

**Bansilal Ramnath Agarwal Charitable Trust's
VISHWAKARMA INSTITUTE OF TECHNOLOGY, PUNE. 37
(An Autonomous Institute Affiliated to Savitribai Phule University of Pune)
Department of Mechanical Engineering**

Research Data (Academic year 2023-24)

Year	Journal Publication (SCI Indexed) (I)	Journal Publication (Scopus Indexed) (II)	Journal Publication (others) (III)	Total (I+II+III) (Journal Publication) (IV)	Publications in Conference (V)	Book Chapter (VI)	Total publication (IV+V+VI)
2023-24	03	23	11	37	15	nil	52!

Journal Publications (Academic year 2023-24)

1. Pawar, R., Patil, S. & Hulwan, D. Investigating the Effect of Compression Ratio on Operating Characteristics of Compression Ignition Engine Fueled with Diesel—Ricebran Biodiesel—*n*-Butanol Additive Blends. *J. Inst. Eng. India Ser. E* **104**, 129–140 (2023). <https://doi.org/10.1007/s40034-022-00264-2> (Scopus)
2. Suryavanshi, P., Kudtarkar, Y., Chaudhari, M., Bodas, D., (2023), Fabricating a low-temperature synthesized graphene-cellulose acetate-sodium alginate scaffold for the generation of ovarian cancer spheroid and its drug assessment, *Nanoscale Advances*, 5(18), pp. 5045–5053 (Sci)
3. Akshay B. Padalkar, Mangesh B. Chaudhari, Adinath M. Funde, (), Computational investigation for reduction in auxiliary energy consumption with different cell spacing in battery pack, *Journal of Energy Storage*, Volume 65, 2023, 107265, <https://doi.org/10.1016/j.est.2023.107265> (Sci)
4. Gaikwad, A., Chavan, U., (2023), Design and Analysis of EN19 Centre Crankshaft, *Periodica Polytechnica Mechanical Engineering*, 67(3), pp. 227–234 (Scopus)
5. Khodke, M., Chavan, U., Joshi, S., Shinde, S., (2023), Experimental studies on carbon nanotube strain sensors, *Materials Today: Proceedings*, <https://doi.org/10.1016/j.matpr.2023.03.383> (Scopus)
6. Akash Gaikwad, Umesh Chavan, (2023), AISI 4130 and E250BR alloy steels chassis structural analysis and performance comparison, *Materials Today: Proceedings*, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2023.06.265>. (Scopus)
7. Pravin Hujare, Ashwin Shelke, Hrunil Kansepatil, Dinesh Kamble, Deepak Hujare, Umesh Chavan, (2023), Analysis for effect of optimized air drag braking system on the drag force of vehicle, *Materials Today: Proceedings*, Volume 72, Part 3, Pages 1725-1734, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2022.09.475>. (Scopus)
8. Umesh Chavan, Omkar Prajapati, Pravin Hujare, (2023), Lithium ion battery thermal management by using coupled heat pipe and liquid cold plate, *Materials Today: Proceedings*, Volume 80, Part 2, Pages 382-388, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2022.10.185>. (Scopus)
9. Ganesh Dongre, Nitin Patki, Ravi Raut, Apurva Kulkarni, Aditya Murdande, Ishwar Pagar, Yash Badve, Vishwajit Khade, Namrata Ingle, (2023), Experimental analysis of SS316 using brass electrode in electric discharge machining, **Materials Today: Proceedings**, <https://doi.org/10.1016/j.matpr.2023.05.692> (Scopus)
10. Ganesh Dongre, Nitin Patki, Ravi Raut, Apurva Kulkarni, Aditya Murdande, Ishwar Pagar, Yash Badve, Vishwajit Khade, Namrata Ingle, (2023), Experimental analysis of SS316 using brass electrode in electric discharge machining, **Materials Today: Proceedings**, <https://doi.org/10.1016/j.matpr.2023.05.692> (Scopus)

