VARUN SHARMA

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Education

Degree	University	Subjects	Year
B.Tech.	Guru Nanak Dev Engineering College PTU, Jalandhar	Mechanical Engineering	2011
M.Tech.	Guru Nanak Dev Engineering College, Ludhiana	Production Engineering	2013
Ph.D.	Indian Institute of Technology Delhi	Mechanical Engineering	2017

Academic Experience

Institution	Position	Year
Lovely Professional University	Assistant Professor	August, 2013 – December, 2013
Indian Institute of Technology Delhi	Research Associate	December, 2016 - March, 2017
Birla Institute of Technology and Science Pilani	Assistant Professor	May, 2017 – June, 2018
Indian Institute of Technology Roorkee	Assistant Professor	June, 2018 to till date

Courses Taught

Title	Course code	Class	Semester
Introduction to Mechanical Engineering	MIN-101A	B.Tech.	Autumn
Basic Manufacturing Processes	MIN-102	B.Tech.	Spring
Manufacturing Technology - I	MIN-104	B.Tech.	Spring
Theory of Production Processes	MIN-208	B.Tech.	Spring
Theory of Production Processes - II	MIN-309	B.Tech.	Autumn
Rapid Prototyping	IDN-523	M.Tech.	Autumn
Quality Management	MIN-571	M.Tech.	Autumn
Advanced Manufacturing Processes	MIN-572	M.Tech.	Autumn
Additive Manufacturing	MIN-601	M.Tech.	Spring
Reverse Engineering and Rapid Tooling	MIN-629	M.Tech.	Spring

Short Term Courses/Seminar Organized

S.No.	Course title	Sponsor	Organizer	Dates
1.	Idea conceptualization through additive/subtractive manufacturing methods	AICTE	MIED, IIT Roorkee	July 08-12, 2019

2.	Additive and Subtractive manufacturing for advanced engineering applications: Challenges and Future Aspects	ARDB DRDO	MIED, IIT Roorkee	February 24-25, 2022

Non-academic Responsibilities

1. Member, Faculty Search Committee, 2018-2019
2. Member, Planning, Information, and Special Event Cell, 2018-till date
3. Professor-In-charge, Metrology Lab, Production and Industrial Engineering Laboratories, 2018-till date
4. Deputy Office-In-charge, Placement, 2019-2020
5. Co-ordinator, Modern Workshop, 2020-2021
6. Co-ordinator, Placement, 2020-2021
7. Member, Department Administrative Committee, 2021-till date
8. Member, Time Table Committee, 2021-till date
9. Warden, Radhakrishnan Bhawan, 2020-2021
10. Chief Warden, Radhakrishnan Bhawan, 2022-till date
11. Maintenance head in charge of MIED, West Block, 2022-till date
12. Joint Faculty in Department of Design: 2020- till date

Projects

S.No.	Title of project	Funding Agency	Amount (Rs.)	Duration	Status
1.	Design and development of novel cutting inserts for sustainable machining using rapid tooling	Aeronautical Research Development Board (ARDB/DRDO)	27,75,460	3 Years	Completed
2.	Ultrasonic-assisted grinding of difficult-to-cut materials with ultrasonically atomized green solvents	Council of Scientific & Industrial Research (CSIR)	25,60,000	3 Years	Completed
3.	Investigations into bio-ceramic-based poly (D, L-lactide) composite scaffold using stereolithography	Science and Engineering Research Board (SERB), DST	26,05,900	2 Years	Completed
4.	Implications of 3D printed bio-ceramic based scaffolds logistics in Uttarakhand	Uttarakhand State Council for Science & Technology (UCOST)	3,68,000	2 Years	Completed
5.	Experimental investigations on FDM and SLA printed personalised drug delivery system	India Egypt S T Cooperation	11,10,000	2 Years	In-progress
6.	Experimental investigations and analysis of oral drug delivery systems fabricated using 3D printing.	FIG, IIT Roorkee	20,00,000	3 Years	Completed

Consultancy Projects

S.No.	Title of project	Funding Agency	Amount (Rs.)	Duration	Status
1.	Studies on improving the efficacy of hydraulic machine	M/S Haytcon, Muzzafarnagar, Uttar Pradesh	1,18,000	6 months	Completed
2.	Certification of analysis procedure	Aetos Design & Engineering Pvt. Ltd., Bangalore	1,18,000	6 months	Completed

