

**WALCHAND INSTITUTE OF TECHNOLOGY, SOLAPUR**

*(An Autonomous Institute)*

**Mechanical Engineering**

**Faculty Publications**

**A.Y. 2023-24**

<b>Name of Author(s)</b>	<b>Title of Research Publication</b>	<b>Name of Journal</b>
Dr. B.B.Deshmukh et al.	Performance improvement of set of worm gears used in soot blower through profile modification.	Frontiers in Mechanical Engineering, ISSN: 2095-0241, Volume 10.
Mr. N.R.Tambake et al.	Machine learning for monitoring hobbing tool health in CNC hobbing machine.	Frontiers in Mechanical Engineering, ISSN: 2095-0241, Volume 11.
Dr. B.B.Deshmukh et al.	Development of a digital twin of heat energy storage and retrieval system for performance evaluation through AR-based simulation.	Cyber-Physical Systems, ISSN: 2333-5785, Volume 10, 2024 - Issue 3.
Dr. S.B.Tuljapure, Dr. P.R. Kulkarni, Mr. R. Gaikwad	Review of Ergonomic Investigation of Footwear Storage Racks Used at Religious Places.	AIP Conference Proceedings, ISSN: 1551-7616, Volume 2890, Issue 1.
Mr. G.B.Agalave, Dr. B.B.Deshmukh, Dr. P.R.Kulkarni	Integration of Solar Flat Plate Collector and Thermal Energy Storage for Heating Applications: An Experimental Study.	International Journal of Heat and Technology, ISSN: 0392-8764, Vol. 41, No. 5.
Mr. S.S.Rathod, Dr. B.B.Deshmukh, Dr. V.G.Chitte	Current Design Scenario on an orthodontics Hybrid Fixed Functional Appliance: A Review.	AIP Conference Proceedings, ISSN: 1551-7616, Volume 2890, Issue 1.
Mr. P.G.Chitte, Dr. B.B.Deshmukh, Dr. V.G.Chitte	Design of an orthodontic infra zygomatic crest implant and its retention – A review.	AIP Conference Proceedings, ISSN: 1551-7616, Volume 3013, Issue 1.

**A.Y. 2022-23**

<b>Name of Author(s)</b>	<b>Title of Research Publication</b>	<b>Name of Journal</b>
Dr. B.B.Deshmukh et al.	Developing a digital twin of centrifugal pump for performance evaluation.	Materials Today Proceedings, ISSN: 2214-7853, Volume 72, Part 3, Pages 1798-1802.
Dr. B.B.Deshmukh Ms. P. Jambhale	Design and Analysis of Compliant Macro Scale Gripper.	Techno-societal 2022, Publisher Springer, Cham, ISBN: 978-3-030-69925-3, Pages 495–504.
Dr. B.B.Deshmukh et al.	Multi-Point Face Milling Tool Condition Monitoring Through Vibration Spectrogram and LSTM-Autoencoder.	International Journal of Performability Engineering, ISSN 2993-8341, Vol. 18, Issue 8, Pages 570-579.
Dr. B.B.Deshmukh, Dr. S.S.Pardeshi, Mr. A.T.Vidap	A Review on Compliant Microgripper.	Recent Advances in Mechanical Engineering, ISBN: 9789819918959.
Dr. B.B.Deshmukh, Dr. S.S.Pardeshi, Mr. A.T.Vidap	Design and Analysis of a Compliant Microgripper.	Advances in Engineering Design, ISBN: 9789811264716.
Dr. B.B.Deshmukh, Ms. P. Jambhale	Application of Compliant Mechanisms in Various Fields—A Review.	Advances in Engineering Design, ISBN: 9789811264716.
Dr. B.B.Deshmukh et al.	Two-wheeler tyre pressure monitoring through K-nearest neighbours algorithm trained using wheel hub vibrations acquired using ADXL335 accelerometer.	International Journal of Vehicle Noise and Vibration, ISSN: 1479-148X, Vol. 18, No. 3-4.
Dr. B.B.Deshmukh, Mr. R.Honkalas, Mr. P.V.Pawar	Investigation and Analysis of Existing Design of Worm and Worm Wheel of a Gear Motor used in a Soot Blower.	Materials Today Proceedings, ISSN: 2214-7853, Volume 72, Part 3, Pages 904-910.
Dr. B.B.Deshmukh, Mr. S.R.Dhale	WEDM with different diameter wire electrodes on Inconel 718: Improved dimensional deviation, wire consumption and surface quality.	Materials Today Proceedings, ISSN: 2214-7853, Volume 72, Part 3, Pages 896-903.
Mr. N.R.Tambake, Dr. B.B.Deshmukh, Dr. A.D. Patange	Development of a low-cost data acquisition system and training of J48 algorithm for classifying faults in cutting tool.	Materials Today Proceedings, ISSN: 2214-7853, Volume 72, Part 3, Pages 1061-1067.

