

Curriculum Vitae

Dr. Abhishek Sharma

Assistant Professor
Mechanical Engineering Department
B.I.T. Sindri, Dhanbad
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Objective:

Intend to build a career with leading institute in hi-tech environment with committed and dedicated people, which will help me to explore myself fully and realize my potential. Willing to work as a key player in challenging and creative environment.

Educational Qualifications:

Ph.D.	Mechanical Engineering National Institute of Technology Rourkela Thesis title: Investigations of a Direct Injection Diesel Engine Run on Non-Petroleum Fuel Blends Supervisor: Dr. S Murugan, Professor, Department of Mechanical Engineering	CGPA: 8.98/10 May 2017
M.Tech	Thermal Engineering Maulana Azad National Institute of Technology Bhopal Thesis title: An experimental study of engine performance characteristics under controlled engine temperature and variable operating parameters Supervisor: Dr. A Rehman, Professor, Department of Mechanical Engineering	CGPA: 7.69/10 June 2008
B.E.	Mechanical Engineering Shri Shankaracharya College of Engineering and Technology, Bhilai Pt. Ravishankar Shukla University Raipur, Chhattisgarh	Percentage: 68.16% June 2005
Intermediate	Public Higher Secondary School, Tumgaon M.P. Board	Percentage: 73.77% June 2000
High School	Public Higher Secondary School, Tumgaon M.P. Board	Percentage: 79.6% June 1998

Research Interests:

- Pyrolysis, Waste to Energy, Alternative Fuel
- Renewable Energy, Phase Change Material
- Composite Material

Academic Appointments:

- Assistant Professor at the Department of Mechanical Engineering, B.I.T. Sindri, Dhanbad, Jharkhand since 19-01-2023 to till date.
 - Associate Professor at the Department of Mechanical Engineering, School of Automobile, Mechanical and Mechatronics Engineering, Manipal University Jaipur, Rajasthan from 01-04-2020 to 17-01-2023.
 - Assistant Professor-Senior Scale at the Department of Mechanical Engineering, School of Automobile, Mechanical and Mechatronics Engineering, Manipal University Jaipur from 11-07-2019 to 31-03-2020.
 - Assistant Professor at the Department of Mechanical and Automation Engineering, Amity School of Engineering & Technology, Amity University Madhya Pradesh, Gwalior, from 10-03-2017 to 26-06-2019.
 - Research Assistant at the Department of Mechanical Engineering, National Institute of Technology Rourkela from 11-01-2012 to 28-02-2017.
 - Assistant Professor at the Department of Mechanical Engineering, Technocrats Institute of Technology & Science, Bhopal from 07-10-2009 to 10-01-2012.
 - Lecturer at the Department of Mechanical Engineering, RKDF Institute of Technology & Science, Bhopal from 05-08-2008 to 27-05-2009.
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Administrative Experience/Position of Responsibility

At Amity University Madhya Pradesh, Gwalior

- Member of question paper moderation committee.
- Member of syllabus moderation committee for B.Tech Mechanical Engineering.
- Digital media coordinator of the Department of Mechanical Engineering.
- Member of science club committee.
- Training co-ordinator (To conduct training programs for students and make them ready for campus placement).

At Manipal University Jaipur, Jaipur

- Program coordinator of M.Tech Energy Science and Technology.
 - NBA executive team member.
 - Nucleus member in Directorate of Entrepreneurship Cell.
 - In charge of Internal Combustion Engine Laboratory.
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Publications:

Total Impact Factor = **165**

Google Scholar Citations = 2240, h-index = 27, i10 index = 62

Scopus Citations (Scopus Author ID: 56669045800) = 1525, h-index = 22

Web of Science Researcher ID: S-8492-2019

ORCID ID: 0000-0002-8925-305X

(I) Publications in Refereed Journals

1. Mukesh Kumar, Vinod Kumar Singh, Ravikant Ravi, Vikas Verma, Akhilesh Arora, Tabish Alam, Anil Singh Yadav and **Abhishek Sharma**. Biodiesel production from microalgae oils: A critical review, Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2023. (SAGE Publications, **SCI Journal**, Impact Factor **2.4**)
<https://doi.org/10.1177/09544089241251775>
2. **Abhishek Sharma**, Vishal S Sharma, Shaman Gupta, Rakesh Chandmal Sharma, Srihari Palli and Neeraj Sharma. Additive manufacturing in the COVID-19 pandemic: Equipment and challenges?, Journal of Micromanufacturing, 2024. (SAGE Publications, **Scopus Index**)
<https://doi.org/10.1177/25165984241228083>
3. Rahul Kumar, Susheel Kumar Maurya, Mayank Choubey, Shri Krishna Mishra, Abhishek Kumar Jain, **Abhishek Sharma**, Rajan Kumar, Indradeep Kumar, Ashish Saxena, and Manoj Agrawal. Optimization and empirical studies of riser design in sand casting process using different mould properties, International Journal on Interactive Design and Manufacturing, 2024: 1-12. (Springer Nature Publication, **Scopus Index**, Impact Factor **2.2**)
<https://doi.org/10.1007/s12008-023-01725-7>
4. Vikash Kumar, Gajendra Prasad Singh, Manish Kumar, Amit Kumar, Pooja Singh, Alok Kumar Ansu, **Abhishek Sharma**, Tabish Alam, Anil Singh Yadav, and Dan Dobrotač. Nanocomposite Marvels: Unveiling Breakthroughs in Photocatalytic Water Splitting for Enhanced Hydrogen Evolution, ACS Omega, 2024, Vol 9, 6: 6147–6164. (American Chemical Society Publication, **SCI Journal**, Impact Factor **4.1**)
<https://doi.org/10.1021/acsomega.3c07822>
5. Nadeem Faisal, Dheeraj Kumar, Amit Kumar, Alok Kumar Ansu, **Abhishek Sharma**, Abhishek Kumar Jain, Meshel Q. Alkahtani, T. M. Yunus Khan, and Naif Almakayeel. Experimental Analysis for the Performance Assessment and Characteristics of Enhanced Magnesium Composites Reinforced with Nano-Sized Silicon Carbide Developed Using Powder Metallurgy, ACS Omega, 2024, Vol 9, 5:5230–5245. (American Chemical Society Publication, **SCI Journal**, Impact Factor **4.1**)
<https://doi.org/10.1021/acsomega.3c05089>
6. Khushbu Rai, Harsh Pandey, Rahul Kumar, **Abhishek Sharma**, Anil Singh Yadav, Neeraj Sharma, Ali Etem Gürel and Ümit Ağbulut. Energy and exergy analyses of modified solar still with coated hybrid nanomaterial on absorber plate, Applied Nanoscience, 2024, 14:375-388. (Springer Nature Publication, **Scopus Index**)
<https://doi.org/10.1007/s13204-023-02982-4>

7. Nishant Saxena, Rahul Kumar, Yarrapragada K S S Rao, Dilbag Singh Mondloe, Nishikant Kishor Dhapekar, **Abhishek Sharma** and Anil Singh Yadav. Hybrid KNN-SVM Machine Learning Approach for Solar Power Forecasting, *Environmental Challenges*, 2024, 14:100838. (Elsevier Publication, **Scopus index**)
<https://doi.org/10.1016/j.envc.2024.100838>
8. Shri Krishna Mishra, Mukesh Kumar Gupta, Rahul Kumar, **Abhishek Sharma** and Anil Singh Yadav. Effect of Nanoparticles Enhanced Phase Change Materials in the Charging-Discharging Performance of Thermal Storage System, *International Journal of Vehicle Structures & Systems*, 2023, 15 (6), 779-785. (**Scopus Index**)
<https://doi.org/10.4273/ijvss.15.6.08>
9. Nibedita Nath, Subhendu Chakroborty, Sumit Sharma, **Abhishek Sharma**, Anil Singh Yadav & Tabish Alam. A graphene-based material for green sustainable energy technology for hydrogen storage, *Environmental Science and Pollution Research*, 2023, pp:1-13. (Springer Nature Publication, **SCI Journal**, Impact Factor 5.8)
<https://doi.org/10.1007/s11356-023-30431-w>
10. Manish Kumar, Arun Arora, Shanu Pandey, Anil Singh Yadav, Rajan Kumar, **Abhishek Sharma** and Tabish Alam. Thermodynamic performance analysis of solar-biomass based gas turbine-Rankine-Kalina combined triple power cycle, *Multiscale and Multidisciplinary Modeling, Experiments and Design*, 2023, pp:1-16. (Springer Nature Publication, **Scopus Index**, Impact Factor 2.2)
<https://doi.org/10.1007/s41939-023-00235-z>
11. Injamamul Haque, Tabish Alam, Jagmohan Yadav, Naveen Kumar Gupta, Md Irfanul Haque Siddiqui, Tauseef Uddin Siddiqui, Naushad Ali, Shivam Srivastava, Anil Singh Yadav, **Abhishek Sharma**, Rohit Khargotra and Amit Kumar Thakur. Numerical analysis of various shapes of lozenge pin-fins in microchannel heat sink, *International Journal of Chemical Reactor Engineering*, 2023, pp:1-13. (De Gruyter Publication, **SCI Journal**, Impact Factor 1.636)
<https://doi.org/10.1515/ijcre-2023-0092>
12. Ramanpreet Singh, Vimal Kumar Pathak, Ashish Kumar Srivastava, Rakesh Kumar and **Abhishek Sharma**. A new metaphor-less optimization algorithm for synthesis of mechanisms, *International Journal on Interactive Design and Manufacturing*, 2023, pp: 1-21. (Springer Nature Publication, **SCI Journal**, Impact Factor 2.2)
<https://doi.org/10.1007/s12008-023-01502-6>
13. Gaurav Gupta, Advait Mishra, Saksham Kulshrestha, Faisal Moin Patel, Nishant Tiwari and **Abhishek Sharma**. Numerical Investigation and Taguchi Optimization Concerning Thermal Performance of HCCI Engines with Multi-Stage Direct Injection and Modified Geometry, *International Journal of Energy for a Clean Environment*, 2024,25(4):17-34. (Begell House Publication, **Scopus Index**)
<https://doi.org/10.1615/InterJEnerCleanEnv.2023046407>
14. Rahul Kumar, Anil Singh Yadav, **Abhishek Sharma**, Upendra Rajak, Tikendra Nath Verma, Tabish Alam, Nishant Tiwari and C P Jawahar. Experimental analysis of a diesel engine run on non-conventional fuel blend at different preheating temperatures, *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*, 2023. (SAGE Publications, **SCI Journal**, Impact Factor 2.4)

