

Mechanical Engineering Department
List of Publications (From 2021 to 2025)

2025

1. F. Gorana and Y.K. Modi, "Optimization of porosity and strength of selective laser-sintered polyamide porous scaffolds useful in bone tissue engineering," Rapid Prototyping Journal, DOI: <https://doi.org/10.1108/RPJ-08-2024-0321>, 2025.
2. F. Gorana and Y.K. Modi, "Multi-objective Optimization for Porosity and Strength of Selective Laser Sintered Porous Scaffolds Useful in Bone Tissue Engineering," Iranian Journal of Science and Technology, Transactions of Mechanical, DOI: <https://doi.org/10.1007/s40997-025-00843-9>, 2025.
3. K.L. Dhaker and Y.K. Modi, "Data-driven modeling and optimization for recast layer in electric discharge drilling of Inconel-718 material," Journal of Micromanufacturin, DOI: 25165984251317862, 2025.
4. K. L. Dhaker, A. Sharma, T. Arif, G. Shukla, A. Shukla, and S. Avikal, "Statistical analysis and data driven modelling of hole circularity in EDD of aerospace material", Advances in Materials Engineering: Lecture Notes in Mechanical Engineering, pp. 401-415, January 2025.
5. D. P. Singh, S. Avikal , H. Singh, S. Monga, and A. Sharma, "A MCDM-based approach for the selection of industrial robots for arc welding process", Advances in Materials Engineering: Lecture Notes in Mechanical Engineering, pp. 389-399, January 2025.
6. P. Gupta, S. Kumar, and Y. Shrivastava, "Comparative analysis between LMD and WDLMD for identifying suitability in measuring chatter features during turning operation on CNC lathe," MAPAN, pp. 1–14, 2025
7. P. Dumka, R. Chauhan, and M. Ubaid, "A COMPARATIVE STUDY OF GAUSS-SEIDEL AND NEWTON-RAPHSON METHODS :," Acta Mech. Malaysia, vol. 8, no. 1, pp. 1–6, 2025, doi: 10.26480/amm.01.2025.10.16.
8. P. Dumka et al., "Modelling Two-Dimensional Laplace Equation Using Monte Carlo Simulation: A Python Viewpoint," Math. Model. Eng. Probl., vol. 12, no. 1, pp. 159–165, 2025, doi: 10.18280/mmep.120118.
9. P. Dumka, D. Dave, C. Sonawane, A. Bongale, C. K. Chan, and G. Tejani, "Python Simulations for Engineering Education : Resultant and Equilibrium in Coplanar Non-Concurrent Forces," vol. 12, no. 2, pp. 403–414, 2025.
10. Dumka, P., Chauhan, R., Verma, T., & Mishra, D. R. (2025). Understanding Kuttaka (Pulverizer) method by Bhaskara II with the help of Microsoft excel.

11. Kumar, R., Mishra, D. R., & Dumka, P. (2025). Development of a novel film condensation-based heat transfer model to estimate the productivity of conventional solar still. *Journal of Solar Energy Research*.

2024

1. R. Mishra and B. Singh, "Ascertaining higher MRR at chatter free milling using spline-based local mean decomposition and artificial neural network based hybrid approach," *Sci. Iran.*, vol. 31, no. 16, pp. 1387–1401, Oct. 2024, doi: 10.24200/sci.2024.59028.6024.
2. P. Gupta and B. Singh, "Tool chatter diagnosis using EMD and LMD techniques: A comparative study," *EVERGREEN Joint Journal of Novel Carbon Resource Sciences & Green Asia Strategy*, vol. 11, no. 2, pp. 1216–1226, 2024.
3. A. Dhakar, B. Singh, and P. Gupta, "Diagnosing faults in rolling bearings of an air compressor set up using local mean decomposition and support vector machine algorithm," *Journal of Vibration Engineering & Technologies*, vol. 12, pp. 6635–6648, 2024.
4. A. Dhakar, B. Singh, and P. Gupta, "Comparative performance analysis of different types of k-nearest neighbor (k-NN) classifiers for fault diagnosis of air compressor setup," *Engineering Research Express*, vol. 6, no. 2, p. 025563, 2024.
5. P. Gupta and Y. Shrivastava, "The high strain rate response of a bio-mimetic composite plates," *Journal of Mines, Metals and Fuels*, pp. 21–26, 2024.
6. P. Gupta, B. Singh, Y. Shrivastava, and S. Kumar, "Multiquadric collocations for nonlinear vibration of functionally graded plates of Ti–6Al–4V metal," *Journal of Mines, Metals and Fuels*, pp. 252–260, 2024.
7. A. Dhakar, B. Singh, and P. Gupta, "Diagnosing faults of reciprocating air compressor setup using signal processing technique and machine learning approach," in *Lecture Notes in Mechanical Engineering: Recent Advances in Mechanical Engineering*, Springer, Singapore, pp. 447–461, 2024.
8. F. Gorana and Y.K. Modi, "Influence of build orientation on porosity, strength and dimensional accuracy of laser sintered polyamide porous bone scaffolds," *Archive of Mechanical Engineering*, DOI: 10.24425/ame.2023.149639, 2024.
9. H.N. Singh, S. Agrawal, and Y.K. Modi, "Additively manufactured patient specific implants: A review," *Archive of Mechanical Engineering*, vol. 71, no. 1, pp. 109–138, 2024.
10. Dumka, P., Chauhan, R., Rana, K., Gajula, K., Mishra, A., Srivastava, A. K., & Mishra, D. R. (2024). Using Spreadsheets for Analysing the Influence of Bleed Pressure on Rankine Cycle Performance. *Spreadsheets in Education*, 1–20.

