

PUBLICATIONS :

International Journals

1. Kartikey Pandey, J. C. Mohanta, Vandana Agrawal, Annapurna Mohanta, "Deep Learning-Based Fault Detection for Power Transmission Insulators Using a Custom-Developed UAV Platform" **Sigma Journal of Engineering and Natural Sciences**, Accepted for publication, SCOPUS
2. Siddhartha Kr. Singh, Vandana Agrawal, "Numerical investigation of effectiveness of rib roughened channels on pin fin array", Journal of Engineering and Applied Science, Springer Nature, Accepted for publication, SCOPUS
3. Pankaj Singh Yadav, J.C. Mohanta, Vandana Agrawal, M.D. Faiyaz Ahmed, "Modeling and Performance Evaluation of Mecanum Wheel Platform with Reduced Vibration and A Robust Path Planning". Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2024, 46 (5), pp 1-25 [SCI, IF 2.1]
4. S. Arunkumar, Ch. Siva Ramakrishna, M.S. Alphin, R. Muraliraja, T. Vinod Kumar, Bhaskar Vishwakarma, Vandana Agrawal, Anil Singh Yadav, "Optimization of stirrer speed on mechanical properties of aluminium graphite stir cast", Materials Today: Proceedings, Article in press, SCOPUS
5. Pankaj Singh Yadav, J.C. Mohanta, Vandana Agrawal, M.D. Faiyaz Ahmed, "Vibration-reducing modelling of a mecanum wheel based on equivalent stiffness and strength analysis", Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2023, 1-13, DOI: 10.1177/09544089231212594, [SCI, IF 1.822]
6. Md. Ehtesham, Vandana Agrawal, "Integrating Reverse Engineering with CNC Machining" Nano World Journal, 9(S1), 2023, S156-S161, SCOPUS
7. Pankaj Singh Yadav, Vandana Agrawal, J.C. Mohanta, M.D. Faiyaz Ahmed, "A Theoretical Review of Mobile Robot Locomotion based on Mecanum Wheels", EVERGREEN Joint Journal of Novel Carbon Resource Sciences & Green Asia Strategy, 9(2), 2022, 396-403, SCOPUS
8. Pankaj Singh Yadav, Vandana Agrawal, J.C. Mohanta, M.D. Faiyaz Ahmed, "A robust sliding mode control of mecanum wheel-chair for trajectory tracking", Materials Today: Proceedings, 56, 2022, 623-630, SCOPUS
9. Sushant Gautam, Vandana Agrawal, "Feature curve extraction from data points", IOP Conference Series: Materials Science and Engineering, 1136, 2021, 012004, SCOPUS
10. Rajneesh Jaisawal, Vandana Agrawal, "Generative Design Method (GDM) - A State of Art", IOP Conference Series: Materials Science and Engineering, 1104, 2021, 012036, SCOPUS
11. Vandana Agrawal, Naveen Agrawal, "Hole Filling Method for Triangular Mesh Generation", International Journal of Innovative Technology and Exploring Engineering, 8(7), 2019, 1271-1276, SCOPUS

12. Vandana Agrawal, "Parameterization of Unorganized Point Cloud Data for B-Spline Surface Fitting" International Journal of Innovative Technology and Exploring Engineering, 8(4), 2019, 2278-3075, SCOPUS
13. Vandana Agrawal, "Triangular Modeling using Delaunay based region growing approach", International Journal of Engineering and Technology, 7(4), 2018, 6747-6755, doi:10.14419/ijet.v7i4.20322, SCOPUS
14. M.K. Gupta, Niraj Chowdhary, Vandana Agrawal, "Static and dynamic mechanical analysis of hybrid composite reinforced with jute and sisal fibres", Journal of the Chinese Advanced Materials Society, 6(4), 2018, 666-678, doi:10.1080/22243682.2018.1539643
15. Sachin Nigam, Vandana Agrawal, " A Review: Curvature approximation on triangular meshes" International Journal of Engineering Science and Innovative Technology, IJEIT Publication, 2(3), 2013