11. Neelesh Sirdeshmukh, Ganesh Dongre, (2023), Achieving controlled topography and wettability through laser surface texturing of Ti6Al4V for bioengineering applications, Results in Engineering, Volume 17, 100898 (Scopus)
12. Ganesh Dongre, Avadhoot Rajurkar, Suvarna Patil, Ravi Raut, Naina Joseph, Vaishnavi Mote, Harsh Raja, Sumeet Jangam, (2023), Effect of cooling technique and tool material on Inconel alloy, **Materials Today: Proceedings**, Volume 80, Part 2, Pages 1456-1461 (Scopus)
13. Ganesh Dongre, Avadhoot Rajurkar, Suvarna Patil, Ravi Raut, Naina Joseph, Vaishnavi Mote, Harsh Raja, Sumeet Jangam, (2023), Effect of cooling technique and tool material on Ti6Al4V alloy, **Materials Today: Proceedings**, Volume 80, Part 2, Pages 1567-1572 (Scopus)
14. Shruti Bawankar, Abhishek Bhamare, Somesh Bhamre, Harsh Batheja, Ganesh Korwar, (2023), “**Driver Safety System**”, Journal For Research in Applied Science and Engineering Technology, <https://doi.org/10.22214/ijraset.2023.56198> (Non-Indexed)
15. Thopate, K., Shinde, S., Mahajan, R., Bhagat, R., Joshi, P., Kalbhor, A., Kulkarni, A. ., & Jadhav, S.m, (2023), Keyless Security: The Smart Solution for Home with a Smart Door Lock, *International Journal on Recent and Innovation Trends in Computing and Communication*, 11(8s), 170–174. <https://doi.org/10.17762/ijritcc.v11i8s.7187> (Scopus)
16. Ketki Shirbavikar, Sunil Shinde, Sunil Chougule, Vikas Sanap, Durgesh Sandhan, Aditya Saravade, Mukta Rasal, Kushal Shah, (2023), “MRI COOLING SYSTEM ANALYSIS & OPTIMIZATION:CFD, TEMPERATURE CONTROL & EFFICIENCY ENHANCEMENT”, International Journal Of Membrane Science & Technology, Vol. 10 No. 4 : <https://doi.org/10.15379/ijmst.v10i4.3609> (Non-Indexed)
17. Komble, S.P., Kulkarni, G., Dhamangaonkar, P., Sewatkar, C., (2023), Mathematical modeling of drying characteristics for cylindrical Thompson seedless grapes under natural convection, Journal of Food Process Engineering, 46(3), e14263, <https://doi.org/10.1111/jfpe.14263> (SCI)
18. Bodkhe, H., Bilade, C., Naik, D., Deshmukh, O., Bulakh, A., Potdar, P., Shirbavikar, K., & Komble, S. (2023). Track-Me-Down Emergency Location Service Provider. *Engineering Proceedings*, 59(1),235, <https://doi.org/10.3390/engproc2023059235> (Scopus)
19. Murali M. Madgundi, Abhishek P. Kumbhar, Gokarna M. Lele, Sachin P. Komble, Yuvraj H. Marane, Aakash R. Mate, (2023), “Design and investigation on rain saucer: The technique of roofless rainwater harvesting”, Materials Today: Proceedings, Volume 72, Part 3, , Pages 1084-1088, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2022.09.169>. (Scopus)

