

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 2020-21)**

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)
2020-21	05	09	14	28	10	02	40

**Journal Publications (Academic year 2020-21)**

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	Experimental modal parameter identification and validation of cantilever beam	Ishan Nadkarni	Ritvik Bhardwaj, Stephen Ninan, <b>S.P. Chippa</b>	Materials Today: Proceedings	Scopus 0.304	14 August 2020	38	<u>1</u>	<a href="https://doi.org/10.1016/j.matpr.2020.07.396">https://doi.org/10.1016/j.matpr.2020.07.396</a>
2	Using numerical simulation to investigate the effect of injection configurations over the scramjet performance	Girish Barpande	Amarjit Singh, <b>S. Pavithran</b>	Elsevier (Materials today: Proceedings)	Scopus	October 2020	<u>Volume 46,</u>	<u>Part 10</u>	<a href="https://doi.org/10.1016/j.matpr.2020.09.703">https://doi.org/10.1016/j.matpr.2020.09.703</a>
3	Using Numerical Simulation to Obtain Length of Constant Area Section in Scramjet Combustor	G Barpande	A Singh, <b>S Pavithran</b>	SAE International Journal of Aerospace	Scopus	March 2020	13	1	<a href="https://doi.org/10.4271/01-13-01-0004">https://doi.org/10.4271/01-13-01-0004</a>
4	Transient elastohydrodynamic analysis of	<b>SP Chippa</b>	<b>NV Borse</b>	Proc IMechE Part J:	SCI 1.397	October 25, 2020	235	8	DOI: 10.1177/1350650120967210

	finite line contact under load impulse			J Engineering Tribology					
5	Design of cell spacing in lithium-ion battery module for improvement in cooling performance of the battery thermal management system	Kumar Kirad	<b>Mangesh Chaudhari</b>	Journal of Power Sources (Elsevier)	SCI <a href="#">8.247</a>	30 September 2020	481	-	ISSN: 0378-7753
6	All solid-state asymmetric supercapacitor based on Ni.Co layered double hydroxide and rGO nanocomposite deposited on Ni foam,Journal of Electrochemical Energy Conversion and Storage	P. E. Lokhande	<b>U. S. Chavan</b>	<i>J. Electrochem. En. Conv. Stor.</i>  ASME	SCI 1.845	August 2020	17	3	<b>ISSN:</b> 2381-6872 <b>eISSN:</b> 2381-6910
7	All Cyclic voltammetry behaviour modelling of fabricated nanostructured	P. E. Lokhande	<b>U. S. Chavan</b>	Proc IMechE Part C:J Mechanical Engineer	SCI 1.386	March 2020	234	13	ISSN: 0954-4062 Online ISSN: 2041-2983

	Ni(OH) <sub>2</sub> electrode using artificial neural network for supercapacitor application			ing Science, SAGE					
8	Experimental investigations on wear properties of natural fibre composites for brake pad applications	S.D. Gat	<b>U. S. Chavan</b>	International Research Journal of Engineering and Technology (IRJET)	-	May 2020	5	-	e-ISSN: 2395-0056, p-ISSN: 2395-0072
9	Experimental Investigation of solar Drying characteristic of graphs	<b>S.P. Komble</b>	G.N Kulkarni, C. M. Sewatkar	Springer's Proceedings in Energy	Scopus	18 October 2020	online		Print ISBN: 978-981-15-5954-9 Electronic ISBN: 978-981-15-5955-6 (electronic)
10	Design Modifications and Analysis of Excavator Boom	Prathmesh Pudke,	<b>U. S. Chavan</b>	(IRJET)	-	Sep 2020	7	9	e-ISSN: 2395-0056  p-ISSN: 2395-0072

11	Nickel hydroxide nanosheets grown on nickel foam for high performance supercapacitor applications	U. S. Chavan	P. E. Lokhande & Suraj Bhosale	Materials Technology Advanced Performance Materials	SCI	15 Jan 2021			Taylor & Francis Group
12	Automated Cleaning Tracking and Cooling System (ACTCS) for Solar Panel	Ahmed Shah	Dev Shah, Mohammed Ahsan Shaikh, Pawan kumar Shelar, Bhushan Shrirame, Sachin Komble	<b>International Journal of Engineering Research &amp; Technology (IJERT)</b>	-	<b>January-2021</b>	<b>Vol. 10 Issue 01,</b>		<b>IJERTV10 IS010088</b>
13	CFD simulation of reciprocating compressor valves to improve the valve geometry	Pradeep Patil	Prof. D. B. Hulwan	The journal of oriental research madras	-	JANUARY 2021	Vol. XCII-I		ISSN : 0022-3301
14	<b>Valve Design Change to Improve Volumetric Efficiency &amp; COP of Refrigeration</b>	<b>Pradeep Patil</b>	<b>D. B. Hulwan</b>	Journal of the Maharaja Sayajirao University of Baroda	-	2021	Volume-55	1	ISSN: 0025-0422

