

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 2021-22)

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)
2021-22	09	04	12	25	33	-	58

Journal Publications (Academic year 2021-22)

Sr. No	Title of the publication	First Author	Co-Author(s)	Name of the Journal	Indexed in	Date of publication	Volume	Edition No.	ISBN/ISSN//DOI
1	Flow Characteristics and Novel Applications of Synthetic Jets – A Review	Pratik Walimbe	Agrawal, A., Chaudhari, M. B.	J. Heat Transfer	SCI	May 31, 2021	Paper No: HT-21-1268	-	https://doi.org/10.1115/1.4051326
2	Plastic zone analysis of SS316L and Ti6Al4V materials under mixed mode loading conditions	Patil, S	Chavan, U.,	International Journal for Computational Methods in Engineering Science and Mechanics	SCI	28 Oct 2021	DOI: 10.1080/15502287.2021.1992542	-	DOI: 10.1080/15502287.2021.1992542
3	Design and analysis of motion and energy regulating vibration harvester	N. Satpute	L. Jugulkar, S. Jabade, G. Korwar, S. Arawade	Proceedings of the Institution of Mechanical	SCI	, August 25, 2021	236	3	https://doi.org/10.1177/09544062211021441

				Engineers, Part C: Journal of Mechanical Science					
4	Issues related to the numerical simulation of herringbone grooved journal bearing including cavitation condition	NV Borse	MA Sawant, SP Chippa	Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology	SCI	December 22, 2021	https://doi.org/10.1177/13506501211062546	-	https://doi.org/10.1177/13506501211062546
5	Parametric exergy analysis of a Two-Stage vapour compression cycle for freeze desalination comparing eco-friendly refrigerants	S. Pavitran	Shrikant Jadhav, Suresh Gosavi	International Journal of Exergy	SCI	2021-22	<i>in press</i>	<i>in press</i>	1742-8300

6	Investigation of heat transfer and fluid flow characteristics in straight and zigzag microchannels with water as working medium	S. M. Gaikwad	M.K. Nalawade	International Journal of Ambient Energy	SCI	27 May 2021	DOI: 10.1080/01430750.2021.1924858	-	DOI: 10.1080/01430750.2021.1924858
7	Design and Analysis of Wheelchair Based on Rocker-Bogie Mechanism	A. Kulkarni	K. Dwivedi, R. Kulkarni, N. Mahale, G. Lohiya, M.Chaudhari	Transactions of the Indian National Academy of Engineering	Scopus	9 November 2021	https://doi.org/10.1007/s41403-021-00300-4	-	https://doi.org/10.1007/s41403-021-00300-4
8	Variable Runner Length Design, Simulation, and Optimization for FSAE Intake System	S. Pavitran	-	International Journal of Automotive and Mechanical Engineering	Scopus	2021-22	<i>in press</i>	<i>in press</i>	ISSN: 2229-8649 (Print); 2180-1606 (Online)
9	Analysis of Thermoelastohydrodynamic Lubrication of Journal Bearing including the Effect of Surface	N. Baineni	N. Borse, S. Chippa	Journal of The Institution of Engineers (India): Series D	Scopus	05 March 2022	https://doi.org/10.1007/s40033-022-00335-z	-	https://doi.org/10.1007/s40033-022-00335-z

	Roughness and Cavitation								
10	Validation of Installation effects of an ultrasonic flow meter on butterfly valve using numerical analysis	K.Kumar	Sachin Komble, S Thorat, P Korgaonkar, V. Bartakke. P. Sonje, O. Chavan, K. Kavire	Materials Today: Proceedings	Scopus	9 th Aug 2021	46	15	ISSN 2214-7853
11	Design and Development of Lever Operated Wheelchair	Aniket Vidyagar	Ganesh D. Korwar, Sumedh Kulkarni, Nikhil Gund, Sreeraj Karpe, Somnath Hirole	International Research Journal of Engineering and Technology (IRJET)	-	Jan 2022	9	1	
12	On-road condition analysis of shock absorber using Arduino UNO	Shinde Yashkumar	Nishant Sardeshpande, Prasad Pund, Ojas Patil, Mangesh Chaudhari	IJARIT	-	2021-22	8	1	2454-132X
13	Performance evaluation of bifacial modules on a tilted single axis tracker and	Akshay Saraf	D. B. Hulwan, Dr. Sudhir Muthyala	Journal of Huazhong University	-	October 2021	50	7	ISSN-1671-4512