11. Dumka, P., Chauhan, R., Mishra, D. R., Shaik, F., Govindaraj, P., Kumar, A., Sonawane, C., & Velkin, V. I. (2024). Development and implementation of a Python functions for automated chemical reaction balancing. *Indonesian Journal of Electrical Engineering and Computer Science*, 34(3), 1557–1565.
12. Kumar, R., Mishra, D. R., & Dumka, P. (2024). Improving solar still performance: A comparative analysis of conventional and honeycomb pad augmented solar stills. *Solar Energy*, 270, 112408.
13. Sahoo, A. K., & Mishra, D. R. (2024). Experimental characteristic evaluation of micro hole EDM drilling of Ni51. 58Ti48. 34 alloy with copper electrode and response optimization using GRG assisted with GA. *Journal of Engineering and Applied Science*, 71(1), 117.
14. Dumka, P., Pandey, N., & Mishra, D. R. (2024). Conventional Solar Still Augmented with Saltwater Bottles: An Experimental Study. *Journal of Solar Energy Research*, 9(1), 1811–1821.
15. Sahoo, A. K., & Mishra, D. R. (2024). Characterization of Laser Drilling and Parametric Optimization Using Golden Jackal Optimizer. *International Journal of Precision Engineering and Manufacturing*, 25(11), 2299–2310.
16. Kumara, R., Mishraa, D. R., & Dumkaa, P. (2024). Journal of Solar Energy Research (JSER). *Journal of Solar Energy Research Volume*, 9(4), 2102–2114.
17. Sahoo, A. K., & Mishra, D. R. (2024). Characterisation and optimisation of the Nd: YAG laser drilling for basalt-glass-kevlar-29 hybrid composite material using particle swarm technique. *International Journal on Interactive Design and Manufacturing (IJIDeM)*, 1–16.
18. Dumka, P., Gajula, K., Sharma, K., Mishra, D. R., Chauhan, R., Siddiqui, M. I. H., Dobrot\u0107, D., & Rotaru, I. M. (2024). A case study on single basin solar still augmented with wax filled metallic cylinders. *Case Studies in Thermal Engineering*, 61, 104847.
19. Sahoo, A. K., & Mishra, D. R. (2024). Characterisation of basalt/glass/kevlar-29 hybrid fibre-reinforced plastic composite material through Nd: YAG laser drilling and optimisation using stochastic methods. *Journal of Mechanical Science and Technology*, 38(8), 4321–4331.
20. Dumka, P., Mishra, D. R., & Chauhan, R. (2024). EXPLORING THE INFLUENCE OF HANGING WICKS ON SOLAR STILL PRODUCTIVITY. *I TECH MAG*, 6, 1–5.
21. A. Sharma, P. Joshi, B. K. Bhuyan, and R. K. Phanden, “Investigation of excellence in Nd-YAG laser cutting of Al6061-T6 thin sheet using GRA coupled with PCA”, *Engg. Res. Exp.* vol. 6, issue 4, pp 5560, December 2024.

22. G. Ji, B. Mangla, S. A. Umoren, and A. Sharma, "Generation of layers of pointed gourd seed extract on mild steel using drop casting and testing of their corrosion behavior in salty water", *Mor. J. Chem.* vol. 12, issue 4, pp. 1839-1951, October 2024.
23. T. Arif and A. Sharma, "Experimental Investigation in Sustainable Electric discharge drilling of Inconel alloy using grey-based fuzzy logic approach", *Proc..Inst. Mech. Engineers Part E: J. Proc. Mech. Engg.* January 2024, DOI: 10.1177/09544089231221541 (Article in Press).
24. A. Sharma, A. Thakur, and R. K. Phanden, "Tensile behavior of jute-carbon reinforced polymer matrix composite using ABAQUS", *Advances in Manufacturing and Materials: Lecture Notes in Mechanical Engineering*, pp. 721–730, July 2024.
25. P. Dumka et al., "A case study on single basin solar still augmented with wax filled metallic cylinders," *Case Stud. Therm. Eng.*, vol. 61, no. June, p. 104847, 2024, doi: 10.1016/j.csite.2024.104847.
26. P. Dumka et al., "Development and implementation of a Python functions for automated chemical reaction balancing," *Indones. J. Electr. Eng. Comput. Sci.*, vol. 34, no. 3, pp. 1557–1565, 2024, doi: 10.11591/ijeecs.v34.i3.pp1557-1565.
27. C. K. Chan, P. Dumka, M. Villagómez-Galindo, F. Shaik, G. Tejani, and K. Patel, "Development of thermodynamic relation for mean density of mixture in the risers.pdf," *Appl. Chem. Eng.*, vol. 7, no. 4, pp. 1–8, 2024, doi: <https://doi.org/10.59429/ace.v7i4.5555>.
28. P. Dumka, R. Chauhan, and A. K. Srivastava, "Modelling of Gust Factor Based Dynamic Loading of Buildings Using Python Programming," *Comput. Eng. Phys. Model.*, vol. 7, no. 3, pp. 61–83, 2024, doi: Computational Engineering and Physical Modeling.
29. P. Dumka et al., "Enhancing solar still performance with Plexiglas and jute cloth additions: experimental study," *Sustain. Environ. Res.*, vol. 34, no. 1, pp. 2–12, 2024, doi: 10.1186/s42834-024-00208-y.
30. P. Dumka, "UTILIZING MICROSOFT EXCEL FOR CRITICAL PATH METHOD (CPM) PROBLEM SOLVING: A PRACTICAL DEMONSTRATION FOR ENGINEERING STUDENTS," *Ind. Eng. J.*, vol. 53, no. 1, pp. 166–172, 2024.
31. D. Prajapati, I. Samanta, A. Kumar, and P. Dumka, "Real-time Ad Click Prediction : Logistic Regression vs . Decision Tree," *Int. J. Sci. Res. Comput. Sci. Eng.*, vol. 12, no. December, pp. 34–40, 2024.
32. P. Dumka, N. Jain, R. Chauhan, "Implementation of the Tridiagonal Matrix Algorithm (TDMA) in C: A Practical Approach," *Recent Trends Program. Lang.*, vol. 11, no. 3, pp. 36–43, 2024.