	<b>Piston Compressor</b>								
15	Cellulose-Derived Flame-Retardant Solid Polymer Electrolyte for Lithium-Ion Batteries	S. B. Kale	T. C. Nirmale, N. D. Khupse, B. B. Kale, M. V. Kulkarni, S. Pavitran, S. W. Gosavi	ACS Sustainable Chemistry and Engineering	SCI	Jan 2021	9	4	<a href="https://doi.org/10.1021/acssuschemeng.0c06309">https://doi.org/10.1021/acssuschemeng.0c06309</a>
16	STUDY OF MIXED MODE FRACTURE STUDY OF FRICTION STIR WELDING OF AA2024 ALUMINUM ALLOY USING ANSYS	Swapna Deshpande	Ashish Mujumdar	IJRAR	-	2021-06-26	8	2	-
17	Application of Lattice Structure in Weight Optimization	Ganesh D Korwar	Akshay S. Bhinge	<b>International Journal for Research in Engineering Application &amp; Manage</b>	-	2020/8	Vol. 6,	5	-

				<b>ment (IJRE M)</b>					
18	Human Energy Harvesting: A Review	S.S.Arawade	G.D. Korwar	<b>Internat ional Journal ofAdvan ced Researc h in Science, Commu nication andTech nology(I JARSC T</b>	-	2020/9	Vol. 9,	5	-
19	Recent Trend in Biomechanical Energy Harvesting	SS Arawade	GD Korwar	<b>Internat ional Journal of Advance d Researc h in Science, Commu nication and</b>	-	2020/11	Vol. 11,	2	

				<b>Technol ogy (IJARS CT)</b>					
20	Design of Electric Cycle (Complete Design and Analysis of 2 Electric Cycle Models)	Sunil D. Chougule,	Kunal Kaul	<b>IJERT</b>	-	-May 2021	Volume 10	5	ISSN (Online): 2278-0181
21	Investigation of effect of different geometric parameters on fundamental natural frequency of composite laminate plate	Ashish N Gadhve	Nishant S Kulkarni	<b>IOP Conf. Series</b>	Scopus	Feb 2021	1057	1	DOI:10.1088/1757-899X/1057/1/012006
22	Investigating Effects of Geometrical Parameters of Arrowhead Shaped Auxetic Structure on Negative Poisson's Ratio	Shubham Nitinkumar Wani	M. V. Walame	International Research Journal of Engineering and Technology (IRJET)	-	May 2021	8	5	e-ISSN: 2395-0056, p-ISSN: 2395-0072
23	Determination of Energy Absorption	Akshada Kamthe	M.V. Walame	International	-	June 2021	8	6	e-ISSN: 2395-0056,



	Capacity of Auxetic Hexagon Structure with Different Geometrical Parameters by Simulation and Experimentation			Research Journal of Engineering and Technology (IRJET)					p-ISSN: 2395-0072
24	Study of Effect of Change in Geometrical Parameters on Negative Poisson Ratio of Auxetic Honeycomb Structure	Akshada Kamthe	M.V. Walame	IJRAR	-	June 2021	8	2	E-ISSN 2348-1269, P-ISSN 2349-5138
25	Cellular Arrowhead Shaped Auxetic Structure with Significantly Reduced Stress Concentration Effects	Shubham Nitinkumar Wani	M. V. Walame	International Research Journal of Engineering and Technology	-	June 2021	8	6	ISSN: 2395-0056, p-ISSN: 2395-0072
26	Thermal modelling of laser surface micro-texturing: Investigation on	Avadhoot Rajurkar	Niranjan Deshmukh, Omkar Kolekar, Radhika	Materials Today Proceedings	Scopus	May-2021	46	17	<a href="https://doi.org/10.1016/j.matpr.2021.03.420">https://doi.org/10.1016/j.matpr.2021.03.420</a>

	effects of laser parameters on dimple-texture dimensions and aspect ratio		Muley, Satish Chinchani kar						
27	Performance study of dimple and channel textured tools during turning of Inconel-718	Avdhoot Rajurkar	Satish Chinchani kar	Materials Today Proceedings	Scopus	8 April 2021	46	17	<a href="https://doi.org/10.1016/j.matpr.2021.03.399">https://doi.org/10.1016/j.matpr.2021.03.399</a>
28	Laser micro & nano surface texturing for enhancing osseointegration and antimicrobial effect of biomaterials: A review	Neelesh Sirdeshmukh	Ganesh Dongre	Materials Today Proceedings	Scopus	21 January 2021	44	1	<a href="https://doi.org/10.1016/j.matpr.2020.12.433">https://doi.org/10.1016/j.matpr.2020.12.433</a>
29	<u>Comparative Analysis of Dry-EDM and Conventional EDM in machining of Hastelloy</u>	Apurva A Kulkarni	, Dr. Ganesh Dongre , Ravi A Raut	Turkish Journal of Computer and Mathematics Education	Scopus	5 April 2021 _____ _____ _____ _____ _____ _____ _____	12	3	<a href="https://doi.org/10.17762/turcomat.v12i3.1629">https://doi.org/10.17762/turcomat.v12i3.1629</a>