<https://doi.org/10.1177/09544089231190754>

15. Vishista Kaushik, Amit Aherwar, **Abhishek Sharma**, Sunil Kumar, Sikandar Aftab, Rohit Khargotra and Tej Singh. Influence of cow dung ash and TiB₂ on the physicochemical and tribological performance of Al6061-based hybrid composites, *Results in Engineering*, 2023, 19:101311. (Elsevier Publication, **Scopus index**, Impact Factor 5)
<https://doi.org/10.1016/j.rineng.2023.101311>
16. Adel T. Abbas, Neeraj Sharma, Zeyad A. Alsuhaibani, **Abhishek Sharma**, Irfan Farooq and Ahmed Elkaseer. Multi-Objective Optimization of AISI P20 Mold Steel Machining in Dry Conditions Using Machine Learning-TOPSIS Approach, *Machines* 2023, 11 (7):748. (MDPI Publication, **SCI Journal**, Impact Factor 2.6)
<https://doi.org/10.3390/machines11070748>
17. Advait Mishra, Saksham Kulshrestha, Faisal Moin Patel, Nishant Tiwari and **Abhishek Sharma**. Effect of piston bowl geometry and spray angle on engine performance and emissions in HCCI engine using multi-stage injection strategy, *Environmental Progress & Sustainable Energy*, 2023, e14203:1-16. (American Institute of Chemical Engineers, **SCI Journal**, Impact Factor 2.8)
<https://doi.org/10.1002/ep.14203>
18. Yogesh Agrawal, J.L. Bhagoria, Atul Gautam, **Abhishek Sharma**, Anil Singh Yadav, Tabish Alam, Rajan Kumar, Geetesh Goga, Subhendu Chakroborty and Rahul Kumar. Investigation of thermal performance of a ribbed solar air heater for sustainable built environment, *Sustainable Energy Technologies and Assessments*, 2023, 57:103288. (Elsevier Publication, **SCI Journal**, Impact Factor 8)
<https://doi.org/10.1016/j.seta.2023.103288>
19. Rahul Kumar, Sujit Kumar Verma, Naveen Kumar Gupta, Andres Armando Mendiburu Zevallos, **Abhishek Sharma**, Tabish Alam, Sayed M. Eldin. Experimental assessment and modeling of solar air heater with V shape roughness on absorber plate, *Case Studies in Thermal Engineering*, 2023, 43: 102784. (Elsevier Publication, **SCI Journal**, Impact Factor 6.8)
<https://doi.org/10.1016/j.csite.2023.102784>
20. J. Prakash Arul Jose, Anurag Shrivastava, Prem Kumar Soni, N. Hemalatha, Saad Alshahrani, C. Ahamed Saleel, **Abhishek Sharma**, Saboor Shaik, and Ibrahim M. Alarifi. An Analysis of the Effects of Nanofluid-Based Serpentine Tube Cooling Enhancement in Solar Photovoltaic Cells for Green Cities, *Journal of Nanomaterials*, 2023, 3456536 (2023):1-15. (Hindawi Publication, **Scopus Index**)
<https://doi.org/10.1155/2023/3456536>
21. Saurabh Singh, Suraj Kumar Singh, Rahul Kumar, **Abhishek Shrama**, Shruti Kanga. Finding Alternative to River Sand in Building Construction, *EVERGREEN*, 2022, 9 (04):973-992. (Joint Journal of Novel Carbon Resource Sciences & Green Asia Strategy, **Scopus Index**)
<https://doi.org/10.5109/6625713>
22. Debaditya Chakroborty, Ayush Rath, Ramanpreet Singh, Vimal Kumar Pathak, Ashish Kumar Srivastava, **Abhishek Sharma**, Kuldeep K. Saxena, Gaurav Kumar and Sandeep Kumar. External six-bar mechanism rehabilitation device for index finger: Development and shape synthesis, *Robotics and Autonomous Systems*, 2023, 161: 104336. (Elsevier Publication, **Scopus Index**, Impact Factor 4.3)

<https://doi.org/10.1016/j.robot.2022.104336>

23. Abhisek Omkar Prasad, Pradumn Mishra, Urja Jain, Anish Pandey, Anushka Sinha, Anil Singh Yadav, Rajan Kumar, **Abhisek Sharma**, Gaurav Kumar, Karrar Hazim Salem, Avdhesh Sharma and Anil Kumar Dixit. Design and development of software stack of an autonomous vehicle using robot operating system, *Robotics and Autonomous Systems*, 2023, 161: 104340 (Elsevier Publication, Scopus Index, Impact Factor 4.3)
<https://doi.org/10.1016/j.robot.2022.104340>
24. Vipin Shrivastava, Anil Singh Yadav, A.K. Sharma, Prem Singh, Tabish Alam and **Abhisek Sharma**. Performance Comparison of Solar Air Heater with Extended Surfaces and Iron Filling, *International Journal of Vehicle Structures & Systems*, 2022, 14 (5), 607-610. (Scopus Index)
<https://doi.org/10.4273/ijvss.14.5.10>
25. Neeraj Sharma, Gurpreet Singh, Rakesh Chandmal Sharma, **Abhisek Sharma**, and Kapil Kumar Goyal. Magnesium-based nanocomposites: An overview of applications and challenges. *Powder Metallurgy and Metal Ceramics*, 2022 Jul; 61:205-220. (Springer publication, **SCI Journal**, Impact Factor 1)
<https://doi.org/10.1007/s11106-022-00307-8>
26. Anish Pandey, Surjeet Singh, Vadali Santosha Sai Chaitanya, Man Mohan, Neeraj Sharma, **Abhisek Sharma** and Rahul Kumar. Design and Fabrication of a Novel Gripper Wheel based All-Terrain Differential-Driven Unmanned Landmine and Metal Detector Robot Vehicle, *International Journal of Vehicle Structures & Systems*, 2022, 14 (4), 489-496. (Scopus Index)
<https://doi.org/10.4273/ijvss.14.4.15>
27. Nikita Kumari, Tabish Alam, Masood Ashraf Ali, Anil Singh Yadav, Naveen Kumar Gupta, Md Irfanul Haque Siddiqui, Dan Dobrota, Ionela Magdalena Rotaru and **Abhisek Sharma**. A Numerical Investigation on Hydrothermal Performance of Micro Channel Heat Sink with Periodic Spatial Modification on Sidewalls, *Micromachines*, 2022 Nov 16; 13(11):1986. (MDPI Publication, **SCI Journal**, Impact Factor 3.4)
<https://doi.org/10.3390/mi13111986>
28. Vimal Kumar Pathak, Ramanpreet Singh, Abhisek Sharma, Rakesh Kumar and Debaditya Chakraborty. A Historical Review on the Computational Techniques for Mechanism Synthesis: Developments Up to 2022, *Archives of Computational Methods in Engineering*, 2023 Mar; 30(2):1131-1156. (Springer publication, **SCI Journal**, Impact Factor 9.7)
<https://doi.org/10.1007/s11831-022-09829-1>
29. Anil Singh Yadav, Tabish Alam, Gaurav Gupta, Rajiv Saxena, Naveen Kumar Gupta, K. Viswanath Allamraju, Rahul Kumar, Neeraj Sharma, **Abhisek Sharma**, Utkarsh Pandey and Yogesh Agrawal. A Numerical Investigation of an Artificially Roughened Solar Air Heater, *Energies* 2022, 15 (21):8045. (MDPI Publication, **SCI Journal**, Impact Factor 3.2)
<https://doi.org/10.3390/en15218045>
30. Ramanpreet Singh, Vimal Kumar Pathak, Abhisek Sharma, Debaditya Chakraborty, Kuldeep K. Saxena, C. Prakash, Dharam Buddhi and Karrar hazim Salem. Caster Walker GAIT Trainer (CGT): A robotic assistive device, *Robotics and Autonomous Systems*, 2023, 159:104302. (Elsevier Publication, **Scopus Index**, Impact Factor 4.3)
<https://doi.org/10.1016/j.robot.2022.104302>