33. P. Dumka, "Building Logic Gate Circuits in Python," *Mathematics and Computer Science: Contemporary Developments*, 2024, pp. 104–115.
34. P. Dumka, N. Limbachiya, N. Chippada, V. D. J. Macedo, L. Khatua, N. R. Lakkimsetty, T.C. Manjunath, F. Shaik, C. K. Chan, D. Dave, "Impact of jute covered hemispherical cups on the performance augmentation of a single slope solar still; An experimental investigation," *Appl. Chem. Eng.*, vol. 7, no. 3, pp. 1–12, 2024, doi: 10.59429/ace.v7i3.5516.
35. P. Dumka, "Deriving Continuity Equation using SymPy," *Res. Appl. Therm. Eng.*, vol. 7, no. 1, pp. 5–10, 2024.
36. S. K. Srivastava and K. L. Dhaker, "Data-driven approach for Cu recovery from hazardous e-waste," *Process Safety and Environmental Protection*, vol. 183, pp. 665–675, 2024.
37. P. Gupta, A. K. Srivastava, and N. Pandey, "Enhancing hand efficiency of smart glass cleaning robot through generative design module," *International Journal of Mechanical and Industrial Engineering*, vol. 18, no. 2, pp. 29–36, 2024.
38. N. Pandey, M. Kumar, A. K. Srivastava, and P. Gupta, "Application of finite element analysis in assessing mechanical chair design," *Journal of Computational Mechanics, Power System and Control*, vol. 7, no. 3, 2024.
39. P. Gupta and Y. Shrivastava, "The high strain rate response of a bio-mimetic composite plates," *Journal of Mines, Metals and Fuels*, pp. 21–26, 2024.
40. A. Shrivastava, N. Pandey, P. Tewari, A. K. Srivastava, and P. Gupta, "Cutting-edge generative design strategy for transforming robot leg dynamics in Autodesk Fusion 360," *Journal of Computational Mechanics, Power System and Control*, vol. 7, no. 2, 2024.
41. P. Tewari, N. Pandey, A. K. Srivastava, and P. Gupta, "Designing a CAD model and optimization of a glass cleaning robot body part by generative design using Autodesk Fusion 360," *International Journal of Scientific Research in Multidisciplinary Studies*, vol. 10, no. 2, pp. 18–24, 2024.
42. N. Pandey, M. Kumar, P. Gupta, and A. K. Srivastava, "Modelling and dimension analysis of a multipurpose convertible laptop table using Autodesk Fusion 360," *International Journal of Industrial and Manufacturing Engineering*, vol. 18, no. 3, pp. 93–102, 2024.
43. N. Pandey, A. Shrivastava, P. Tewari, A. K. Srivastava, and P. Gupta, "Innovative and unique generative design solution for the leg part of a robot using Autodesk Fusion 360 CAD software," *Journal of Engineering Design and Analysis*, vol. 6, no. 2, pp. 26–35, 2024.

44. P. Tewari, N. Pandey, A. K. Srivastava, and P. Gupta, "Designing a CAD model and optimization of a glass cleaning robot body part by generative design using Autodesk Fusion 360," *International Journal of Scientific Research in Multidisciplinary Studies*, vol. 10, no. 2, pp. 18–24, 2024.
45. A. Shrivastava, N. Pandey, P. Tewari, A. K. Srivastava, and P. Gupta, "Cutting-edge generative design strategy for transforming robot leg dynamics in Autodesk Fusion 360," *Journal of Computational Mechanics, Power System and Control*, vol. 7, no. 2, 2024.
46. Dumka, P., Mishra, D. R., Singh, B., Chauhan, R., Siddiqui, M. H. I., Natrayan, L., & Shah, M. A. (2024). Enhancing solar still performance with Plexiglas and jute cloth additions: experimental study. *Sustainable Environment Research*, 34(1), 3.
47. Mishra, D. R., Dumka, P., & Sharma, S. (2024). Solar Distiller Device.
48. H. S. Ruhela, S. Bhardwaj, T. Agarwal, and P. Gupta, "Explicit dynamics analysis of shinpads using finite element analysis," in *Lecture Notes in Mechanical Engineering: Recent Advances in Industrial Machines and Mechanisms*, Springer, pp. 683–690, 2024.
49. P. Maithil, P. Gupta, and M. L. Chandravanshi, "Analysis of Hashin failure criteria for tensile and compression fracture of fiber reinforced composite using finite element technique," in *Lecture Notes in Mechanical Engineering: Recent Advances in Industrial Machines and Mechanisms*, Springer, pp. 453–460, 2024.
50. S. C. Dash, "Effects of double diffusion and Soret effect on MHD braking of liquid metal packed between enclosed rotating cylindrical annulus," *International Journal of Modern Physics C*, vol. 36, no. 06, Nov. 2024, doi: 10.1142/s0129183124502334.
51. P. Gupta and B. Singh, *Artificial Intelligence Approach in CNC Machining*. Eliva Press, ISBN: 978-1-63648-757-1.

2023

1. R. Mishra and B. Singh, "SBLMD–ANN–MOPSO-based hybrid approach for determining optimum parameter in CNC milling," *Soft Comput.*, vol. 27, no. 11, pp. 7299–7320, 2023, doi: 10.1007/s00500-023-07944-0.
2. R. Mishra, M. S. N. S. Kiran, M. Maheswaram, A. Upadhyay, and B. Singh, "Investigation of optimal feature for milling chatter identification using supervised machine learning techniques," *J. Eng. Res.*, vol. 12, no. 4, pp. 950–962, Dec. 2024, doi: 10.1016/j.jer.2023.100138.
3. R. Mishra, P. Gupta, and B. Singh, "An intelligent approach to extract chatter and metal removal rate features impromptu from milling sound signal," *Proc. Inst. Mech. Eng. Part E J. Process Mech. Eng.*, Mar. 2023, doi: 10.1177/09544089231159465.
4. A. Dhakar, B. Singh, and P. Gupta, "Fault diagnosis of air compressor set-up using decision tree based J48 classification algorithm," *Journal of Engineering Research*, 2023.

