with Biodiesel. 2025. Journal of Environmental Nanotechnology. 14(2)58-68. 10.13074/jent.2025.06.2511378
20. Sivasankar Arumugam, Balamurugan Gopalakrishnan, Sivakumar Ganesan and Vivek Chandrasekaran. Improvement of EDM machining performance by brass coated copper electrode. International Journal of Machining and Machinability of Materials. 2025. 27(3), pp 211-223. 10.1504/IJMMM.2025.147843
21. Sathish S, Kumar, John Presin A, Arumugam, Sivasankar. Parthiban A., Seralathan S. Optimization of Mesophilic Anaerobic Digestion using Bio-Vegetable Waste for Emerging Pollutant Removal. Indian Journal of Environmental Protection 2025
22. M. Balachandar and M. Vinoth Kumar. Hot Corrosion Behaviour of Super 304HCu Austenitic Stainless Steel Exposed to Salt Mixture at 900°C. Journal of Materials Engineering and Performance. 2025. doi.org/10.1007/s11665-025-12676-3
23. M. Balachandar and M. Vinoth Kumar. Influence of impact angle on mass loss behaviour of super 304hcu stainless steel under air jet erosion conditions. Journal of Engineering and Technology for Industrial Applications. Manaus, v.11 n.56, p.360-365. 2025. doi.org/10.5935/jetia. v11i56.2890

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Research Publication Details – Faculty

2025

Scopus Indexed Conference articles

1. Arunkumar, G.A.; Balaji, D.; Lawrence, P.; Deepanraj, B.; Saravanan, D. Investigation on the performance and emission characteristics of a hydrogen enhanced diesel fueled compression ignition engine, 2025, AIP Conference Proceedings, 3342 (1) 70045, 10.1063/5.0296614
2. Raja, Selvakumar, John, Godwin, Siddarth J.P., Senthilkumar, Akash, Mathew, Abhay, Nakandhrakumar R.S., Nandagopal, Sasikumar, Arumugam, Sivasankar. Automatic Brake Failure Detection with Electromagnetic Braking System. SAE Technical Papers. 2025. DOI: 10.4271/2025-28-0373
3. Narreddy, Reddy Kavya Sree, Mandadi, Luhithail, Nelluri, Sri Varun, Jeyaguru, Jensin Joshua, Arumugam, Sivasankar, Karuppasamy, Arunkumar, Sivamani, Seralathan. Selection of an ideal composite laminate using ELECTRE approach. AIP Conference Proceedings 2025. DOI: 10.1063/5.0296138
4. Nakandhrakumar R.S. Raja, Selvakumar, Elumalai, Sangeethkumar, Velmurugan, Ramanathan, Ramakrishnan M. Monitoring of Long Drill Wear Status through Vibration Analysis Using Time and Frequency Domain. SAE Technical Papers, 2025 DOI: 10.4271/2025-28-0252
5. Nakandhrakumar R.S., Tandi, Ronak, Ramakrishnan M., Raja, Selvakumar, Elumalai, Sangeethkumar, Velmurugan, Ramanathan. Dome Profile Optimization and Stress Analysis of Type IV Composite Cylinders Using a CLT-Based MATLAB Program and FEA Validation. SAE Technical Papers. 2025. DOI: 10.4271/2025-28-0374