31. N. Magesh, T. Pushparaj, V. Vinoth Kannan, Deepak Thakur, **Abhishek Sharma**, Abdul Razak, Abdulrajak Buradi, and Abiot Ketema. Experimental Investigation and Prediction of Performance, Combustion, and Emission Features of a Diesel Engine Fuelled with Pumpkin-Maize Biodiesel using Different Machine Learning Algorithms, *Mathematical Problems in Engineering*, 2022, 9505424:1-17. (Hindawi Publication, **Scopus Index**)
<https://doi.org/10.1155/2022/9505424>
32. Pradumn Mishra, Urja Jain, Siddharth Choudhury, Surjeet Singh, Anish Pandey, **Abhishek Sharma**, Ramanpreet Singh, Vimal Kumar Pathak, Kuldeep K. Saxena and Anita Gehlot. Footstep planning of humanoid robot in ROS environment using Generative Adversarial Networks (GANs) deep learning, *Robotics and Autonomous Systems*, 2022, 158:104269. (Elsevier Publication, **Scopus Index**, Impact Factor 4.3)
<https://doi.org/10.1016/j.robot.2022.104269>
33. **Abhishek Sharma**, Neeraj Sharma, Ravinder Pal Singh, Rishu Arora, Randeep Singh Gill, Gurminder Singh. Micro-Drill on Al/SiC Composite by EDD Process: An RSM-MOGOA Based Hybrid Approach. *International Journal of Lightweight Materials and Manufacture* 2022 Dec 1;5 (4):564-75. (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.ijlmm.2022.07.002>
34. Santosh Kumar Singh, Sujit Kumar Verma, Rahul Kumar, **Abhishek Sharma**, Ramanpreet Singh and Nishant Tiwari. Experimental analysis of latent heat thermal energy storage system using encapsulated multiple phase-change materials. *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*, 2024, 238 (1): 124-133. (SAGE Publications, **SCI Journal**, Impact Factor 2.4)
<https://doi.org/10.1177/09544089221110983>
35. Santosh Kumar Singh, Sujit Kumar Verma, Rahul Kumar, Gaurav Gupta, Pravat Ranjan Pati and **Abhishek Sharma**. Thermal Performance Enhancement of CuO-Paraffin Nano-Enhanced Phase Change Material, *International Journal of Vehicle Structures & Systems*, 2022, 14 (3), 411-416. (**Scopus Index**)
<https://doi.org/10.4273/ijvss.14.3.26>
36. Anil Singh Yadav and **Abhishek Sharma**. Experimental Investigation on Heat Transfer Enhancement of Artificially Roughened Solar Air Heater. *Heat Transfer Engineering*, 2022 May 17; 44(7):624-637. (Taylor & Francis, **SCI Journal**, Impact Factor 2.3)
<https://doi.org/10.1080/01457632.2022.2079048>
37. Rajesh Khanna, Neeraj Sharma, Nilesh Kumar, Rahul Dev Gupta, **Abhishek Sharma**. WEDM of Al/SiC/Ti composite: A hybrid approach of RSM-ARAS-TLBO algorithm. *International Journal of Lightweight Materials and Manufacture*, 2022 Sep 1; 5(3):315-325. (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.ijlmm.2022.04.003>
38. Rahul Kumar, Sujit Kumar Verma, Shri Krishna Mishra, **Abhishek Sharma**, Anil Singh Yadav and Neeraj Sharma. Performance Enhancement of Solar Air Heater using Graphene/Cerium Oxide and Graphene-Black Paint Coating on Roughened Absorber Plate. *International Journal of Vehicle Structures & Systems*, 2022, 14 (2), 273-279. (**Scopus Index**)
<https://doi.org/10.4273/ijvss.14.2.23>

39. Neeraj Sharma, Vishal Sharma, Rakesh Chandmal Sharma, Rishu Arora, **Abhishek Sharma**. Development of Quality Microholes by Electrical Discharge drilling on Al/SiC Composite using of Grey-Desirability Approach. *International Journal of Lightweight Materials and Manufacture*, 2022, Jun 1; 5(2):267-277. (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.ijlmm.2022.02.004>
40. R. Ramesh Kumar, Abdul Razak, Saad Alshahrani, **Abhishek Sharma**, Deepak Thakur, Saboor Shaik, C Ahamed Saleel, Asif Afzal. Vibration analysis of composite exhaust manifold for diesel engine using CFD. *Case Studies in Thermal Engineering*. 2022, 32:101853. (Elsevier Publication, **SCI Journal**, Impact Factor **6.8**)
<https://doi.org/10.1016/j.csite.2022.101853>
41. S. Senthil Kumar, K. Rajan, V Mohanavel, M Ravichandran, Parvathy Rajendran, Ahmad Rashedi, **Abhishek Sharma**, Sher Afghan Khan and Asif Afzal. Combustion, Performance, and Emission Behaviors of Biodiesel Fueled Diesel Engine with the Impact of Alumina Nanoparticle as an Additive. *Sustainability*. 2021 Jan; 13(21):12103. (MDPI Publication, **SCI Journal**, Impact Factor **3.9**)
<https://doi.org/10.3390/su132112103>
42. Satishchandra Salama, Tushar Choudhary, Arivalagan Pugazhendhic, Tikendra Nath Verma, **Abhishek Sharma**. A review on recent progress in computational and empirical studies of compression ignition internal combustion engine. *Fuel*. 2020 Nov 1; 279: 118469. (Elsevier Publication, **SCI Journal**, Impact Factor 7.4)
<https://doi.org/10.1016/j.fuel.2020.118469>
43. Manish Rawat, Bhupesh K. Lad and **Abhishek Sharma**. Simulation Based Joint Optimization of Fleet System Modularity and LOR Decisions Considering Different Failure Rates of Components. *Grey Systems: Theory and Application 2020*, Vol. 10 No. 3, pp. 377-390. (Emerald Publications, **SCI Journal**, Impact Factor **2.9**)
<https://doi.org/10.1108/GS-12-2019-0066>
44. Mayank Choubey, K. P. Maity and **Abhishek Sharma**. Finite Element Modeling of Material Removal Rate in Micro-EDM Process with and without Ultrasonic Vibration. *Grey Systems: Theory and Application 2020*, Vol. 10 No. 3, pp. 311-319. (Emerald Publications, **SCI Journal**, Impact Factor **2.9**)
<https://doi.org/10.1108/GS-11-2019-0047>
45. Saurabh Dewangan, Suraj Kumar Mohapatra, and **Abhishek Sharma**. An Assessment into Mechanical Properties and Microstructural Behavior of TIG Welded Ti-6Al-4V Titanium Alloy. *Grey Systems: Theory and Application 2020*, Vol. 10 No. 3, pp. 281-292. (Emerald Publications, **SCI Journal**, Impact Factor **2.9**)
<https://doi.org/10.1108/GS-11-2019-0052>
46. **Abhishek Sharma** and S. Murugan. Influence of Nozzle Opening Pressure on the Combustion, Performance and Emission Characteristics of a DI Diesel Engine Fueled with Jatropa Methyl Ester-Tyre Pyrolysis Oil Blend, *Energy*, 2017, 127:236-246. (Elsevier Publications, **SCI Journal**, Impact Factor **9**)
<https://doi.org/doi.org/10.1016/j.energy.2017.03.114>