20. Sachin Komble, Siddhi Chaudhari, Ishwari Chothave, Kunal Dalvi, Dharmraj Dange, Sameer Dhurate. (2023), "Fire Fighting Robot", International Journal of Recent Engineering Science, Volume 10 Issue 2, 54-60, DOI :10.14445/23497157/IJRES-V10I2P108 (Non-Indexed)
21. Thopate, K. ., Shirbavikar, K. ., Kulkarni, R. V. ., Phursule, R. ., Kale, V. ., Karjule, S. ., Suhas, K. ., & Kale, S. . (2023). Enhancing Ultrasonic Sensor Goggles for Blinds Using Node MCU ESP8266 Microprocessor. *International Journal of Intelligent Systems and Applications in Engineering*, 12(1), 611–618. Retrieved from <https://ijisae.org/index.php/IJISAE/article/view/3959> (Scopus)
22. Bodkhe, H., Bilade, C., Naik, D., Deshmukh, O., Bulakh, A., Potdar, P., Shirbavikar, K., & Komble, S. (2023). Track-Me-Down Emergency Location Service Provider. *Engineering Proceedings*, 59(1), 235, <https://doi.org/10.3390/engproc2023059235> (Scopus)
23. Devesh Patil, Ashay Patil, Chetan Patil, Dhiraj Patil, & Ketki Shirbavikar. (2023). Smart Waste Segregator and Management Bin. *Engineering Research Transcripts*, 2, 55–60. Retrieved from <https://www.grinrey.com/journals/index.php/ert/article/view/48> (Non-Indexed)
24. Avadhoot Rajurkar, Nishant Darshane, Girish Dengale, Pushkar Morankar, (2023), Effect of laser process parameters on contact angle for linear and square grid micro-textured surfaces, *Materials Today: Proceedings*, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2023.08.237>. (Scopus)
25. Avadhoot Rajurkar Atharva Joshi, Abhishek Bokil, Ashish Chhajed, Tejas Choudhari, Atharva Kalamkar, Girish Kotwal, (2023), "FEA of FANUC 165F Robot Face Plate using Three Different work Materials – Mild Steel, Structural Steel and Stainless Steel", *International Journal for Research in Applied Science & Engineering Technology*, Volume 11(4), 4511-4522, DOI Link: <https://doi.org/10.22214/ijraset.2023.50984> (Non-Indexed)
26. Vishwajeet Pawar Avadhoot Rajurkar, Chirag Bhagat, Vijay Baswante, Vikas Agrawal, Shital Dukale, (2023), "Playing with Big Data", *International Scientific Journal of Engineering and Management*, Volume 2(5), (Non-Indexed)
27. Avadhoot Rajurkar, Kunal Dangra, Aryan Deshpande, Madhav Gosavi, Tejas Phadtare, Gajanan Gambhire, (2023), "[Comparative Finite Element Analysis of a Novel Robot Chassis Using Structural Steel and Aluminium Alloy Materials](https://doi.org/10.4028/p-45j91B)", *Engineering Innovations*, **Volume 7, 61-73**, <https://doi.org/10.4028/p-45j91B> (Non-Indexed)
28. Gaigole, P.M., Rajiv, B., (2023), Multi-performance characteristics optimization in near-dry rotary EDM of AlSiC by weighted principal component analysis, *Materials Today: Proceedings*, <https://doi.org/10.1016/j.matpr.2023.03.075> (Scopus)