5. A. Dhakar, B. Singh, and P. Gupta, "Fault diagnosis of air compressor set-up using decision tree based J48 classification algorithm," *Journal of Engineering Research*, 2023.
6. P. Gupta, B. Singh, and Y. Srivastava, "Comparison of signal processing techniques for prediction of optimal process variables to yield higher productivity during turning on CNC lathe," *Indian Journal of Engineering and Materials Sciences*, vol. 30, pp. 103–111, 2023.
7. P. Gupta, B. Singh, and Y. Srivastava, "Theoretical and experimental prediction of optimal process variables for enhanced metal removal rate during turning on CNC lathe," *EVERGREEN Joint Journal of Novel Carbon Resource Sciences & Green Asia Strategy*, vol. 10, no. 2, 2023.
8. P. Rout, A. K. Jha, P. Gupta, B. Singh, and S. Choudhury, "Failure analysis of composite plate under ballistic impact," *Materials Today Proceedings*, Elsevier, vol. 74, part 4, pp. 1008–101, 2023.
9. S. Gupta, S. K. Yadav, P. Gupta, and B. Singh, "Stable zone identification during machining on CNC lathe using ANFIS," in *Lecture Notes in Recent Advances in Intelligent Manufacturing*, pp. 89–99, 2023.
10. F. Gorana and Y.K. Modi, "Process parameter optimization for fabrication of acrylonitrile butadiene styrene parts," *Materials Today Proceedings*, DOI: <https://doi.org/10.1016/j.matpr.2023.08.204>, 2023.
11. F. Gorana, K.K. Sahu, and Y.K. Modi, "Parameter Optimization for Dimensional Accuracy of Fused Deposition Modelling Parts using Taguchi Method," *Materials Today Proceedings*, DOI: <https://doi.org/10.1016/j.matpr.2022.12.068>, 2023.
12. Joshi, A. R., Deo, A., Parashar, A., Mishra, D. R., & Dumka, P. (2023). Modelling Steam Power Cycle using Python. *Int. J. Sci. Res. Comput. Sci. Eng. Inf. Technol*, 9(1), 152–162.
13. Dumka, P., Samaiya, N., Gandhi, S., & Mishra, D. R. (2023). Modelling of Hardy Cross Method for Pipe Networks.
14. Mishra, P., Sharma, A., Mishra, D. R., & Dumka, P. (2023). Solving Double Integration With The Help of Monte Carlo Simulation: A Python Approach. *Int. J. Sci. Res. in Multidisciplinary Studies Vol*, 9(3).
15. Dumka, P., Samaiya, N. K., Gandhi, S., Dash, S., Dubey, S., & Mishra, D. R. (2023). Comparative Study of Wind Pressure Variations on Rectangular Buildings Using Python Programming. *The Asian Review of Civil Engineering*, 11(2), 15–24.
16. Mishra, P., Tewari, P., Mishra, D. R., & Dumka, P. (2023). Numerical modelling of double integration with different data spacing: A Python-based approach. *Mathematics and Computational Sciences*, 4(2), 46–54.

17. Dumka, P., Kumar, R., & Mishra, D. R. (2023). Development of a Time Marching Based Heat Transfer Algorithm to Predict the Distillate Output from a Conventional Solar Still. Available at SSRN 4474069.
18. Sahoo, A. K., & Mishra, D. R. (2023). Parametric optimization of response parameter of Nd-YAG laser drilling for basalt-PTFE coated glass fibre using genetic algorithm. *Journal of Engineering Research*.
19. Mishra, P., Tewari, P., Mishra, D. R., & Dumka, P. (2023). Integration based on Monte Carlo Simulation. *International Journal of Mathematical Sciences and Computing*, 3, 58–65.
20. Sahoo, A., & Mishra, D. R. (2023). Parametric optimization of Nd: YAG laser drilling operation on basalt-PTFE coated glass woven fibre ybrid composite for hole taper using teaching learning based optimization algorithm. II. *International Energy Days Symposium*.
21. Dumka, P., Chauhan, R., & Mishra, D. R. (2023). Modelling Taylor's Table Method for Numerical Differentiation in Python. *International Journal of Mathematical Sciences and Computing*, 9(4), 20–28.
22. Srivastava, A. K., Mishra, D. R., Dumka, P., Pandey, N., & Kumar, M. (2023). FERTILIZER SPRAY MACHINE I.
23. Mishra, D. R., Sauda, A., & Tomar, S. (2023). Natural farming of oak lettuce through hydroponic self- sustainable green house. In E. İ. ŞAHİN (Ed.), 4th International black sea modern scientific research congress. IKSAD Publications.
24. S. P. Singh, A. Sharma, V. Singh, and S. Mishra, "Effects of fiber type, content, orientation", and surface treatments on the mechanical properties of PAFRP composite, *Engg. Res. Exp.* vol. 6, issue, pp. 5011, December 2023.
25. A. Sharma, and P. Joshi, "Comparative Analysis of Laser Profile Cutting of Ni-based Superalloy Sheet Using RSM and ANN", *Int. J. Interact. Des. Manuf.* vol. 18, issue 5, pp. 3413-3425, November 2023.
26. V. Dwivedi, P. Mandla, D. Gupta, R. Chandel, and A. Sharma, "Simulation of Tensile behaviour of Carbon Fiber Reinforced Polymer Matrix Composite", *Material Today: Proceedings*, <https://doi.org/10.1016/j.matpr.2023.01.422> (February, 2023).
27. V. Mahalik, N. Pandey, H. K. Mahto, A. Shrivastava, A. Pandey, P. Tewari, A. K. Srivastava, and P. Gupta, "Optimization of a robot part in terms of mass and volume with material strength analysis," *International Journal of All Research Education and Scientific Methods*, vol. 11, no. 10, 2023.
28. H. K. Mahto, N. Pandey, V. Mahalik, A. Shrivastava, A. Pandey, P. Tewari, A. K. Srivastava, and P. Gupta, "Design and analysis of the component of glass cleaning robot

using generative designing module," International Research Journal of Modernization in Engineering Technology and Science, vol. 5, no. 10, 2023.