Dr. S.B.Tuljapure, Mr. S.M.Salimath	Design of vibrating chair to introduce limited fatigue to reduce insomnia.	Materials Today Proceedings, ISSN: 2214-7853, Volume 72, Part 3, Pages 1624-1630.
Dr. S.B.Tuljapure, Dr. P.R.Kulkarni, Mr. T.S.Pathak	Application of Design for Manufacturing Technique to Lubricating Oil Pump Body for Reduction of Its Machining Time.	IOP Conference Series: Materials Science and Engineering-2022, ISSN: 1757-899X, 1259 012042.
Dr. B.B.Deshmukh et al.	Vibration monitoring system based on ADXL335 accelerometer and Arduino Mega2560 interface.	Journal of Algebraic Statistics, ISSN: 1309-3452, Volume 13, No. 2, Pages 2291-2301.
Dr. S.S.Bansode, Dr. R.B.Hiremath, Dr. Bimlesh Kumar	Achieving sustainability through improvement in the textile wet process using particle swarm optimization and the tabu search algorithm.	Textile Research Journal, ISSN: 00405175, Volume 93, Issue 3-4.

#### A.Y. 2021-22

Name of Author(s)	Title of Research Publication	Name of Journal
Dr. B.B.Deshmukh et al.	Distance Operated Manipulator: A Case Study for Rose Plucking.	Machines, Mechanism and Robotics, ISSN :2195-4364, Pages 1047-1053.
Dr. S.B.Tuljapure, Mr. S.M.Salimath	Review of Research on Effect of Vibrations on Sleep of Human Beings.	Vidyabharati International Interdisciplinary Research Journal, ISSN 2319-4979, Special Issue.
Mr. A.N.Surde et al.	Agile Methodology for IoT Application Development and Business Improvisation.	Smart Trends in Computing and Communications. Lecture Notes in Networks and Systems, Springer, 978-981-16-4016-2, ISSN: 2367-3370.
Mr. P.G.Chitte et al.	Design and Development of Pipe Traversing Robot.	International Research Journal of Engineering and Technology (IRJET), ISSN: 2395-0056, Volume: 09, Issue: 06.
Mr. P.G.Chitte et al.	Automatic Lane Detection System Using AI and Module Training Function.	International Research Journal of Modernization in Engineering Technology and Science, ISSN: 2582-5208, Volume:04, Issue:06.

Mr. S.S.Rathod, Mr. N.S.Motgi	Development of Automatic Dry Fruit Roasting Machine.	International Journal of Engineering Research & Technology (IJERT), ISSN: 2278-0181, Vol. 10, Issue 07.
Dr. B.B.Deshmukh, Mr. R.Honkalas, Mr. P.V.Pawar	A Review on Design and Efficiency Improvement of Worm and Worm Wheel of a Gear Motor.	Journal of Physics: Conference Series 1969 (1), 012023, ISSN: 1742-6588.
Dr. B.B.Deshmukh et al.	Design of a low cost system for determination of fat using IOT and ML.	Journal of Physics: Conference Series 1969 (1), 012034, ISSN: 1742-6588.
Dr. B.B.Deshmukh, Dr. P.Marathe, Dr. S.S.Pardeshi	Development of Bridge and Lever Type Compact Compliant Mechanism for Micro Positioning Systems.	Journal of Physics: Conference Series 1969 (1), 012006, ISSN: 1742-6588.
Dr. B.B.Deshmukh, Dr. S.P.Jagtap, Dr. S.Pardeshi	Applications of compliant mechanism in today's world–A review.	Journal of Physics: Conference Series 1969 (1), 012013, ISSN: 1742-6588.
Dr. B.B.Deshmukh, Mr. P.V.Pawar	Life estimation of taper roller bearing used in a decanter gearbox using Python 3.8.	AIP Conference Proceedings, ISSN: 1551-7616, Volume 2469, Issue 1, ISSN: 1551-7616.
Dr. B.B.Deshmukh et al.	CFD Analysis and 3D Printing of Venturi for Vacuum-Assisted LDPE Grain Flow System.	Recent Advances in Manufacturing Modelling and Optimization, ISSN: 2195-4364, Pages 1–10.
Mr. P.G.Chitte, Dr. B.B.Deshmukh, Mr. P. Tapasi	Design and Development of Dewatering Screw Press.	Recent Advances in Manufacturing Modelling and Optimization, ISSN: 2195-4364, Pages 569–578.
Mr. N.R.Tambake, Dr. B.B.Deshmukh, Dr. A.D. Patange	Data Driven Cutting Tool Fault Diagnosis System Using Machine Learning Approach: A Review.	Journal of Physics: Conference Series 1969 (1), 012049, ISSN: 1742-6588.