47. **Abhishek Sharma** and S. Murugan. Effect of blending waste tyre derived fuel on oxidation stability of biodiesel and performance and emission studies of a diesel engine, *Applied Thermal Engineering*, 2017, 118:365-374. (Elsevier Publications, **SCI Journal**, Impact Factor 6.4) <https://doi.org/doi.org/10.1016/j.applthermaleng.2017.03.008>
48. **Abhishek Sharma** and S. Murugan. Durability analysis of a single cylinder DI diesel engine operating with a non-petroleum fuel, *Fuel*, 2017, 191:393-402. (Elsevier Publication, **SCI Journal**, Impact Factor 7.4) <https://doi.org/doi.org/10.1016/j.fuel.2016.11.086>
49. **Abhishek Sharma** and S. Murugan. Potential for using a tyre pyrolysis oil-biodiesel blend in a diesel engine at different compression ratios, *Energy Conversion and Management*, 2015, 93:289-297. (Elsevier Publications, **SCI Journal**, Impact Factor 10.4) <https://doi.org/doi.org/10.1016/j.enconman.2015.01.023>
50. **Abhishek Sharma** and S. Murugan. Combustion, performance and emission characteristics of a DI diesel engine fuelled with non-petroleum fuel: A study on the role of fuel injection timing. *Journal of the Energy Institute*, 2015, 88(4):364-375. (Elsevier Publications, **SCI Journal**, Impact Factor 5.7) <https://doi.org/doi.org/10.1016/j.joei.2014.11.006>
51. **Abhishek Sharma** and S. Murugan. Influence of Fuel Injection Timing on the Performance and Emission Characteristics of a Diesel Engine Fueled with Jatropa Methyl Ester-Tyre Pyrolysis Oil Blend, *Applied Mechanics and Materials*, 2014, Vol. 592, pp. 1627-1631. (Trans Tech Publications, **Scopus Index**) <https://doi.org/doi.org/10.4028/www.scientific.net/AMM.592-594.1627>
52. **Abhishek Sharma** and S. Murugan. Investigation on the behaviour of a DI diesel engine fueled with Jatropa Methyl Ester (JME) and Tyre Pyrolysis Oil (TPO) blends, *Fuel*, 108:699-708. (Elsevier Publication, **SCI Journal**, Impact Factor 7.4) <https://doi.org/doi.org/10.1016/j.fuel.2012.12.042>

(II) Publications in National/International Conferences

1. Anil Singh Yadav, Nitin Dubey, Mayank Singh, Rajan Kumar, Subhendu Chakroborty, **Abhishek Sharma** and Yogesh Agrawal. A Revisit to Thermal Performance Enhancement of Sustainable Solar Air Heater, 2023, 3rd International Conference on Energy, Power and Electrical Engineering on 16th September 2023, Huazhong University of Science and Technology, China. (IEEE Publication, **Scopus Index**) <https://doi.org/10.1109/EPEE59859.2023.10351983>
2. MD. Mofid Alam, Nishikant Kishor Dhapekar, Y Anupam Rao, Rajesh Tiwari, Renuka Shyam Narain, Sanjay G Sakharwade, Sheik Hidayatulla Shariff, Anil Singh Yadav and Abhishek Sharma. Advancements in energy recovery from waste plastic material for sustainable environment and circular economy, *Materials Today: Proceedings*, 2023. (Elsevier Publication, **Scopus Index**) <https://doi.org/10.1016/j.matpr.2023.08.272>
3. Amir Ashfaq, S.C.V. Ramana Murty Naidu, Manoj Kumar, Raj Kumar Yadav, Jasmeet Kaur Sohal, Sheik Hidayatulla Shariff, Anil Singh Yadav and **Abhishek Sharma**. Impact of biodiesel

on engine performance and emission, *Materials Today: Proceedings*, 2023. (Elsevier Publication, **Scopus Index**)

<https://doi.org/10.1016/j.matpr.2023.07.275>

4. Shresht Kohli, B. Pavani Srikavya, Nishikant Kishor Dhapekar, Rajesh Tiwari, Rahul Kumar, Anil Singh Yadav, Neeraj Sharma and **Abhishek Sharma**. Impact of nano materials on engine performance run on biofuels, *Materials Today: Proceedings*, 2023. (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.matpr.2023.07.133>
5. Anil Singh Yadav, Tabish Alam, Rajiv Saxena, Raj Kumar Yadav, Rajan Kumar, **Abhishek Sharma**, Yogesh Agrawal, K. Viswanath Allamraju, Monika Vyas, Manmohan Singh and Subhendu Chakroborty. Effect of Artificial Roughness on Heat Transfer and Friction Factor in a Solar Air Heater: A Review, *Recent Advances in Materials and Manufacturing Technology, Lecture Notes in Mechanical Engineering*, 2023, (pp. 355-364). (Springer Singapore, **Scopus Index**)
https://doi.org/10.1007/978-981-99-2921-4_33
6. Shourjya Chowdhury, Mansi Tiwari, Parul Mishra, Rajeev Singh Parihar, Alope Verma, Ruchi Mehrotra, Nidhi Punj and **Abhishek Sharma**. Recent trends of plastic waste management for sustainable environment in Indian context, *Materials Today: Proceedings*, 2023. (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.matpr.2023.06.063>
7. Sandeep Kumar, Padam Singh, Vipin Shrivastava, Jasmeet Kaur Sohal, **Abhishek Sharma**, Manoj Kumar, Tabish Alam and Anil Singh Yadav. Potential non-edible oil seeds for biodiesel production: An Indian context, *Materials Today: Proceedings*, 2023. (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.matpr.2023.05.419>
8. **Abhishek Sharma**, B Pavani Srikavya, A.D. Urade, Amit Joshi, Renuka Shyam Narain, Vinay Dwarakanath, Tabish Alam and Ravi Shankar Prasad. Economic and environmental impacts of biofuels in Indian context, *Materials Today: Proceedings*, 2023. (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.matpr.2023.05.118>
9. Anil Singh Yadav, Abhay Agrawal, Amit Jain, Rajiv Saxena, Manoj Kumar, **Abhishek Sharma** and Sonali Singh. Revisiting the Recent Advancements in the Design and Performance of Solar Greenhouse Dryers, *Recent Advances in Manufacturing and Thermal Engineering, Lecture Notes in Mechanical Engineering*, 2023, pp. 275-292. (Springer, Singapore, **Scopus Index**)
https://doi.org/10.1007/978-981-19-8517-1_20
10. Anil Singh Yadav, Tabish Alam, **Abhishek Sharma**, Rajiv Saxena, Vipin Shrivastava, Rajan Kumar, Yogesh Agrawal and Subhendu Chakroborty. A revisit to recent development in enhancement of thermal and hydraulic performance of solar air heater, *Materials Today: Proceedings*, (2023). (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.matpr.2023.02.374>
11. Yogesh Agrawal, Kshitij Yugbodh, Bhavana Ayachit, Nitin Tenguria, Praveen Kumar Nigam, Atul Gautam, Anil Singh Yadav, **Abhishek Sharma** and Tabish Alam. Experimental

investigation on thermal efficiency augmentation of solar air heater using copper wire for discrete roughened absorber plate, *Materials Today: Proceedings*, 2023. (Elsevier Publication, **Scopus Index**)

<https://doi.org/10.1016/j.matpr.2022.12.244>

12. Devdutt Pradeep Kumar, Ch. Siva Ramakrishna, Piyush Tiwari, Nishant Vibhav Saxena, Sunil Kumar Mishra, Shubhlakshmi Tiwari, Prashant Kumar, Anil Singh Yadav and **Abhishek Sharma**. Challenges and prospects of waste management in Rajasthan, *Materials Today: Proceedings*, 2022, 63: A15–A21. (Elsevier Publication, **Scopus Index**)

<https://doi.org/10.1016/j.matpr.2022.08.200>

13. Shubhra Sparsh, Ch. Siva Ramakrishna, Rahul Sahu, Renuka Shyam Narain, Jasmeet Kaur Sohal, Madhusmita Sahu, Neeraj Sharma, Vinod Kumar and **Abhishek Sharma**. Future prospects of biodiesel production from jatropha in India, *Materials Today: Proceedings*, 2022, 63: A22–A26. (Elsevier Publication, **Scopus Index**)

<https://doi.org/10.1016/j.matpr.2022.07.273>

14. Ranveer Sachin Powar, Anil Singh Yadav, Ch. Siva Ramakrishna, Swastika Patel, Man Mohan, Sanjay G Sakharwade, Mayank Choubey, Alok Kumar Ansu and **Abhishek Sharma**. Algae: A potential feedstock for third generation biofuel, *Materials Today: Proceedings*, 2022, 63: A27–A33. (Elsevier Publication, **Scopus Index**)

<https://doi.org/10.1016/j.matpr.2022.07.161>

15. Anil Singh Yadav, Padam Singh, Rahul Sahu, P. Thangamuthu, Renuka Shyam Narain, Y. Anupam Rao, Azmeera Balu, Bishnu Prasad Panda and **Abhishek Sharma**. Potential utilization of turpentine oil as an alternative fuel, *Materials Today: Proceedings*, 2022, 63: A1–A8. (Elsevier Publication, **Scopus Index**)