29. **Makarand Ambole Dr. Varsha Karandikar, Dr. Girish Kotwal, Prof. Gajanan Gambhire, Omkar Taksale, (2023), “Productivity Enhancement in Manufacturing Industry by Cycle Time Reduction”, International Journal of Current Engineering and Technology, Volume13(3), 224-227. (Non-Indexed)**
30. Chaudhari, R., Joshi, O., Dargad, N., Jain, A., Gaikwad, J., (2023), Estimation of Planar and Normal Anisotropy Parameters of Al 8011 Sheets as Cold Rolled and Cold Rolled with Annealed Condition, Materials Science Forum, 1098, pp. 51–61 (Scopus)
31. Chaudhari, R., Shete, A., Mane, G., ... Phulambrikar, V., Agrawal, V., (2023), Surface Hardening of CP Ti by Laser Hardening and Development of Ti/TiC Surface Composite by Laser Sintering Technique for Wear Resistant Surface, Solid State Phenomena, 350, pp. 51–61 (Scopus)
32. Chaudhari, R., Pardeshi, O., Chandak, D., ... Ovhal, H., Dhanpalwar, G., (2023), Hardness and Microstructure Analysis of Rotary Friction Welded Dissimilar Joint of Cu and Ti-6Al-4V, Key Engineering Materials, 961, pp. 23–34 (Scopus)
33. Rajesh Chaudhari, Atharv Kirad, (2023), “To study the effect of controlled cooling on microstructures and hardness of medium carbon steel and alloy steel forged components”, Materials Today: Proceedings, Volume 72, Part 3, Pages 1896-1902, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2022.10.152>. (Scopus)
34. Atharva Nagarkar, Rajesh Chaudhari, Arnab Das , (2023), “Validation of a Harmonic Acoustic Model for Duct-borne Noise &”; Vibration onboard Maritime Vessels, 11 January 2023, PREPRINT (Version 1) available at Research Square [<https://doi.org/10.21203/rs.3.rs-2435778/v1>] (Non-Indexed)
35. Bharsakade, R., Badgujar, P., Malani, K., Rithe, S., Salunke, P. (2023). Quality and Efficiency Improvement Through Process FMEA— A Case Study. In: Singh, R.P., Tyagi, M., Walia, R.S., Davim, J.P. (eds) Advances in Modelling and Optimization of Manufacturing and Industrial Systems. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-19-6107-6_26 (Scopus)
36. Omkar S Vyas, Omkar M Taksale, & Ramkrishna S Bharsakade. (2023). Design and Model of A Vehicle Safety System. *Engineering Research Transcripts*, 2, 45–50. Retrieved from <https://www.grinrey.com/journals/index.php/ert/article/view/46> (Non-Indexed)
37. Ramkrishna Bharsakade, Aayush Dongre, Deepak Dhamecha, Saurabh Dolharkar, Sanket Chavan, Harshal Daspute, Arnav Pande, (2023), “Educational Project Management System”, Grenze International Journal of Engineering & Technology (GIJET), [Vol 9, Issue 2, p477](#) , ISSN 2395-5287 (Non-Indexed)

Conference Publications (Academic year 2023-24)

1. Dattatray Hulwan, Milind Rane, Anirudha Dalvi, Anvay Kulkarni, Aayush Shah, Ameya Bhawe, Vhanneshwar Arawat, (2023) "Fully Automated Pothole Detection and Repair System using Artificial Intelligence," *2023 3rd International Conference on Pervasive Computing and Social Networking (ICPCSN)*, Salem, India, pp. 540-546, doi: 10.1109/ICPCSN58827.2023.00094.
2. Pravin Hujare, Sandeep Kore, Deepak Hujare, Umesh Chavan, Aarohi Yemde, (2023), "**Investigation of effect of mass on performance of suspension system using quarter car test rig**", *AIP Conf. Proc.* 2427, 020052, <https://doi.org/10.1063/5.0101143>
3. Ganesh Dongre, Milind Rane, Ravi Raut, Arya Sapre, Vivek Sanap, Sanket Lavalekar, Aarya Sangle, Atharva Shingade, Siddharth Dhakar, Nilesh Sirdeshmukh, (2023). "**Generation of super-hydrophobic textures by using nanosecond pulsed laser machine**", *AIP Conf. Proc.* 2901, 100005, <https://doi.org/10.1063/5.0179957>
4. Apurva Kulkarni, Ganesh Dongre, Ravi Raut, (2023), "**Experimental analysis of powder mixed EDM of Hastelloy C-276**", *AIP Conf. Proc.* 2901, 100015, <https://doi.org/10.1063/5.0178583>
5. G. Korwar, B. Barhate, V. Barsale and B. Salgotra, "Piezoelectric as a Viable Power Source: Sensor Based Energy Harvesting for Autonomous Systems," *2023 10th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON)*, Gautam Buddha Nagar, India, 2023, pp. 481-487, doi: 10.1109/UPCON59197.2023.10434547.
6. N. Satpute, G. Korwar, N. S. Kulkarni, S. Jabade and N. Shinde, "Development of Shape Memory Alloy Based Heat Engine for Solar Energy Harvesting," *2023 6th International Conference on Contemporary Computing and Informatics (IC3I)*, Gautam Buddha Nagar, India, 2023, pp. 1250-1254, doi: 10.1109/IC3I59117.2023.10397618.
keywords: {Coils;Deformation;Wires;Heat engines;Solar energy;Power systems;Solar heating;Shape Memory Alloy;SMA Heat Engine;Solar cell},
7. N. Satpute, G. Korwar, N. S. Kulkarni, S. Jabade and N. Shinde, "Development of Shape Memory Alloy Based Heat Engine for Solar Energy Harvesting," *2023 6th International Conference on Contemporary Computing and Informatics (IC3I)*, Gautam Buddha Nagar, India, 2023, pp. 1250-1254, doi: 10.1109/IC3I59117.2023.10397618.
keywords: {Coils;Deformation;Wires;Heat engines;Solar energy;Power systems;Solar heating;Shape Memory Alloy;SMA Heat Engine;Solar cell},
8. Dhairyashil Jadhav, Niraj Kurane, Om Mali, Rohan Pawar, Anurag Jadhav, Ganesh Korwar, (2023), "Design and development of rover with pick and place Mechanism", *J. Phys.: Conf. Ser.* **2601** 012007DOI 10.1088/1742-6596/2601/1/012007