International Conferences

1. Kartikey Pandey, J.C. Mohanta, Vandana Agrawal, "Machine learning-driven fault detection in power system grids using YOLOv8 algorithm" 1st International conference on "Energy, environment and green technology" (ICEEGT-2025), 3rd-4th April 2025, Department of Electrical Engineering, National Institute of Technical Teachers' Training & Research (NITTTR), Kolkata
2. Kartikey Pandey, J. C. Mohanta, Vandana Agrawal, "Deep learning based fault detection for power transmission insulators using a custom developed UAV platform" 6th International Conference on Recent Advancements in Mechanical Engineering (ICRAME 2025), 18th February-2nd March 2025, Department of Mechanical Engineering, National Institute of Technology Silchar, Assam, India
3. Kartikey Pandey, J. C. Mohanta, Vandana Agrawal, "Improvement in Infrastructure Safety using Deep Learning Techniques to Detect Vegetation Encroachment and Bird Nests in the Power Transmission System" International Conference on Next Generation Technologies: Design and Manufacturing, 13th–15th November 2024, IIT Madras
4. Hansraj Singh, Vandana Agarwal, Raj Srivastava, "Automobile shape design modification using Reverse Engineering" 1st International Conference on Advancement in Energy ଓ଼ିଆ Sangam-2023 held during 18-20 December 2023, Department of Mechanical Engineering, MNNIT Allahabad
5. Kartikey Pandey, J.C. Mohanta, Vandana Agrawal, "Enhancing energy conservation in power transmission grids through Deep learning based fault detection", 1st International Conference on Advancement in Energy ଓ଼ିଆ Sangam-2023 held during 18-20 December 2023, Department of Mechanical Engineering, MNNIT Allahabad
6. Abhinay Kumar, Vandana Agrawal, Sunil Kumar Gupta, Janjanam Gopi Sai "Application of reverse engineering for modelling, analysis and fabrication of molar tooth" 1st International Conference on Advancement in Energy ଓ଼ିଆ Sangam-2023 held during 18-20 December 2023, Department of Mechanical Engineering, MNNIT Allahabad
7. Pankaj Singh Yadav, J.C. Mohanta, Vandana Agrawal, M.D. Faiyaz Ahmed, "3D Printing and Prototype Development of Mecanum Wheel Chair with Control Strategies". Proceedings of the International Conference in Recent Advances in Mechanical

Engineering August 25-27, 2022, Indian Institute of Technology, Jodhpur, Rajasthan, India ICRAM2022–PAPER No. 5647

8. Md. Ehtesham, Vandana Agrawal, "Integrating Reverse Engineering with CNC Machining", International Conference on Innovations in Mechanical and Materials Engineering (IMME-2022) held during November 4-6, 2022, Department of Mechanical Engineering, MNNIT Allahabad
9. Pankaj Singh Yadav, Vandana Agrawal, J.C. Mohanta, M.D. Faiyaz Ahmed, "A Theoretical Framework of Mobile Robot Locomotion based on Mecanum Wheels" (CIMS_ 118) for 2nd International Conference on Industrial and Manufacturing Systems (CIMS-2021) held during Nov 11-13, 2021, Department of Production and Industrial Engineering, Punjab Engineering College Chandigarh, NIT Jalandhar
10. Siddhartha Kr. Singh, Vandana Agrawal, "Numerical investigation of heat transfer characteristics of pin fin array in enclosed spaces" International Conference on Progressive Research in Industrial & Mechanical Engineering PRIME-2021, Department of Mechanical Engineering, NIT Patna, August 5-7, 2021
11. Vandana Agrawal, "Application of octree decomposition for segmentation of unorganized point cloud data", International Conference on Advances in Mechanical Engineering and Nano Technology (ICAMEN) 2021, Department of Mechanical Engineering, Manipal University Jaipur, India and Research and Consultancy Section, National Institute of Technology Uttarakhand, India, March 18-19, 2021
12. Sushant Gautam, Vandana Agrawal, "Feature curve extraction from data points", International Conference on Advances in Materials, Mechanics, Mechatronics and Manufacturing organized by Yajurvedam: An association for educational empowerment and social welfare on March 6-7, 2021 by online mode
13. Rajneesh Jaisawal, Vandana Agrawal, "Generative Design Method (GDM) - A State of Art", International Conference on Optimization Techniques and Recent Innovations in Mechanical Engineering ICOTRIME 2020 organized by Mechanical Engineering Department, Krishna Engineering College Ghaziabad on December 11-12, 2020 by online mode
14. Manoj Kumar Kushwaha, Vandana Agrawal, "Design of Chip Cooling System", Proceedings of 1st International Conference on Innovation Technologies in Mechanical engineering organized by Department of Mechanical Engineering, Krishna Institute of Engineering and Technology, Ghaziabad on August 24-25, 2012 at Krishna Institute of Engineering and Technology, Ghaziabad
15. Anoop Kumar Patharia, Naveen Agrawal, M. Taraq, Vandana Agrawal, Dhaneshwar Mahto, "Performance Analysis of Humid Air Gas Turbines Power Plants", International Conference of Energy Engineering (ICEE 2009) organized by Pondicherry Engineering College, Puducherry on January 7-9, 2009 at Pondicherry Engineering College, Puducherry
16. Naveen Agrawal, Anoop Kumar Patharia, Tariq M. , Vandana Agrawal, Dhaneshwar Mahto, "A Comparative Analysis between Simple and Intercooled Gas Turbine with Film Air Cooling", International Conference of Energy Engineering (ICEE 2009)