<https://doi.org/10.1016/j.matpr.2022.06.319>

16. Gude Naga Venkata Siddartha, Ch. Siva Ramakrishna, Praveen Kumar Kujur, Y. Anupam Rao, Nishit Dalela, Anil Singh Yadav and **Abhishek Sharma**. Effect of fuel additives on internal combustion engine performance and emissions, *Materials Today: Proceedings*, 2022, 63: A9–A14. (Elsevier Publication, **Scopus Index**)

<https://doi.org/10.1016/j.matpr.2022.06.307>

17. Rahul Kumar, Y Anupam Rao, Anil Singh Yadav, Azmeera Balu, Bishnu Prasad Panda, Manish Joshi, Sumit Taneja and **Abhishek Sharma**. Application of phase change material in thermal energy storage systems, *Materials Today: Proceedings*, 2022, 63: 798–804. (Elsevier Publication, **Scopus Index**)

<https://doi.org/10.1016/j.matpr.2022.06.152>

18. Kunal Bansal, Rahul Kumar, Shri Krishna Mishra, Prashant Kumar and **Abhishek Sharma**. Validation and CFD modeling of solar still with nanoparticle coating on absorber plate, *Materials Today: Proceedings*, 2022, 63: 673–679. (Elsevier Publication, **Scopus Index**)

<https://doi.org/10.1016/j.matpr.2022.04.744>

19. Sivakumar Chelliah, A. Geetha Selvarani, D.Yogaraj, Piyush Tiwari, Bhaskar Vishwakarma, and Abhishek Sharma. Implementation of drive mechanism to control worktable motion in planer machine tool, *Materials Today: Proceedings*, 2022, 62 (4): 2347–2350. (Elsevier Publication, **Scopus Index**)

<https://doi.org/10.1016/j.matpr.2022.04.203>

20. M. Nagappan, A. Devaraj, J. M .Babu, Nishant Vibhav Saxena, Om Prakash, Prashant Kumar, and **Abhishek Sharma**. Impact of additives on Combustion, performance and exhaust emission of biodiesel fueled direct injection diesel engine, *Materials Today: Proceedings*, 2022, 62 (4): 2326-2331. (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.matpr.2022.04.114>
21. Gowthami Duttaluru, Alok Kumar Ansu, **Abhishek Sharma** and Ravi Kumar Sharma. Study of eutectic organic phase change materials with enhanced thermal properties, *Materials Today: Proceedings*, 2022, 63: 553-558. (Elsevier Publication, Scopus Index)
<https://doi.org/10.1016/j.matpr.2022.03.706>
22. A. Devaraj, M. Nagappan, D.Yogaraj, OmPrakash, Y Anupam Rao and **Abhishek Sharma**. Influence of nano-additives on engine behaviour using diesel-biodiesel blend, *Materials Today: Proceedings*, 2022, 62 (4): 2266-2270. (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.matpr.2022.03.598>
23. Sushil Kumar Maurya, Rahul Kumar, Shri Krishna Mishra, **Abhishek Sharma**, Anil Singh Yadav and Vishesh Ranjan Kar. Friction stir welding of cast aluminum alloy (A319): Effect of process parameters, *Materials Today: Proceedings*, 2022, 56 (2): 1024-1033 (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.matpr.2022.03.271>
24. Anil Singh Yadav, Abhay Agrawal, **Abhishek Sharma** and Abhay Gupta. Revisiting the effect of ribs on performance of solar air heater using CFD approach, *Materials Today: Proceedings*, 2022, 63: 240-252. (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.matpr.2022.02.549>
25. Anil Singh Yadav, Abhay Agrawal, **Abhishek Sharma**, Sachin Sharma, Rajesh Maithani and Anil Kumar. Augmented artificially roughened solar air heaters, *Materials Today: Proceedings*, 2022, 63: 226-239. (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.matpr.2022.02.548>
26. Neeraj Sharma, **Abhishek Sharma**, Kapil Kumar Goyal, Shaman Gupta, Shashi Bahl, Gaurav Kumar Sharma. Transformation temperature and corrosion behavior of porous NiTi and NiTiCu shape memory alloy, *Materials Today: Proceedings*, 2022, 63: 215-218. (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.matpr.2022.02.519>
27. V. Balambica, S .Baskar, S.Padmanabhan, Moti Lal Rinawa, Dilip S. Borkar, **Abhishek Sharma**, and M. Ruban. Study on tribological characteristics of Bio-Lubricant formed from Brassica napus oil, *Materials Today: Proceedings*, 2022, 62(3): 1544-1549. (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.matpr.2022.02.448>
28. Krishna Anurag Mishra, Shivam Agarwalla, Daiwik Mishra, Anshuman Samal, Ashwani Kumar, P. Chandrasekhar, **Abhishek Sharma** and Anish Pandey. Fuzzy logic controlled autonomous quadruped robot. *Materials Today: Proceedings*, 2022, 63:49-55. (Elsevier Publication, **Scopus Index**)
<https://doi.org/10.1016/j.matpr.2022.02.239>

29. D. Yogaraj, T. Subesh, A. Devaraj, Kannam Sree Pranay Chowdary, Uday Khakha, Santosh P. Alone and **Abhishek Sharma**. Design and analysis of compact paddy harvester machine. *Materials Today: Proceedings*, 2022, 62(3): 1430-1434. (Elsevier Publication, **Scopus Index**) <https://doi.org/10.1016/j.matpr.2022.01.166>
30. Anil Singh Yadav, Om Prakash Shukla, **Abhishek Sharma** and Irshad Ahmad Khan. CFD analysis of heat transfer performance of ribbed solar air heater. *Materials Today: Proceedings*, 2022, 62 (3): 1413-1419. (Elsevier Publication, **Scopus Index**) <https://doi.org/10.1016/j.matpr.2021.12.560>
31. Anil Singh Yadav, Mayank Kumar Dwivedi, **Abhishek Sharma** and Vimal Kumar Choosey. CFD based heat transfer correlation for ribbed solar air heater, *Materials Today: Proceedings*, 2022, 62(3): 1402-1407. (Elsevier Publication, **Scopus Index**) <https://doi.org/10.1016/j.matpr.2021.12.382>
32. S. Padmanabhan, M. Selvamuthukumar, S. Ganesan, S. Baskar and **Abhishek Sharma**. Investigation of Heat Transfer Characteristics in Double Tube Heat Exchanger with Helical Turbulator Using CFD, *Advancement in Materials, Manufacturing and Energy Engineering*, Vol. II, Lecture Notes in Mechanical Engineering, 2022, pp. 531-541. (Springer, Singapore, **Scopus Index**) https://doi.org/10.1007/978-981-16-8341-1_45
33. M.Karthick, K. Logesh, S. Baskar and **Abhishek Sharma**. Performance and Emission Characteristics of Single-Cylinder Diesel Engine Fueled with Biodiesel Derived from Cashew Nutshell, *Advancement in Materials, Manufacturing and Energy Engineering*, Vol. II, Lecture Notes in Mechanical Engineering, 2022, pp. 521-529. (Springer, Singapore, **Scopus Index**) https://doi.org/10.1007/978-981-16-8341-1_44
34. K. Logesh, M. Karthik Karthick, S. Baskar and **Abhishek Sharma**. Performance and Emissions Characteristics of Diesel Engine Run on Citrullus Colocynthis Biodiesel with Zinc Oxide Additive, *Advancement in Materials, Manufacturing and Energy Engineering*, Vol. II, Lecture Notes in Mechanical Engineering, 2022, pp. 513-520. (Springer, Singapore, **Scopus Index**) https://doi.org/10.1007/978-981-16-8341-1_43
35. **Abhishek Sharma** and S. Murugan. Combustion Analysis of a Diesel Engine Run on Non-conventional Fuel at Different Nozzle Injection Pressure. *Innovations in Energy, Power and Thermal Engineering*, Lecture Notes in Mechanical Engineering, 2022, pp. 109-118. (Springer, Singapore, **Scopus Index**) https://doi.org/10.1007/978-981-16-4489-4_11
36. Saurabh Chandrakar, Alok Agrawal, Prem Prakash, Irshad Ahmad Khan and **Abhishek Sharma**. Physical and mechanical properties of epoxy reinforced with pistachio shell particulates. In *AIP Conference Proceedings 2021*, Vol. 2341(1):040012. (American Institute of Physics, **Scopus Index**) <https://doi.org/10.1063/5.0049949>
37. Sugeet Kharbanda, Tanish Bhadury, Gaurav Gupta, Devasri Fuloria, Pravat Ranjan Pati, Vijay Kumar Mishra and **Abhishek Sharma**. Polymer composites for thermal applications – A review, *Materials Today: Proceedings*, 2021, 47 (11): 2839-2845. (Elsevier Publication, **Scopus Index**) doi.org/10.1016/j.matpr.2021.03.609