9. A. Koli, V. Killedar, K. Kulkarni, T. Kotgire, T. Koli and R. Bhagat, "Violent Activity Type Prediction," *2023 IEEE 3rd International Conference on Technology, Engineering, Management for Societal impact using Marketing, Entrepreneurship and Talent (TEMSMET)*, Mysuru, India, 2023, pp. 1-6, doi: 10.1109/TEMSMET56707.2023.10150145.
10. Siddhant Ghuge, Harshit Rathore, Geetanjali Ghayal, Sakshi Ghorpade, Laxmikant Mangate, (2023), "Smart segregation system for fruit ripeness", *E3S Web of Conf.* 469 00008, DOI: 10.1051/e3sconf/202346900008
11. Aarya Pawar, Pratham Khinvsara, Revant Pund, Tushar Raikar, Rishikesh Dayma, Nishant Kulkarni, (2023), "[Home Automation with Node MCU & Firebase using Internet of Thing \(IoT\)](#)", AITC-2023 and CSSP-2023
12. Nitin Satpute, Atharva Joshi, Kaustubh Utpat, Nishant Kulkarni, Siddharth Jabade, Ludwin Molina Arias, Ramesh Narina, Marek Iwaniec, (2023)," [Investigation on application of egg shell micro powder based epoxy composite for vibration isolation of MEMS sensor](#)", *AIP Conf. Proc.* 2976, 070002, <https://doi.org/10.1063/5.0172977>
13. Prajyot Chatur, Vijay Kulal, Dinesh Bohr, Darshan Patil, Rutuja Bhosle, Komal Jogdand, Nishant Kulkarni, (2023), "[Development of fire fighting mobile bot](#)", *AIP Conf. Proc.* 2901, 100025, <https://doi.org/10.1063/5.0180215>
14. Atharwa Kharkar, Varsha Karandikar, Himanshu Kurzekar, Arnav Hardas, Nilay Diwan, Ameya Panshikar, Gajanan Gambhire, (2023), "[Optimizing Efficiency and Safety in Industry: The Power of Industrial Engineering Techniques for Waste Identification and Productivity Improvement](#)", *Proceedings of the Second International Conference on Emerging Trends in Engineering (ICETE 2023)*, https://doi.org/10.2991/978-94-6463-252-1_118
15. Ramkrishna S Bharsakade, Girish N Kotwal, Sunil S Kuber, Piyush Shinde, Piyush Munshi,(2023),"[Development of low-cost technology for nano-polishing of aluminum](#)", *AIP Conf. Proc.* 2779, 020008, <https://doi.org/10.1063/5.0142300>