	comparison with static system			y of Science and Technology					
14	Surface Water Garbage Collector	S.Kannav	U Chavan, S Karbelekar	International Research Journal of Engineering and Technology	-	August 2021	8	8	ISSN: 2395-0072
15	Automated Onion Sapling Bot	Prajwal Mondhe	,Rushikesh Ubale, Nikhil Rathod,Kartik Batra, Ketki Shirbavikar	INTERNATIONAL RESEARCH JOURNAL OF ENGINEERING AND TECHNOLOGY	-	January 2022	9	1	e-ISSN: 2395-0056
16	Design and analysis of power generation unit	Yashpal Kondgule	Pratiksha Kulkarni, Aayushi Kharat, Anand Malani,	INTERNATIONAL RESEARCH JOURNAL	-	January 2022	9	1	e-ISSN: 2395-0056

			Mrunal Jondhale, Ketki Shirbavikar	AL OF ENGINEERING AND TECHNOLOGY					
17	Evaluation of Design and Simulation of Gas Spring Testing of Old and New Grooving Machine and Load, Experimental	Gadhave Shubham	Chavan Umesh, Bhagat Rajkumar	International Research Journal of Engineering and Technology (IRJET)	-	Feb 2022	9	2	e-ISSN: 2395-0056, p-ISSN: 2395-0072
18	Performance Analysis of Tubular PEM Fuel Cell Models and Thermal Analysis of Base Model using Ethylene Glycol-Water Mixture as a Coolant	Tejas Ambekar	Prathmesh Amle, Durgesh Chandangole, Gopal Ghule, L. D. Mangate	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	-	Jan 2022	10	1	ISSN: 2321-9653

19	A review of amphibious robots	Sunil Shinde	Rohan Kulkarni, Kshitij Dwivedi, Atharva Nagarkar, Vivek Pawar, Sanjana Patil	International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)	-	Feb 2022	12	1	ISSN (P): 2249-6890; ISSN €: 2249-8001
20	Kinematic Analysis of compliant slider Crank mechanism	Ganesh..D . . Korwar	-	Research Square	-	August 10 th , 2021	-	-	DOI: https://doi.org/10.21203/rs.3.rs-740948/v1
21	Photovoltaic Smart Agricultural Tool	Yash Arun Mane	Ajit Balasaheb Satpute , Aniket Ajit Suryawanshi , Mihir Purushottam Shinde, Sunil. D. Chougule	IJERT	-	January 2022	11	1	ISSN: 2278-0181

22	Upgrading the performance of a six-cylinder CNG Engine with the induction of Turbocharger for HCV application	Sumit A. Kadam	Debjyoti Bandyopadhyay, Nishant S. Kulkarni, Sandeep D. Rairikar, S. S. Thipse	International Journal of Current Engineering and Technology	-	July/Aug 2021	11	4	E-ISSN 2277 – 4106, P-ISSN 2347 – 5161
23	Multi-objective Optimization with FEC Polar Code for Bandwidth Efficient Mobile Network Using Response Surface Methodology	<u>Makarand Jadhav</u>	<input type="checkbox"/> Ganesh Dongre & <input type="checkbox"/> Parikshit Mahalle	<i>Wireless Personal Communications</i>	SCI	<u>19 April 2022</u>	-	-	https://doi.org/10.1007/s11277-022-09688-w
24	Experimental Investigation on Laser-Processed Micro-Dimple and Micro-Channel Textured Tools during Turning of Inconel 718 Alloy	Avadhoot Rajurkar	Satish Chinchani	Journal of Materials Engineering and Performance	SCI	17 January 2022	-	-	https://doi.org/10.1007/s11665-021-06493-7
25	Numerical model for solar drying mechanism of grapes using double	Sachin P. Komble	Govind N. Kulkarni, Chandrashekar M. Sewatkar	Journal of Food Process Eng.	SCI	23 May 2022	-	-	DOI: 10.1111/jfpe.14139

glazed cabinet type solar dryer								
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Conference Publications (Academic year 2021-22)