38. Aditya Girge, Vaibhav Goel, Gaurav Gupta, Devasri Fuloria, Pravat Ranjan Pati, **Abhishek Sharma** and Vijay Kumar Mishra. Industrial waste filled polymer composites – A review, *Materials Today: Proceedings*, 2021, 47 (11): 2852-2863. (Elsevier Publication, **Scopus Index**) <https://doi.org/10.1016/j.matpr.2021.03.617>
39. Suveer Chandra Dubey, Vivek Mishra and **Abhishek Sharma**. A review on polymer composite with waste material as reinforcement, *Materials Today: Proceedings*, 2021, 47 (11): 2846-2851. (Elsevier Publication, **Scopus Index**) <https://doi.org/10.1016/j.matpr.2021.03.611>
40. Anil Singh Yadav, Vipin Shrivastava, Vimal Kumar Chouksey, **Abhishek Sharma**, Sanjay Kumar Sharma, and Mayank Kumar Dwivedi. Enhanced solar thermal air heater: A numerical investigation. *Materials Today: Proceedings*, 2021, 47 (11): 2777-2783. (Elsevier Publication, **Scopus Index**) doi.org/10.1016/j.matpr.2021.03.385
41. Anil Singh Yadav, Vipin Shrivastava, **Abhishek Sharma**, Sanjay Kumar Sharma, Mayank Kumar Dwivedi and Om Prakash Shukla. CFD simulation on thermo-hydraulic characteristics of a circular tube having twisted tape inserts, *Materials Today: Proceedings*, 2021, 47 (11):2790-2795. (Elsevier Publication, **Scopus Index**) <https://doi.org/10.1016/j.matpr.2021.03.396>
42. J. Thamilarasan, S. Kolappan, R. Pushpakumar and **Abhishek Sharma**. Investigation of plastic Pyrolysis oil performance on CI engine blended with magnesium oxide nanoparticle using Taguchi method, *Materials Today: Proceedings*, 2021, 47 (11): 2796-2800. (Elsevier Publication, **Scopus Index**) doi.org/10.1016/j.matpr.2021.03.401
43. Anil Singh Yadav, Vipin Shrivastava, Abhishek Sharma and Mayank Kumar Dwivedi. Numerical simulation and CFD-based correlations for artificially roughened solar air heater, *Materials Today: Proceedings*, 2021, 47 (11): 2685-2693. (Elsevier Publication, **Scopus Index**) doi.org/10.1016/j.matpr.2021.02.759
44. Abhishek Kashyap, Anish Kumar Pandey, Dayal R. Parhi and **Abhishek Sharma**. Path optimization for multiple humanoid robot using TLBO based ANFIS controller in obscure environment, *Materials Today: Proceedings*, 2021, 47 (11): 2677-2684. (Elsevier Publication, **Scopus Index**) doi.org/10.1016/j.matpr.2021.02.756
45. Alok Agrawal, Saurabh Chandraker and **Abhishek Sharma**. Physical, mechanical and sliding wear behavior of solid glass microsphere filled epoxy composites. *Materials Today: Proceedings*, 2020, 29(2):420–426. (Elsevier Publication, **Scopus Index**) <https://doi.org/10.1016/j.matpr.2020.07.295>
46. **Abhishek Sharma**, Gaurav Gupta and Alok Agrawal. Utilization of waste lubricating oil as a diesel engine fuel. 4th International Conference on Materials Engineering and Nano Sciences (ICMENS 2020), Thammasat University, 13-15 March 2020, IOP Conference Series: Materials Science and Engineering, 840 (2020): 012015. (IOP Conference Proceedings, **Scopus Index**) doi.org/10.1088/1757-899X/840/1/012015

47. Alok Agrawal, Saurabh Chandraker and **Abhishek Sharma**. Mechanical and Thermal Behaviour of Epoxy/hexagonal Boron Nitride/Short Sisal Fiber Hybrid Composites. 4th International Conference on Materials Engineering and Nano Sciences (ICMENS 2020), Thammasat University, Bangkok, Thailand, 13-15 March 2020, IOP Conference Series: Materials Science and Engineering , 840 (2020):012011. (IOP Conference Proceedings, **Scopus Index**)
doi.org/10.1088/1757-899X/840/1/012011
48. Saksham Arya, **Abhishek Sharma**, Manish Rawat and Alok Agrawal. Tyre as an Alternative Fuel: A Review. Materials Today: Proceedings, 2020, 28 (4): 2481-2484. (Elsevier Publication, **Scopus Index**)
doi.org/10.1016/j.matpr.2020.04.797
49. Alok Agrawal, Tanmay Awasthi, Dinesh Soni, **Abhishek Sharma** and Vivek Mishra. Physical and mechanical behaviour of epoxy/hexagonal boron nitride/short sisal fiber hybrid composites. Materials Today: Proceedings, 2020, 28 (4): 2166-2170. (Elsevier Publication, **Scopus Index**)
doi.org/10.1016/j.matpr.2020.04.150
50. **Abhishek Sharma**, S. Murugan. Reduction of nitric oxide emissions from a direct injection diesel engine run non-petroleum fuel blend using antioxidant additives. Proceedings of the National Conference on Waste to Energy, Carbon Capture and Storage (NCWECCS – 2017), 3-5 August 2017, National Institute of Technology Rourkela, India.
51. **Abhishek Sharma**, Rajan Tiwari, Subhash Gupta and S Murugan. Combustion Analysis of a Diesel Engine Running with Non-Conventional Fuel at Different Nozzle Injection Pressure. International Conference on Advances in Energy Research (ICAER 2017), Indian Institute of Technology Bombay, 12-14 December 2017.
52. Vishal Gupta, **Abhishek Sharma** and Khushboo Sabharwal Gupta. Numerical Analysis of Direct Type Greenhouse Dryer. In proceedings of the American Society of Mechanical Engineers, 2017 Gas Turbine India Conference, December 7-8, 2017, Bangalore, Karnataka, India. pp. V002T06A008-V002T06A008. (**Scopus Index**)
doi.org/10.1115/GTINDIA2017-4784
53. **Abhishek Sharma** and S. Murugan. Experimental evaluation of combustion parameters of a di diesel engine operating with biodiesel blend at varying injection timings. Proceedings of the First International Conference on Recent Advances in Bioenergy Research, Springer Nature, 2016, pp. 169-177). (**Scopus Index**, ISBN 978-81-322-2773-1)
https://doi.org/10.1007/978-81-322-2773-1_13
54. **Abhishek Sharma**, S. Murugan. Impact of Fuel Injection Pressure on Performance and Emission Characteristics of a Compression Ignition Engine Fueled with Jatropha Methyl Ester Tyre Pyrolysis Blend, SAE 2014 Powertrains, Fuels & Lubricants Meeting, 20-23 October 2014, Birmingham, England. Paper No. - 2014-01-2650. (**Society of Automotive Engineers, Scopus Index**)
<https://doi.org/10.4271/2014-01-2650>
55. **Abhishek Sharma**, S. Murugan. Potential Application of Bio-fuel in a Diesel Engine. Proceedings of International Conference on Environment and Energy (ICEE-2014), 15-17 December 2014, Jawaharlal Nehru Technological University Hyderabad.

56. **Abhishek Sharma**, S. Murugan. Influence of Fuel Injection Timing on the Performance and Emission Characteristics of a Diesel Engine Fueled with Jatropa Methyl Ester-Tyre Pyrolysis Oil Blend. Proceedings of International Mechanical Engineering Congress, 13-15 June 2014, National Institute of Technology Trichy.
57. **Abhishek Sharma** and Bijay Dhakal. Performance and Emission Studies of a Diesel Engine Using Biodiesel Tyre Pyrolysis Oil Blends. SAE World Congress & Exhibition, 8 April 2013, Detroit, US. Pp. 1-7, Paper No. 2013-01-1150. (**Society of Automotive Engineers, Scopus Index**)
<https://doi.org/10.4271/2013-01-1150>
58. **Abhishek Sharma**, R. Senthoooran, Subhash Kumar Gupta, S. Murugan. Combustion Studies of a DI Diesel Engine Using Jatropa Methyl Ester Tyre Pyrolysis Oil Blends. Proceedings of International Conference on Alternative Fuels for I.C. engines, pp. 158-165, 6-8 February 2013, Malaviya National Institute of Technology Jaipur.
59. **Abhishek Sharma**, Kuldeep Sharma, S. Murugan. Performance studies of a diesel engine fueled with TPO-diesel blend at preheated temperature. One day National Conference on Advances in Automotive Engineering, 7 September 2012, Karpagam College of Engineering, Coimbatore, India.
60. **Abhishek Sharma**, V Meda, S. Murugan. Experimental studies on a dual fuel diesel engine, pp. 78-84. Innovations in Engineering and Technology for Sustainable Development, 3-5 September 2012, Bannari Amman Institute of Technology. (ISBN No.978-81-920-460-13)
61. R.K. Mandloi, **Abhishek Sharma**, A Rehman. Engine performance characteristics under controlled engine temperature with variable operating parameters, International Conference on Fascinating Advancements in Mechanical Engineering, 11-13 December 2008, Chennai.