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**Conference Publications (Academic year 2020-21)**

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	Analysis of thermoelastohydrodynamic lubrication of journal bearing including the effect of surface roughness and cavitation	Nagarjuna Baineni l	N.V.Borse, S.P.Chippa	<i>An International Virtual Conference on Tribology (TRIBOINDIA 2020)</i>	International	<i>10th - 12th December 2020</i>	Online SRM Institute of Science and Technology, Kattankulathur, India,
2	Validation of Valve Coefficients Using Experimentation and Numerical Analysis	K. Kumar (Scientist 'C' Central Water & Power Research Station, Pune 411024, India)	S. Komble , S. Thorat , P. Korgaonkar, V. Bartakke, P. Sonje, O. Chavan, K. Kavire	3rd International Conference on Futuristic Trends in Materials and Manufacturing.	International	7-8 Apr 2021	Online Guru Gobind Singh Indraprastha University

3	Nature of CSF based on Beating Time in Fibre Reinforced Cotton Rag	S. Bhagwat,	O. Karlekar, S. Padalkar, S. Chaudhari and K. Kulkarni,	2020 IEEE Pune Section International Conference (PuneCon)	International	16-18 Dec. 2020	Pune, India
4	Permanent Magnet Alternator for Electricity Generation in LHB Railway Coaches	Sanika Gaykar	Nilay Joshi, Chinmay Swami, Saloni Shinde, Tashi Kharat, Mangesh Chaudhari	©2020 IEEE	International	2020 IEEE Pune Section International Conference (PuneCon) Vishwakarma Institute of Technology, Pune India. Dec 16-18, 2020	2020 IEEE Pune Section International Conference (PuneCon) Vishwakarma Institute of Technology, Pune India. Dec 16-18, 2020
5	Investigation of Effect of Mass on Performance of Suspension System Using Quarter Car Test Rig	Arohi Yemde	Pravin P Hujare, Deepak P Hujare, Umesh S Chavan Sandeep S Kore	INTERNATIONAL CONFERENCE ON INTELLIGENT MECHANICAL SYSTEMS	International	20-21 FEB-2021	G H Raisoni College of Engineering and Management, Pune, India

				FOR INDUSTRY 4.0 [ICIMSI- 2021]			
6	Thermal modelling of laser surface micro-texturing: Investigation on effects of laser parameters on dimple-texture dimensions and aspect ratio	Avadhoot Rajurkar	Niranjan Deshmukh, Omkar Kolekar, Radhika Muley, Satish Chinchankar	3rd International Conference on Materials, Manufacturing and Modelling ICMMM-2021	International	March 19-21, 2021	VIT Vellore (Online)
7	Effect of deposition strategies and printing parameters on dimensions and strength of 3D printed parts: a comparative analysis	Avdhoot Rajurkar	Dignesh Thesiya	ICRADM-2020	International	16th-17th July 2020	SVNIT, Surat Virtual Conference ICRADM 2020
8	Optimizing Tool Path Sequence Of Plasma Cutting Machine Using TSP Approach	Ramkrishna Bharsakade	Pankaj Gaigole, Shreyash Sonawane	International Conference on Design and Manufacturing Aspects for Sustainable Energy	International	19-Aug-20	Virtual Conference, GRIET Hyderabad

				(ICMED 2020)			
9	Lead Time Reduction for managing Engineering Changes	Ramkrishna Bharsakade	Avadhoot Rajurkar, Swapnil Kolapkar	3rd International Congress on Advances in Mechanical Sciences (ICAMS 2020)	International	27-28 AUG 2020	Hyderabad
10	An Indirect Approach to Analyse the Impact of Working Restrictions Due To COVID 19 on Muscle Fatigue	Varsha Karandikar	Prof. Anand Umrani	E International conference on Socio-Economic and Health Challenges	International	22-Oct-20	Virtual Conference SEHCM - 2020

**(List of Book Chapters)**

Sr. No.	Book Title	Chapter number and Name	First Author	Co-authors	Publisher	Publication Year	ISBN/ISSN No/DOI
3	Flexible Supercapacitor Nanoarchitectonics	11. New-generation materials for flexible supercapacitors	P.E. Lokhande	U.S. Chavan, Suraj Bhosale, Amol Kalam, Sonal Deokar	Scrivener Publishing LLC	7 May 2021	Print ISBN:9781119711452  Online ISBN:9781119711469 , DOI:10.1002/9781119711469
4	Biodiesel Technology and Applications	7. A Global Scenario of Sustainable Technologies and Progress in a Biodiesel Production	M. B. Kumbhar	P. E. Lokhande, U. S. Chavan, V.G. Salunkhe	Scrivener Publishing LLC	18 June 2021	Print ISBN:9781119724643  Online ISBN:9781119724957  DOI:10.1002/9781119724957