29. M. Kumar, P. Rout, A. K. Jha, and P. Gupta, "Structural analysis of aircraft wing using finite element analysis," International Journal of Aerospace and Mechanical Engineering, vol. 17, no. 1, 2023.
30. V. Mahalik, N. Pandey, H. K. Mahto, A. Shrivastava, A. Pandey, P. Tewari, A. K. Srivastava, and P. Gupta, "Optimization of a robot part in terms of mass and volume with material strength analysis," International Journal of All Research Education and Scientific Methods, vol. 11, 2023.
31. H. K. Mahto, N. Pandey, V. Mahalik, A. Shrivastava, A. Pandey, P. Tewari, A. K. Srivastava, and P. Gupta, "Design and analysis of the component of glass cleaning robot using generative designing module," International Research Journal of Modernization in Engineering Technology and Science, vol. 5, 2023.
32. P. Maithil, P. Gupta, and M. L. Chandravanshi, "Study of mechanical properties of the natural-synthetic fiber reinforced polymer matrix composite," Materials Today Proceedings, Elsevier, 2023.
33. K. L. Dhaker, K. Bhilala, H. K. Sharma, and P. Bhil, "Experimental investigation of hole geometry during electric discharge drilling of aerospace material sheet," Materials Today: Proceedings, vol. 78, no. 3, pp. 570–579, 2023.
34. A. Singha, G. Tiwarisb, SC Dash "Thermodynamic Analysis of Solar Heat Exchanger Assisted Ammonia-Water VARS System," Journal of Advanced Mechanical Sciences, Mar.2023 <http://research.jamsjournal.com/index.php/jamsjournal/article/view/27/JAMS-V2-I1-01>
35. P. Dumka and R. Dumka, Basics of C for Engineers: A Quick Introduction, 1st ed. Apna Publisher, 2023.

2022

1. R. Mishra and B. Singh, "SB-LMD based online monitoring of tool chatter detection in milling process," Mater. Today Proc., vol. 56, no. 6, pp. 3276–3284, Oct. 2022, doi: 10.1016/j.matpr.2021.09.489.
2. R. Mishra, B. Singh, and Y. Shrivastava, "Comparative study of EMD and SBLMD signal processing techniques to assess vibration in machining," Mater. Today Proc., vol. 56, no. 6, pp. 3301–3305, Oct. 2022, doi: 10.1016/j.matpr.2021.10.022.
3. R. Mishra and B. Singh, "An ensemble approach to maximize metal removal rate for chatter free milling," J. Comput. Sci., vol. 59, p. 101567, Mar. 2022, doi:

10.1016/j.jocs.2022.101567.

4. R. Mishra and B. Singh, "Prediction of milling chatter using SBLMD-ANN," *J. Mech. Sci. Technol.*, vol. 36, no. 2, pp. 877–882, Feb. 2022, doi: 10.1007/s12206-022-0135-5.
5. R. Mishra and B. Singh, "Extenuating Chatter Vibration in Milling Process Using a New Ensemble Approach," *J. Vib. Eng. Technol.*, vol. 10, no. 4, pp. 1235–1252, Feb. 2022, doi: 10.1007/s42417-022-00440-z.
6. R. Mishra and B. Singh, "A novel ensemble method based on the SBLMD-ANN-MOPSO approach for predicting milling stability regimes," *Meas. Sci. Technol.*, vol. 33, no. 6, p. 065002, Feb. 2022, doi: 10.1088/1361-6501/ac4920.
7. R. Mishra, B. Singh, and Y. Shrivastava, "An effort for identifying stability regimes in CNC milling using spline-based local mean decomposition," *J. Brazilian Soc. Mech. Sci. Eng.*, vol. 44, no. 6, p. 221, Jun. 2022, doi: 10.1007/s40430-022-03523-w.
8. R. Mishra, B. Singh, and Y. Shrivastava, "Measurement of Tool Chatter and MRR Using Sound Signal During Milling of Al 6061-T6," *Mapan - J. Metrol. Soc. India*, vol. 37, no. 4, pp. 721–734, May 2022, doi: 10.1007/s12647-022-00567-0.
9. P. Gupta, B. Singh, and Y. Srivastava, "Robust techniques for signal processing: A comparative study," *EVERGREEN Joint Journal of Novel Carbon Resource Sciences & Green Asia Strategy*, vol. 9, no. 2, pp. 404–411, June 2022.
10. P. Gupta and B. Singh, "Ensembled local mean decomposition and genetic algorithm approach to investigate tool chatter features at higher metal removal rate," *Journal of Vibration and Control*, Sage, pp. 1077546320971157, 2022.
11. P. Gupta, B. Singh, and Y. Srivastava, "Grey relation analysis for optimal process variables during turning on CNC lathe," *Materials Today Proceedings*, Elsevier, vol. 51, pp. 228–233, 2022.
12. P. Gupta, B. Singh, and Y. Srivastava, "Prediction of stable cutting range using local mean decomposition merged with statistical approach," in *Lecture Notes in Mechanical Engineering*, Springer, Singapore, pp. 1409–1420, 2022.
13. Yogesh Shrivastava, Eram Neha, Bhagat Singh, Prashant Kumar Shrivastava, KVSR Murthy and Durgesh Nandan, "Analysis of Regenerative Raw Signals Using Variational Mode Decomposition", *Traitement du Signal*, Vol. 39, Issue 1, pp. 299-304, 2022.
14. K.K. Sahu and Y.K. Modi, "Multi response optimization for compressive strength, porosity and dimensional accuracy of binder jetting 3D printed ceramic bone scaffolds," *Ceramics International*, vol. 48, no. 18, pp. 26772-26783, 2022.
15. Y.K. Modi and N. Khare, "Patient-specific polyamide wrist splint using reverse engineering and selective laser sintering," *Materials Technology*, vol. 37, no. 2, pp. 71-78, 2022.