**A.Y. 2020-21**

<b>Name of Author(s)</b>	<b>Title of Research Publication</b>	<b>Name of Journal</b>
Dr. B.B.Deshmukh et al.	Effect of combination of flexure joints and material used on performance of compliant pantograph mechanism.	Materials Today: Proceedings, ISSN: 2214-7853, Volume 46, Pages 1215-1220.
Dr. S.S.Bansode, Dr. R.B.Hiremath	A study of Problems Faced by Textile Industry in India.	Psychology and Education, ISSN: 1553-6939, Vol. 58 No. 4 (2021), Pages 2117-2122.
Dr. B.B.Deshmukh, Mr. P.S.Hibare	Development of Air Controlled Cotton Cleaning Machine in Blow Room Part II Calculating Trash Content by Shirley Analyzer.	Techno-Societal 2020, Publisher Springer, Cham, ISBN: 978-3-030-69925-3, Pages 593-601.
Dr. B.B.Deshmukh et al.	Experimental investigation and effects of laser hardening process parameters on microhardness of En24 steel.	IOP Conference series: Material Science & Engineering 814 (2020) 012003, ISSN: 1757-899X.
Dr. B.B.Deshmukh Dr. V.V.Shinde	Magneto Rheological Brake with Silicon Based Fluid and Hybrid of Silica Fumes with GO2 as Additives.	Techno-Societal 2020, Pages 107-114, Publisher Springer, Cham, ISBN: 978-3-030-69925-3.

**A.Y. 2019-20**

<b>Name of Author(s)</b>	<b>Title of Research Publication</b>	<b>Name of Journal</b>
Dr. S.B.Tuljapure, Mr. S.A.Abdul	Design of low cost Semi-Automatic Dry Ironing Machine for Laundries.	International Journal of Mechanical & Production Engineering Research & Development (IJMPERD), ISSN (P):2249-6890, Vol 9. Issue 5.
Dr. S.B.Tuljapure, Mr. S.M.Jagtap	Finite Element Analysis of Blackboard Duster Cleaning Machine.	International Journal of Creative Research Thoughts (IJCRT), ISSN: 2320-2882, Vol 8, Issue 6.

Dr. S.B.Tuljapure, Mr. S.S.Deshmukh, Mr. P.V.Nilekar	Design of a Four throw reciprocating compressor Frame for Natural Gas.	International Journal of Mechanical & Production Engineering Research & Development (IJMPERD), ISSN (P):2249-6890, Vol 9. Issue 3.
Mr. S.B.Naik, Mr. S.R.Kushwah	Development of Pneumatic Roving End Opener.	International Journal of Mechanical & Production Engineering Research & Development (IJMPERD), ISSN (P):2249-6890, Vol 9. Issue 5.
Mr. S.B.Naik, Mr. A.P.Gajare	Design & Force analysis of sheet metal operations using press tool for plate lever.	International Journal of Advance Research, Ideas & Innovations in Technology, ISSN: 2454-132X, Vol 6, Issue 2.
Dr. B.B.Deshmukh, Mr. P.V.Pawar, Mr. S.J.Baig	Evaluation of Whirling Speed of an Induction Motor.	International Journal of Recent Technology & Engineering (IJRTE), ISSN :2277-3878, Vol 8, Issue 3.
Dr. B.B.Deshmukh, Mr. P.V.Pawar, Mr. S.J.Baig	The Whirling Speed of the Induction Motors and Unbalanced Magnetic Pull (UMP)- Review.	International Journal of Mechanical & Production Engineering Research & Development (IJMPERD), ISSN (P):2249-6890, Vol 9, Issue 5.
Mr. P.P.Mitrgotri et al.	Foundry Processes Performance from Environmental Perspective.	Indian Foundry Journal, ISSN: 0379-5446 Vol 65, Issue 4.
Dr. B.B.Deshmukh Mr. S.R.Dhale	Investigations into the Effect of varying Electrode Diameter on Cutting Rate and Kerf Width in WEDM of Varying Thickness Inconel718.	Advances in Unconventional Machining and Composites, Springer Nature Singapore Ltd., ISBN: 978-981-32-9473-8, pp 571–582.
Dr. B.B.Deshmukh, Mr. P.S.Hibare	Review of Cotton Cleaning in Blow Room Department.	International Research Journal of Engineering and Technology (IRJET), ISSN: 2395-0056, Volume: 06 Issue: 12.
Dr. B.B.Deshmukh, Mr. V.V.Shinde	Thermal Analysis of Magneto-Rheological Brake for Two Wheelers.	Techno-societal 2018, Publisher Springer, Cham, ISBN: 978-3-030-69925-3, Pages 751-761.