organized by Pondicherry Engineering College, Puducherry on January 7-9, 2009 at Pondicherry Engineering College, Puducherry

National Conferences

1. Monu Kanaujia, Vandana Agrawal, " A Review on Triangular Mesh Modelling From Point Cloud data", National Conference on Research and Innovations in Mechanical Engineering RIME 2014 organized by Technocrats Institute of Technology & Science and TIT College, Bhopal on March 6-8, 2014 at TIT College Bhopal
2. Neetu Gautam, Vandana Agrawal, " A Review on Hole Filling in Triangular meshes in Reverse Engineering", National Conference on Research and Innovations in Mechanical Engineering RIME 2014 organized by Technocrats Institute of Technology & Science and TIT College, Bhopal on March 6-8, 2014 at TIT College Bhopal
3. Bhagirathi Vehera, Vandana Agrawal, " A Review on Indirect Quadrilateral Mesh Generation", National Conference on Research and Innovations in Mechanical Engineering RIME 2014 organized by Technocrats Institute of Technology & Science and TIT College, Bhopal on March 6-8, 2014 at TIT College Bhopal
4. Yastuti Rao Gautam, Vandana Agrawal, "Design optimization of recuperator for microturbine", Proceedings of the Thirty Ninth National Conference on Fluid Mechanics and Fluid Power organized by SVNIT Surat, Gujarat, India on December 13-15, 2012 at SVNIT Surat, Gujarat, India
5. Naveen Agarwal, A.S. Darbari, Mohammad Tariq, Vandana Agrawal, "Stress Analysis of Spur Gear through Finite Element Method", Proceedings of National Conference on Design, Manufacturing and Management for Next Generation (DMM 2009) organized by Departments of Mechanical, Mechatronics Engg. and Management Studies, Kongu engineering College, Perundural, 2009 at Kongu engineering College, Perundural

Book Chapter:

1. Kartikey Pandey, J.C. Mohanta, Vandana Agrawal, "Fault Detection in Power System Grids Applying a Deep Learning Driven YOLOv8 Algorithm" Lecture Notes in Electrical Engineering, Springer, Accepted for publication
2. Siddhartha Kr. Singh, Vandana Agrawal (2023), "Numerical Investigation of Heat Transfer Characteristics of Pin–Fin Array for Natural Convection" Chapter 56, pp. 555-564, Recent Trends in Mechanical Engineering, Springer Nature, ISBN 978-981-19-7708-4
3. Pankaj Singh Yadav, J. C. Mohanta, Vandana Agrawal, and Md. Faiyaz Ahmed (2023) "D Printing and Prototype Development of Mecanum Wheel Chair with Control Strategies". Proceedings of the International Conference in Recent Advances in Mechanical Engineering. Excel India. ISBN: 978-93-91355-76-0 (e-Book).

Books:

1. Vandana Agrawal, Anoop Kumar Pathariya (2018), "An introduction to bio-fuels", LAP LAMBERT Academic Publishing

2. Anil Singh Yadav, Vandana Agrawal (2018), "Renewable Energy Sources- An Application Guide", LAP LAMBERT Academic Publishing

PATENT:

1. “Train coach with natural ventilated air flow”, Design no. 377801-001, Dated 28-02-2023, Controller General of Patents Designs and Trade Marks.
2. “Internal jet piston for a diesel engine” Publication date 23-05-2025