16. Sahoo, A. K., & Mishra, D. R. (2022). Multi-objective optimization of EDM drilling process on NiTi-alloy through GRA and PSO a hybrid approach. ISPEC 9th International Conference Agriculture, Animal Science and Rural Development.
17. Dumka, P., Singh, A., Singh, G. P., & Mishra, D. R. (2022). Kinematics of Fluid: A Python Approach. International Journal of Research and Analytical Reviews (IJRAR), 9(2), 131–135.
18. Mishra, D. R., Srivastava, A. K., Mehto, H. K., Rajpoot, V. S., Singh, R. K., Arora, N. S., & Singh, J. (2022). SMART BIN. IN Patent App. 366189-001.
19. Dubey, M., & Mishra, D. R. (2022). Experimental evaluation of double slope solar still augmented with ferrite ring magnets and a black cotton cloth. International Journal of Ambient Energy, 43(1), 1751–1762. <https://doi.org/10.1080/01430750.2020.1722746>
20. Mishra, D. R., Dumka, P., & Sharma, S. (2022). Knurled Pencil. IN Patent App. 362880-001.
21. Mishra, D. R., Awana Puharta, Yugank T., H., Yadav, S., & Tiwari, S. (2022). Air water distiller. IN Patent 365693-001.
22. Mishra, D. R., Bisht, R., & Sahoo, A. K. (2022). Composite Laminate. IN Patent App. 363695-001.
23. Dumka, P., Gautam, H., Sharma, S., Gunawat, C., & Mishra, D. R. (2022). Impact of Sand Filled Glass Bottles on Performance of Conventional Solar Still. Journal of Basic & Applied Sciences, 18, 8–15.
24. Mishra, D. R., Dumka, P., & Sharma, S. (2022). Solar distiller. IN Patent App. 362811-001.
25. Sahoo, A. K., & Mishra, D. R. (2022). Multi-Response Optimization Of Edm Drilling Of Nitinol Submerged In Distilled Water Using GRA And Taguchi Analysis. 2. Baskent International Conference On Multidisciplinary Studies.
26. Dumka, P., & Mishra, D. R. (2022). An estimation of the distillate output from a CSS based on multivariable regression analysis. International Journal of Ambient Energy, 43(1), 2417–2422.
27. Pawar, P. S., Mishra, D. R., & Dumka, P. (2022). Obtaining exact solutions of visco-incompressible parallel flows using python. International Journal of Engineering Applied Sciences and Technology, 6(11), 213–217.
28. Mishra, D. R., Dumka, P., & Sharma, S. (2022). DM Irrigation Device. IN Patent App. 363786-001.
29. Deo, A., Joshi, A. R., Parashar, A., Mishra, D. R., & Dumka, P. (2022). Analysing One Dimensional Tapered Pin-Fin using Finite Difference. Research and Applications of Thermal Engineering, 5(1), 1–6.

30. Dumka, P., Rana, K., Tomar, S. P. S., Pawar, P. S., & Mishra, D. R. (2022). Modelling air standard thermodynamic cycles using python. *Advances in Engineering Software*, 172, 103186.
31. Pawar, P. S., Mishra, D. R., & Dumka, P. (2022). Solving First Order Ordinary Differential Equations using Least Square Method: A comparative study. *International Journal of Innovative Science and Research Technology*, 7(3), 857–864.
32. Dumka, P., Pawar, P. S., Sauda, A., Shukla, G., & Mishra, D. R. (2022). Application of He's homotopy and perturbation method to solve heat transfer equations: A python approach. *Advances in Engineering Software*, 170, 103160.
33. Chauhan, R., Dumka, P., & Mishra, D. R. (2022). Modelling conventional and solar earth still by using the LM algorithm-based artificial neural network. *International Journal of Ambient Energy*, 43(1), 1389–1396.
34. Mishra, D. R., Dumka, P., Gautam, H., & Sharma, S. (2022). Solar Distiller. IN Patent App. 364198-001.
35. Dumka, P., Sharma, S., Gautam, H., & Mishra, D. R. (2022). Finite Volume Modelling of an Axisymmetric Cylindrical Fin using Python. *Research and Applications of Thermal Engineering*, 4(3), 1–11.
36. Dumka, P., Rathor, R., Katiyar, K., & Mishra, D. R. (2022). Techno-economic investigation of passive solar still augmented with permanent magnets and ultrasonic fogger. *Int. J. Renewable Energy Technology*, 13(3), 285–305.
37. Dumka, P., Chauhan, R., Singh, A., Singh, G., & Mishra, D. (2022). Advances in Engineering Software Implementation of Buckingham 's Pi theorem using Python. *Advances in Engineering Software*, 173(July), 103232. <https://doi.org/10.1016/j.advengsoft.2022.103232>
38. Mishra, D. R., & Puharta, Y. T. (2022). Atmospheric water generator. IN Patent App. 364878-001.
39. Mishra, D. R., Dumka, P., Sharma, S., & Gautam, H. (2022). Impact of wax-filled glass bottles on the performance of conventional solar still. *ISPEC 9th International Conference Agriculture, Animal Science and Rural Development*.
40. Chauhan, R., Dumka, P., & Mishra, D. R. (2022). Experimental Evaluation and Development of Artificial Neural Network Model for the Solar Stills Augmented with the Permanent Magnet and Sandbag. *Journal of Advanced Thermal Science Research*, 9, 9–23.
41. Mishra, D. R., Dumka, P., & Sharma, S. (2022). Solar Distiller Device. IN Patent App. 364171-001.
42. Dumka, P., Gautam, H., Sharma, S., Gunawat, C., & Mishra, D. R. (2022).

ESTIMATION OF HEAT TRANSFER INTERNAL HEAT TRANSFER
COEFFICIENTS OF CONVENTIONAL SOLAR STILL AUGMENTED WITH
SOLAR PUMP.