Sr. No	Title of the publication	First Author	Co-Author(s)	Name of the Conference	National/ International	Date of the conference	Venue of conference
1	A COMPARATIVE STUDY OF SLIDER BEARINGS WITH VARIOUS CONTACT GEOMETRY BASED ON NUMERICAL ANALYSIS	Shraddha Shigare	S.P.Chippa	TRIBOINDIA 2021– An International Virtual Tribology Conference	International	02-04 December, 2021	Saintgits College of Engineering Kottayam, Kerala – 686532, India
2	Solar Drying Characteristics of Grapes using a heat and mass transfer based mathematical Model	S.P.Komble	G. N. Kulkarni, C. M. Sewatkar	ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTTC 2021)	International	17th to 20th December 2021	IIT Madras
3	Numerical Investigation of Single Phase Heat Transfer and Fluid Flow Characteristics in Divergent Minichannels	S.M.Gaikwad	M.K.Nalawade	26th National and 4th International ISHMT-ASTFE Heat and Mass Transfer	International	17th to 20th December 2021	IIT Madras

4	Optimization of anti-vibration mounts for engine bed	Pravin Hujare	Deepak Hujare, Umesh Chavan	17th International Conference on Vibration Engineering and Technology of Machinery VETO MAC – 2021	International	December 16-18, 2021	B.M.S.College of Engineering, Bengaluru
5	A numerical investigation for heat transfer enhancement of synthetic jet using different orifice geometry	Omkar Gaonkar	Mangesh Chaudhari	International Conference on Hybrid Electric and Automotive Technologies (HEAT 2021)	International	29-30, October 2021.	PES University, Bangalore
6	Investigation of Heat Transfer and Fluid Flow Characteristics in Straight and Divergent Wavy Minichannels with Water as Working Medium	Sanjay Mahadev Gaikwad	M K Nalawade	48 th National Conference on Fluid Mechanics and Fluid Power (FMFP)	International	December 27-29, 2021	BITS Pilani, Pilani Campus, RJ, India.
7	Transient structural analysis of knuckle joint	Arti Thombre	Mahesh Kotkar, Darshan Kothawade, Ganesh D Korwar	9 th National Conference on Recent Developments in Mechanical Engineering (RDME-2021)	National	2021/8/18	M.E.S . college of Engineering, pune
8	Analysis of Camshaft Used in Two Cylinder Engine	Arti Thombre	Mahesh Kotkar, Darshan	9 th National Conference on Recent	National	2021/8/18	M.E.S . college of

			Kothawade, Ganesh D Korwar	Developments in Mechanical Engineering (RDME-2021)			Engineering, pune
9	Preparation of biological micro powder based epoxy composite with improved damping factor and investigation for application in a MEMS sensor packaging	Nitin Satpute	Atharva Joshi, Kaustubh Utpat, Nishant Kulkarni, Dharam Buddhi, Siddharth Jabade, Preetam Selmokar, Umesh Chavan	INTERNATIONAL CONFERENCE ON INTELLIGENT ENGINEERING AND MANAGEMENT (ICIEM-2022)	International	27-April-2022 to 29-April-2022	Amity University in London
10	Cloth drying stand with automatic rain protection	A. Khewle	A. Natekar, S. Parbat, S. Patil, S. Kotalwar, M. K. Nalawade	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
11	A comprehensive review on topology optimization and modal analysis of base frame of diesel engine driven twin screw compressor	Mahesh Kotkar	Dipak Pawar, Dhawal Khachane,	2nd National Conference in Mechanical Engineering: Advances in	National	19-21 May 2022	VIT, Pune