(III) Book Published

1. Rahul Goyal, Satyanarayan Patel, **Abhishek Sharma**. Renewable Energy: Accelerating the Energy Transition, Energy Systems in Electrical Engineering, Springer Singapore, 2023. (Scopus Index, Online ISBN 978-981-99-6118-4)
<https://doi.org/10.1007/978-981-99-6116-0>

(IV) Book Chapter Published

1. Rajan Kumar, Abhishek Sharma, Anil Singh Yadav, **Abhishek Sharma**, Ranjeet Kumar Arya, Arvind Kumar Patel. Characterization and mechanical behavior/corrosion analysis of Al-7075 metal matrix composites: a critical review, Green Composites Manufacturing, 2024, pp: 57-77. (**Scopus Index**, De Gruyter Publication, Online ISBN 9783111067346)
<https://doi.org/10.1515/9783111067346-003>
2. Indra Kumar Lokhande, Nishant Tiwari and Abhishek Sharma. A Review on Fast Charging/Discharging Effect in Lithium-Ion Batteries for Electric Vehicles, Renewable Energy: Accelerating the Energy Transition, 2023, pp: 209-233. (**Scopus Index**, Springer, Singapore, Online ISBN 978-981-99-6116-0)
https://doi.org/10.1007/978-981-99-6116-0_12

3. Abhishek Sharma, Y. Anupam Rao, Piyush Tiwari, Nishikant Kishor Dhapekar, Jasmeet Kaur Sohal, Nishant Tiwari and Rahul Kumar. Recent Advancement in Biofuels Production and Its Environmental Impacts, *Renewable Energy: Accelerating the Energy Transition*, 2023, pp: 167-177. (**Scopus Index**, Springer, Singapore, Online ISBN 978-981-99-6116-0)
https://doi.org/10.1007/978-981-99-6116-0_9
4. Rahul Kumar, Sujit Kumar Verma, Amit Kumar Thakur, Abhishek Sharma, Tabish Alam & Anil Singh Yadav. Performance Evaluation of Solar Air Heater Absorber Plate with Nanoparticles Coating, *Renewable Energy: Accelerating the Energy Transition*, 2023, pp: 73-91. (**Scopus Index**, Springer, Singapore, Online ISBN 978-981-99-6116-0)
https://doi.org/10.1007/978-981-99-6116-0_5
5. Rahul Kumar, Nishikant Kishor Dhapekar, Rajesh Tiwari, Y. Anupam Rao, Renuka Shyam Narain, Anil Singh Yadav and **Abhishek Sharma**. Prospects of Renewable Energy Scenario in India, *Renewable Energy: Accelerating the Energy Transition*, 2023, pp:15-31. (**Scopus Index**, Springer, Singapore, Online ISBN 978-981-99-6116-0)
https://doi.org/10.1007/978-981-99-6116-0_2
6. Vednath P. Kalbande, Pramod V. Walke, Kishor Rambhad, Man Mohan and **Abhishek Sharma**. Performance Enhancement of Thermal Energy Storage Systems Using Nanofluid. *Energy Storage Systems Optimization and Applications*, Oct 2022, pp 135–149. (Springer, Singapore, Online ISBN: 978-981-19-4502-1)
https://doi.org/10.1007/978-981-19-4502-1_6
7. Vivek Mishra, Alok Agrawal, Saurabh Chandraker and **Abhishek Sharma**. Mechanical and Thermal properties of sisal fibers-based composites. *Natural and Synthetic Fiber Reinforced Composites: Synthesis, Properties and Application*, Dec 2021 (pp.163-185). (John Wiley & Sons Publications, Online ISBN: 9783527832996)
<https://doi.org/10.1002/9783527832996.ch10>
8. **Abhishek Sharma**, Deepti Khatri, Rahul Goyal, Alok Agrawal, Vivek Mishra and Dulari Hansdah. Environmentally Friendly Fuel Obtained from Pyrolysis of Waste Tyres. *Energy Systems and Nanotechnology*, May 2021 (pp. 185-204). (Springer, Singapore, Online ISBN 978-981-16-1256-5)
https://doi.org/10.1007/978-981-16-1256-5_11
9. Sumit Taneja, Perminderjit Singh, **Abhishek Sharma** and Gurjeet Singh. Use of Alcohols and Biofuels as Automotive Engine Fuel. *Energy Systems and Nanotechnology*, May 2021, pp. 161-183. (Springer, Singapore, Online ISBN 978-981-16-1256-5)
https://doi.org/10.1007/978-981-16-1256-5_10
10. Deepti Khatri, Rahul Goyal and **Abhishek Sharma**. Effects of Silicon Dioxide Nanoparticles on the Combustion Features of Diesel Engine Using Water Diesel Emulsified Fuel. *Energy Systems and Nanotechnology*, May 2021, pp. 119-130. (Springer, Singapore, Online ISBN 978-981-16-1256-5)
https://doi.org/10.1007/978-981-16-1256-5_8
11. **Abhishek Sharma**, S. Murugan. Chapter 13 entitled as “Experimental evaluation of combustion parameters of a di diesel engine operating with biodiesel blend at varying injection timings”.

Project

- A project proposal of amount 52.39 Lakhs has been submitted to **SERB-SUPRA (Scientific and Useful Profound Research Advancement)** for the topic entitled “Development of Novel Form-Stable Phase Change Materials Using Pyrolytic Char for Enhanced Thermal Energy Storage Application in Domestic Heating Applications”.
 - A grant of Rs 17.62 Lakh has been sanctioned on 18th June 2019 for project proposal under “**TEQIP Collaborative Research Scheme**” of National Project Implementation, a Unit of Ministry of Human Resource Development, Government of India for the topic entitled “Development of Pyrolysis Reactor for Fuel Recovery using Plastic Waste”.
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Patent

- **Absorber plate for solar air heater**
Design Number: 364451-001
Applicants: Anil Singh Yadav, Sanjeev Kumar, Verma, Rajiv Saxena, Manoj Kumar, Reena Nashine and **Abhishek Sharma**
 - **Solar energy monitoring system by IOT**
Patent Application No.: 2021103321
Date of Filing: 12-06-2021
Application Status: Granted (Australian Patent) 09-03-2022
Applicants: Ramakrishna Balijepalli, Tushar Choudhary, Shobha Sinha, Abhishek Sharma, Asif Afzal, Upendra Rajak; Dasore, Abhishek Dasore, T. Rajasanthosh Kumar, Sameera Hasan and N. Balavenkata Muni
 - **Duster with flexible mechanism for cleaning boards**
Patent Application No.: 332023-001
Date of Filing: 15-08-2020
Application Status: **Design Accepted** and Published, Journal No is 11/2021 and Journal Date is 12/03/2021.
Applicants: Irshad Ahmad Khan, Alok Agrawal, **Abhishek Sharma**, Vivek Mishra
 - **Disinfector for Electronic Devices**
Patent Application No.: 333969-001
Date of Filing: 06-10-2020
Application Status: **Design Accepted** and Published, Journal No is 14/2021 and Journal Date is 02/04/2021.
Applicants: Bhavana Ayachit, Alok Agrawal, Abhishek Sharma, Abhishek Kumar Jain, Dharmendra Tyagi
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- **Internal Combustion Engine Emission Control Techniques: A Review**
Diary Number: 803/2021-CO/L
Date of Filing: 12-01-2021

Date of Registered: 24-02-2021

Applicants: **Abhishek Sharma** and Manish Rawat

- **Reliability Analysis and Maintenance Optimization of Wind Turbine Assemblies**

Diary Number: 805/2021-CO/L

Date of Filing: 12-01-2021

Date of Registered: 28-02-2021

Applicants: Manish Rawat, **Abhishek Sharma** and Upendra Kulshrestha

Editorship

- Guest-Editor of **Materials Today: Proceedings (Elsevier Publishers)**
 - Guest editor of Frontiers in Thermal Engineering
Special issue title: Advancements in Heat and Mass Transfer for the Efficient Design of Thermal Systems
 - Editorial Advisory Board member of the journal "Optimization in Engineering Research".
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Project/ Thesis Supervision

(I) M. Tech

2017-2018:

- **Peeyush Dewangan:** Combustion, Performance and Emission Analysis of a DI Diesel Engine Fueled with Low and High Cetane Fuel Blends.
- **Dinesh Naik:** Performance and Emission Studies of a Diesel Engine Fuelled with Different Non-Conventional Fuel Blends.
- **Chinta Rakesh:** Experimental Analysis of a Diesel Engine Run on Jatropha Methyl Ester-Tire Pyrolysis Oil Blend at Different Preheating Temperatures.
- **Pranav Sahu:** Potential Utilization of Used Transformer Oil as a Diesel Engine Fuel.