43. Dumka, P., Rathor, R., Sharma, S., Katiyar, K., Gautam, H., Gunawat, C., & Mishra, D. R. (2022). Impact of Coconut Husks on the Productivity of Conventional Solar Still: A Heat Transfer Study. In *Current Advances in Geography, Environment and Earth Sciences* (Vol. 4, pp. 1–14). B P International.
44. Sahoo, A., & Mishra, D. R. (2022). Multi objective optimization of EDM drilling process on NiTi alloy through GRA and PSO a Hybrid approach. In *IPINDIA* (Issues 8834/2022-CD/L).
45. Mishra, D. R., Srivastava, A. K., Mehto, H. K., Rajpoot, V. S., Singh, R. K., Arora, N. S., & Singh, J. (2022). SMART BIN.
46. Mishra, D. R., Srivastava, A. K., & Pandey, N. (2022). Comparative Analysis of The Modern And Conventional Building Structures For The Arid Regions. “IArcSAS” 2nd International Architectural Sciences and Applications Symposium.
47. Raghuvanshi, Y., Mishra, D. R., & Dumka, P. (2022). Modelling Logic Gates in Python. *International Journal for Multidisciplinary Research*, 4(5), 1–8.
48. Dumka, P., & Mishra, D. R. (2022). Understanding the TDMA/Thomas algorithm and its Implementation in Python. *Int. J. All Res. Educ. Sci. Methods*, 10(10), 998–1002.
49. Pankaj, D., Rishika, D., & Mishra, D. R. (2022). Numerical Methods using Python (For scientists and Engineers).
50. Dumka, P., Gajula, K., Sharma, V., & Mishra, D. R. (2022). MODELLING PIPE FLOW USING PYTHON. *International Education \& Research Journal*, 8(10), 4–7.
51. Raghuvanshi, Y., Mishra, D. R., & Dumka, P. (2022). Understanding Sets with the help of Python. *INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT*, 7(10), 136–142.
52. Gajula, K., Sharma, V., Mishra, D. R., & Dumka, P. (2022). First Law of Thermodynamics for Closed System: A Python Approach. *Research and Applications of Thermal Engineering*, 5(3), 1–10.
53. Krishna Gajula Vikrant Sharma, B. S. D. R. M. P. D. (2022). Modelling of Energy in Transit Using Python. *International Journal of Innovative Science and Research Technology*, 7(8), 1152–1156.
54. Dumka, P., Samaiya, N. K., Gandhi, S., Dash, S., Dubey, S., & Mishra, D. R. (2022). Comparative Study of Wind Pressure Variations on Rectangular Buildings Using Python Programming.
55. Mishra, D. R., & Sahoo, A. K. (2022). ND:Yag laser drilling of basalt PTFE hybrid

composite and optimization for hole taper using PSO. International Mediterranean Congress.

56. Dumka, P., Dumka, R., & Mishra, D. R. (2022). Numerical Methods using Python (For scientists and Engineers). Blue Rose Publishers.
57. Chauhan, R., Dumka, P., & Mishra, D. R. (2022). Modelling conventional and solar earth still by using the LM algorithm-based artificial neural network. *International Journal of Ambient Energy*, 43(1), 1389–1396.
58. Dumka, P., Rathor, R., Sharma, S., & Katiyar, K. (2022). Impact of Coconut Husks on the Productivity of Conventional Solar Still: A Heat Transfer Study. In *Current Advances in Geography, Environment and Earth Sciences* (pp. 1–14). <https://doi.org/10.9734/bpi/cagees/v4/2542B>
59. Dumka, P., Chauhan, R., Singh, A., Singh, G., & Mishra, D. (2022). Implementation of Buckingham's Pi theorem using Python. *Advances in Engineering Software*, 173, 103232.
60. Dumka, P., Deo, A., Gajula, K., Sharma, V., Chauhan, R., & Mishra, D. R. (2022). Load and Load Duration Curves Using Python.
61. Sahoo, A., & Mishra, D. R. (2022). Multi-Attribute Optimization of EDM Drilling Process Parameters on Nitinol Using GRA-Assisted PSO. "IArcSAS" 2nd International Architectural Sciences and Applications Symposium.
62. Mishra, D. R., Shukla, D. K., & Tiwari, S. (2022). Noval Structure of Poly Covered Naturally Ventilated Greenhouse for Agro Applications. "IArcSAS" 2nd International Architectural Sciences and Applications Symposium.
63. P. Dumka *et al.*, "Impact of Coconut Husks on the Productivity of Conventional Solar Still: A Heat Transfer Study," in *Current Advances in Geography, Environment and Earth Sciences Vol. 4*, 2022, pp. 1–14. doi: 10.9734/bpi/cagees/v4/2542b.
64. D. Kumar, N. Yadav, K. Mishra, R. Shahid, T. Arif, and D. K. Kanchan, "Sodium ion conducting flame-retardant gel polymer electrolyte for sodium batteries and electric double layer capacitors (EDLCs)," *J Energy Storage*, vol. 46, 2022, doi: 10.1016/j.est.2021.103899.
65. A. Sharma, P. Joshi, and K. K. Saxena, "Empirical modelling and optimization of kerf characteristics in Nd-YAG laser cutting of Al 6061-T6 sheet", *Proc..Inst. Mech. Engineers Part E: J. Proc. Mech. Engg. Vol. 238*, issue 2, pp. 607-618, July 2022 (First online).
66. Y. Raghuvanshi, D. R. Mishra, and P. Dumka, "Understanding Sets with the help of Python," *Int. J. Nov. Res. Dev.*, vol. 7, no. 10, pp. 136–142, 2022.