			Ganesh Korwar	Materials and Design (NCMEAMD 2022)			
12	Bonnet Design for Pedestrian Safety	A. Deshmukh	V. Dhat, Y. Diwakar, S. Gadgil, S. Pavitran	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
13	Cooling and safety enhancements in lithium-ion battery	Mangesh Chaudhari	Krishna Jaiswal	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
14	Enhancement of flow field over double delta wing configuration	Sunil Shinde	Pratik Ganorkar, Krishna Jaiswal	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune

15	Finite element analysis of spiral arm flexural bearing	D. S. Kothawade	G. D. Korwar	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
16	Smart turn indicator device	K. Shirbavikar	N. Atre, K. Nilgund, S. Ohol, A. Otari, S. Padamwar, N. Sirpurkar	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
17	Active vibration control of smart rectangular plate subjected to harmonic excitation	Devashri Patil	Shriniwas Chippa	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
18	Evaluation of design and simulation of shock absorber flaring tube, tool damages work process and use	S. Gadhawe	U. Chavan, and R. Bhagat	2nd National Conference in Mechanical Engineering: Advances in	National	19-21 May 2022	VIT, Pune

	different material analyse in ansys and catia			Materials and Design (NCMEAMD 2022)			
19	Design and analysis of four-way hack saw	A. Malaye	S. Mali, A. Malvadkar, H. Mahajan, S. Komble	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
20	Optimized waste collection and pollution monitoring boat	Srujan Kulkarni	Vaishnavi Kulkarni, Snehal Kumkar, Aditya Lotangane, Jay Mahajan, Sachin Komble	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
21	Design and analysis of low head axial flow hydraulic propeller turbine	Nitin Suryawanshi	S. Pavitran	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune

22	Algorithm for multiple inverse kinematics of general serial link robotic manipulator	Vivek Narvekar	Gunesh Gogate and S. Pavitran	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
23	Study of BLDC motor behavior with change in electrical and mechanical parameters	Rohan Murkute	D. B. Hulwan	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
24	Folding treadmill E-bicycle	Shreyas Mahajan	Neel Malwatkar , Hussain Magar, Mrunmayee Kulkarni, Prachi Mahajan, Neel Madane, S. P. Komble	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune

25	Modeling, simulation and comparison of EVs for Pune city Drive Cycle using MATLAB Simulink	Sai Phadtare	Piyush S Tupkar and D. B. Hulwan	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
26	Torsional vibration analysis of Drive Train of diesel engine Twin Screw Compressor	Arti Thombre	Dipak Pawar, Abhijeet Birari, Shrinivas Chippa	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
27	Effect of variation of contact pressure on the specific wear rate of Carbon Filled PTFE composites in steam environment	Ashutosh Bhosale	Mahesh Walame, Lathesh Madhavan	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
28	Design Analysis of Vertical Gravity Spiral Conveyor	Prathamesh Lohokare	Shrinivas Chippa, Haribhau Phakatkar	2nd National Conference in Mechanical Engineering: Advances in	National	19-21 May 2022	VIT, Pune

			Mahendra Kolam	Materials and Design (NCMEAMD 2022)			
29	State-of-the-Art review of torsional mass dampers: Parameter estimation and Research developments in viscoelastic damping materials	O.J. Gurav	N. V. Satupute , M. V. Walame, G.D. Korwar	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
30	Design and Manufacturing of Fruit Size-Grading Machine	Rutuja Solankar	Pushkar Sonawane , Shubam Pandoh , Tanvi Shinde, Bhushan Suda, Rajkumar Bhagat	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
31	Design of a pressure hull for a submarine	Vishwesh Agrawal,	Samiksha Rahate, Jaineel Shah, Omkar Patil, Nishant Kulkarni	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune

32	Analysis and optimisation of an indirect contact freeze concentration system for seawater desalination	Pravin Abnave	S. Pavitran	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune
33	Study of low cycle fatigue behavior and life estimation based on modified SWT model and enhanced accumulated plastic strain energy density of Ti-6Al-4V ELI	Tejal Ikhar	Sanjay Bahulikar	2nd National Conference in Mechanical Engineering: Advances in Materials and Design (NCMEAMD 2022)	National	19-21 May 2022	VIT, Pune