2018-2019:

- **Dhanesh Mishra:** Performance and Emission Studies of DI Diesel Engine Run on Used Lubricating Oil-Biodiesel Blend as an Alternative Fuels.
 - **Omesh Dewangan:** Experimental Studies of Blending Pyrolytic Oil on Oxidation Stability of Biodiesel and Performance and Emission Studies of a Diesel Engine.
 - **Harishankar:** Combustion, Performance and Emission Studies of a Diesel Engine Fueled with Sewage sludge-derived biodiesel blends
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Invited Lectures

- Delivered a talk in AICTE sponsored faculty development programme in online mode for one week titled " Alternative Fuels" on "Tyre pyrolysis oil as an alternative fuel for diesel engines" on 14 June 2021 at Gyan Ganga Institute of Technology and Sciences (GGITS) Jabalpur, Madhya Pradesh.

- Delivered a talk in AICTE sponsored Short Term Training Programme (STTP) for Faculty Development in online mode for one week (Phases one) titled "New Trends in IC Engines" on "Application of tyre pyrolysis oil as a diesel engine fuel" on 30 Nov 2020 at Rajeev Gandhi Memorial College of Engineering and Technology, Nandyal, Andhra Pradesh, India.
 - Delivered a talk on "Application of tyre pyrolysis oil as a diesel engine fuel" on 11 May 2020 at Sagar Group of Institutions Bhopal.
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Organization of Conferences/Workshops

- As a member in the organizing committee of "**International Conference on Advances in Mechanical Engineering and Nanotechnology**" on 28-29 February 2020 at Manipal University Jaipur.
 - As convener, organized one day National Conference on "**Emerging Trends in Manufacturing & Automation Engineering (NCMAE-2018)**" on 12th October 2018 at Amity School of Engineering and Technology, Amity University Madhya Pradesh, Gwalior.
 - As joint secretary organized one day National Conference on "**Smart Materials: Energy and Environment for Smart Cities (NSES-2018)**" on 28 February 2018 at Amity School of Engineering and Technology, Amity University Madhya Pradesh, Gwalior.
 - As assistant coordinator, organized two days National Seminar on "**Scientific and Technical Terminology in Science & Technology**" on 29th-30th November 2017 at Amity University Madhya Pradesh, Gwalior on behalf of Commission for Scientific & Technical Terminology (CSTT), Ministry of Human Resource Development (MHRD), Govt. of India.
 - As convener, organized one day National Conference on "**Emerging Trends in Manufacturing & Automation Engineering (NCMAE-2017)**" on 6th October 2017 at Amity School of Engineering and Technology, Amity University Madhya Pradesh, Gwalior.
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Workshops/Short Term Training Programs Attended

1. Faculty development programme on "Quality Higher Education: Indian Universities" on 14-20 June 2017 organized by Amity University Gwalior, Madhya Pradesh.
 2. Short term training program on "Waste Heat Recovery and Thermal Energy Storage Energy Systems (WHRTES-2017)" on February 24-26, 2017, organized by National Institute of Technology Rourkela.
 3. Short term training program on "Distributed Multimode Renewable Energy Systems (DMRES-2016)" on April 11-15, 2016, organized by National Institute of Technology Rourkela.
 4. One Week Training Program on "Biomass Based Biorefineries: An Emerging Incentive for Advanced Biofuels and Value-added Products" on February 23-27, 2015 organized by Sardar Swaran Singh National Institute of Renewable Energy, Kapurthala, Punjab.
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5. International Workshop on “Sustainable Energy, Power and Propulsion” on January 5-7, 2015, organized by International Society for Energy, Environment and Sustainability (ISEES), Jadavpur University, Kolkata.
 6. Short term training program on “Modeling and Optimization Techniques for Engineering Applications” on May 19-23, 2014, organized by Sardar Vallabhbhai National Institute of Technology Surat.
 7. Short term training program on “Energy Conversion System-Fundamentals and Applications” on May 26-30, 2014, organized by Maulana Azad National Institute of Technology Bhopal.
 8. Short term training program on “Research Training Workshop” on January 27-31, 2014, organized by The Energy Research Institute University, New Delhi.
 9. International Workshop on “Novel Combustion Concepts for Sustainable Energy Development” on January 2-4, 2014, organized by International Society for Energy, Environment and Sustainability, Indian Institute of Technology Kanpur.
 10. International Workshop on “Advanced Biomass Thermal Conversion Processes” on December 18-19, 2013, organized by CSIR-Central Mechanical Engineering Research Institute, Durgapur.
 11. Three-day workshop on “Large Air Conditioning Systems Design and Construction”, July 22-24, 2013 organized by National Institute of Technology Rourkela.
 12. Three-day workshop on “Technical Knows How to Use Automotive with Minimum Maintenance and Fuel Economy (STTP-Automobile-2008), May 26-28, 2008, organized by Maulana Azad National Institute of Technology Bhopal.
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Awards and Honors:

- Recognized as one of the Top 2% Scientists in the World, published in Elsevier by Stanford University for year 2023.
 - Received best presentation award at “**Research Scholars’ Week 2016**” at National Institute of Technology Rourkela.
 - Fellowship by Ministry of Human Resource Development, Government of India during M.Tech. and Ph.D.
 - Secured first position in third semester M.Tech Thermal Engineering.
 - Qualified Graduate Aptitude Test in Engineering (GATE)-2006 in Mechanical Engineering with 95 percentiles, all India rank 1765.
 - Secured first rank in class 10th with distinction in five subjects.
 - Secured first rank in class 12th with distinction in two subjects.
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Achievements

- One of our research articles titled “Potential for Using a Tyre Pyrolysis Oil-Biodiesel Blend in a Diesel Engine at Different Compression Ratios” was downloaded 660 times within 3 months of its publications.

- One of our research articles titled “Combustion, Performance and Emission Characteristics of a DI Diesel Engine Fuelled with Non-Petroleum Fuel: A Study on the Role of Fuel Injection Timing” in Journal of the Energy Institute “was one of the **most download article** from science direct in the year 2015. Link: <http://www.journals.elsevier.com/journal-of-the-energy-institute/most-downloaded-articles/>
 - Received a certificate from Journal of Energy Conversion and Management, Elsevier publication as a “recognized reviewer” in the year 2014 and 2016.
 - Received a certificate from Journal of Natural Gas Science and Engineering, Elsevier publication as a “recognized reviewer” in the year 2016.
 - The top 10th percentile of the reviewers for the Journal of Energy Conversion and Management, Elsevier publication in terms of the number of manuscript reviews completed in last two years.
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Professional Activities

- Invited as a session chair of 5th International Conference on Materials Engineering and Nano Sciences (ICMENS 2021) and the 6th International Conference on Nanotechnology and Nanomaterials in Energy (ICNNE 2021), Osaka, Japan during March 23-25, 2021.
 - Appointed as Technical Committee of 2021 5th International Conference on Materials Engineering and Nano Sciences (ICMENS 2021) will be held in Osaka, Japan during March 23-25, 2021.
 - Invited as a session chair in the e-national conference on “Advances in Mechanical, Industrial and Material Engineering” held at Sagar Group of Institutions Bhopal India on 28 May 2020.
 - Invited as a session chair in the International Conference on “Innovations in Thermo-Fluid Engineering and Sciences-2020” (ICITFES-2020) held at National Institute of Technology Rourkela, India on 10-12 February, 2020.
 - Invited as a session chair for National Conference on Waste to Energy, Carbon Capture and Storage (NCWECCS – 2017) held at National Institute of Technology Rourkela, India on 3-5 August 2017.
 - Reviewer of many International Journals (Energy conversion and management, Journal of Automobile engineering, Journal of the energy institute, Sustainable Energy Technologies and Assessments, Journal of Automobile Engineering SAGE publication etc.)
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Referees:

1. Dr. S Murugan

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4. Tabish Alam

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Declaration:

I hereby declare that the information furnished above is true to the best of my knowledge.

Date: 26-06-2024

Place: B.I.T. Sindri

Abhishek Sharma