2021

1. R. Mishra and B. Singh, "Stability analysis in milling process using spline based local mean decomposition (SBLMD) technique and statistical indicators," *Meas. J. Int. Meas. Confed.*, vol. 174, p. 108999, Apr. 2021, doi: 10.1016/j.measurement.2021.108999.
2. P. Gupta and B. Singh, "Investigation of tool chatter using local mean decomposition and artificial neural network during turning of Al 6061," *Soft Computing*, Springer, pp. 1–24, 2021.
3. P. Gupta and B. Singh, "A new ensemble approach to explore stability features in turning operation on CNC lathe," *Journal of Mechanical Science and Technology*, Springer, vol. 35, pp. 2819–2825, 2021.
4. P. Gupta and B. Singh, "Analyzing chatter vibration during turning on computer numerical control lathe using ensemble local mean decomposition and probabilistic approach," *Noise & Vibration Worldwide*, Sage, vol. 52, no. 6, pp. 168–180, 2021.
5. P. Gupta and B. Singh, "Exploration of tool chatter in CNC turning using a new ensemble approach," *Materials Today Proceedings Journal*, Elsevier, vol. 43, pp. 640–645, 2021.
6. P. Gupta and B. Singh, "Local mean decomposition and artificial neural network approach to mitigate tool chatter and improve material removal rate in turning operation," *Applied Soft Computing*, Elsevier, vol. 96, p. 106714, 2021.
7. Yogesh Shrivastava and Bhagat Singh, "Tool chatter prediction based on empirical mode decomposition and response surface methodology", *Measurement*, Elsevier, Vol. 173, pp. 108585, 2021.
8. Akshay Jain, Bhagat Singh, Kapil K. Sharma, Yogesh Shrivastava, "Fabrication, testing and machining of hybrid basalt-glass fiber reinforced plastic composite", *Indian Journal of Pure & Applied Physics*, Vol. 59, pp. 258-262, 2021.
9. Kapil K. Sharma, Yogesh Shrivastava, Eram Neha, Akshay Jain and Bhagat Singh, "Evaluation of flexural strength of hybrid FRP composites having three distinct laminates", *Materials Today Proceedings Journal*, Elsevier, Vol. 38, pp. 418-422, 2021.
10. Y.K. Modi and K.K. Sahu, "Process parameter optimization for porosity and compressive strength of calcium sulfate based 3D printed porous bone scaffolds," *Rapid Prototyping Journal*, vol. 27, no. 2, pp. 245-255, DOI: 10.1108/RPJ-04-2020-0083, 2021.
11. K.K. Sahu and Y.K. Modi, "Effect of Printing Parameters on Compressive Strength of Additively Manufactured Porous Bone Scaffolds Using Taguchi Method," *International Journal of Manufacturing, Materials, and Mechanical Engineering*, vol. 11, no. 1, pp. 18-33, 2021.
12. Y.K. Modi and K.K. Sahu, "Process capability analysis of binder jetting 3D printing process for fabrication of calcium sulphate based porous bone scaffolds," *Australian*

Journal of Mechanical Engineering, DOI:
<https://doi.org/10.1080/14484846.2020.1842295>, pp. 1-9, 2021.

13. K.K. Sahu and Y.K. Modi, "Investigation on dimensional accuracy, compressive strength and measured porosity of additively manufactured calcium sulphate porous bone scaffolds," *Materials Technology*, vol. 36, no. 8, pp. 492-803, 2021.
14. K.K. Sahu and Y.K. Modi, "Influence of layer thickness and build orientation on compressive strength of 3D printed scaffolds prototypes," In *IOP Conference Series: Materials Science and Engineering*, vol. 1136, no. 1, pp. 012031, 2021.
15. Sahoo, A. K., Pandey, P., & Mishra, D. R. (2021). Multi-response optimization of EDM drilling parameters of the Nitinol SMA. *The Journal of Engineering and Exact Sciences*, 7(4), 13001–13007.
16. Dumka, P., Gautam, H., Sharma, S., Gunawat, C., & Mishra, D. R. (2021). Estimation of heat transfer internal heat transfer coefficients of conventional solar still augmented with solar pump. *İSTANBUL INTERNATIONAL MODERN SCIENTIFIC RESEARCH CONGRESS -II*, 274–280.
17. Dumka, P., & Mishra, D. R. (2021). Energy, exergy and techno-economic analysis of novel solar stills for sea coastal area. *International Journal of Ambient Energy*. <https://doi.org/10.1080/01430750.2021.1945489>
18. Manoj, D., & Mishra, D. R. (2021). Correction to: Experimental analysis of double slope solar still augmented with dye, pebbles and metal chips. *Environmental Science and Pollution Research International*, 28(17), 22091.
19. Dubey, M., & Mishra, D. R. (2021). Experimental analysis of double slope solar still augmented with dye, pebbles and metal chips. *Environmental Science and Pollution Research*, 28(17), 22077–22090. <https://doi.org/10.1007/s11356-020-11869-8>
20. Md Tasnim Arif, Amit Sharma, "Optimization of MRR and TWR in electric discharge drilling of Ti-alloy using hybrid approach of Taguchi-based GRA and PCA", *Advances in Industrial and Production Engineering: Lecture Notes in Mechanical Engineering*, pp 339–349, July 2023.
21. S. Chandra Dash, "CFD analysis of Joule heating effect in a confined axi-symmetric swirling flow under the influence of axial magnetic field," *International Journal of Computational Materials Science and Engineering*, vol. 10, no. 03, Aug. 2021, doi: 10.1142/s204768412150010x.
22. S. Dash Ch., "MHD braking and Joules heating effect in a rotating confined cylindrical cavity packed with liquid metal," *FME Transactions*, vol. 49, no. 2, pp. 437–444, 2021, doi: 10.5937/fme2102437d.

23. P. Dumka, S. Sharma, H. Gautam, and C. Gunawat, "Impact of Solar Powered Fountain on The Performance of Conventional Solar Still," *Int. J. Eng. Res. Technol.*, vol. 10, no. 11, pp. 109–112, 2021.
24. P. Dumka, S. Sharma, H. Gautam, and D. R. Mishra, "Finite Volume Modelling of an Axisymmetric Cylindrical Fin using Python," *Res. Appl. Therm. Eng.*, vol. 4, no. 3, pp. 1–11, 2021.
25. S. Sharma, R. Rathor, H. Gautam, K. Katiyar, C. Gunawat, and P. Dumka, "Influence of Coco Peat Powder on the Solar Still Productivity: An Exergo-Economic Study," *IOP Conf. Ser. Earth Environ. Sci.*, vol. 795, no. 1, 2021, doi: 10.1088/1755-1315/795/1/012012.
26. Y. Bhagoria, A. Jha, M. Kumar, P. Rout, and P. Gupta, "Analyzing efficiency of meshless and finite element method using 2D beam," *International Conference on Mechanical Engineering and Managerial Applications for Productivity Enhancement and Marketability (MMPM-2021)*, Accepted, In Press.
27. M. Kumar, J. Rajiyan, and P. Gupta, "A computational approach for solving elasto-statics problems," *Materials Today Proceedings*, Elsevier, vol. 46, no. 15, pp. 6876–6879, 2021.