Invited Lectures

S.No.	Title	College/University
1.	Pharmaceutical applications of 3D printing.	DDM College of Pharmacy, Una, Himachal Pradesh
2.	Design of experimentation using Minitab	Guru Nanak Dev Engineering College, Ludhiana, Punjab
3.	3D printing: State of the art	Chandigarh University, Mohali, Punjab
4.	Introduction to 3D printing	DIC, IIT Roorkee, Roorkee Uttarakhand
5.	Sustainable manufacturing through ultrasonic assisted turning process	KIET Group of Institutions, Ghaziabad, Uttar Pradesh
6.	Additive manufacturing techniques for product development	Roorkee Institute of Technology, Roorkee, Uttarakhand
7.	Additive Manufacturing: Recent Trends and Challenges	Chandigarh University, Mohali, Punjab
8.	Some insights into additive manufacturing for product development	DIC, IIT Roorkee, Roorkee Uttarakhand
9.	Design considerations in additive manufacturing.	Chandigarh University, Mohali, Punjab
10.	Abrasive Flow Machining (AFM) of 3D printed parts using a newly developed hydrogel-based abrasive media.	Bundelkhand Institute of Engineering and Technology, Jhansi, Uttar Pradesh
11.	3D printing: biomedical applications	IIT Jammu, Jammu and Kashmir
12.	Quality award models	AICTE Course, IIT Roorkee
13.	Additive manufacturing: Biomedical applications	Department of Mechanical Engineering, CEC, Landran
14.	Additive manufacturing: A paradigm shift	8th International & 10th Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering (AFTMME 2020) IIT Ropar
15.	'Modern Day Manufacturing through 3D printing	3rd International e-Conference on Frontiers in Mechanical Engineering and nanoTechnology [ICFMET] Yashwantrao Patil Science College, Solankur and Sanjeevan Engineering & Technology

		Institute, Panhala, Maharashtra
16.	Session Chair	2nd International Conference on "Industrial and Manufacturing Systems" (CIMS-2021) Department of Production and Industrial Engineering, Punjab Engineering College, Chandigarh, and Department of Industrial and Production Engineering Dr. B R Ambedkar National Institute of Technology (NIT), Jalandhar
17.	Additive Manufacturing Part I-Materials for Additive Manufacturing	Department of Mechanical Engineering, Indian Institute of Technology (Banaras Hindu University) Varanasi
18.	Additive manufacturing: Basics and Process Principle	Bharat Heavy Electricals Limited
19.	Metal based additive manufacturing	Bharat Heavy Electricals Limited

Research Supervision

Area of Research

Conventional machining	Non-conventional machining
Additive manufacturing	Additive manufacturing in biomedical application
Ultrasonic assisted machining	Sustainable machining

Ph.D. Theses

S.No.	Title/Area of Research	Research Scholar	Co-supervisor	Status
1.	Experimental investigations and modeling of ultrasonic assisted magnetic abrasive flow machining	Nitin Dixit	Prof. Pradeep Kumar	Awarded
2.	Modelling and analysis of a reverse logistic decision system for biomedical waste system	Anurag Deepak	Prof. Dinesh Kumar	Submitted
3.	Experimental investigations and modelling for sustainable machining of difficult to cut materials using ultrasonically atomized nano-cutting fluids	Ramandeep Singh	--	Submitted
4.	Investigations of 3D printed bio-ceramic scaffolds and it's logistic implications	Neha Choudhary	Prof. Pradeep Kumar	In-progress
5.	Experimental investigations and modelling of 3D printed tablets for personalized medication	R. Durga Prasad Reddy	--	In-progress
6.	Experimental investigations into Cryo-pulse jet MQL machining of Ti-based alloy with nature inspired	D Narayana Swamy Naik	--	In-progress

	textured tool			
7.	Experimental investigations into ultrasonic assisted grinding of difficult-to-cut material with ultrasonically atomized green solvents	Aswani Kumar Singh	--	In-progress
8.	Experimental investigations and modelling of machining of difficult to cut materials using internally cooled cutting inserts	Rohit Singh	--	In-progress
9.	Experimental investigations into bio-ceramic-based composite scaffold using stereolithography	Mohit Kumar	--	In-progress
10.	Additive manufacturing	Soumyadip Das Gupta	--	In-progress
11.	Additive manufacturing	Deepak Sharma	--	In-progress

M.Tech. Dissertation

S.No.	Title	Student	Year	Status
1.	Experimental investigations into thermo-physical characterisation of hybrid nanofluid	Neetesh Kumar Sah	2020	Awarded
2.	4D printing of self-fitting scaffolds with nature inspired architecture	Shubham Shankar Mohol	2021	Awarded
3.	Experimental investigations into finishing of freeform surface by abrasive flow machining	Muniram Meena	2022	Awarded
4.	Wire arc additive manufacturing of titanium alloys	S A Surendar		In-progress

B.Tech Project Supervised

S.No.	Title	Students	Year	Status
1.	Application of evolutionary algorithms in turning process.	Anshul Bajpai, Gautam Singla, Tanmay Maheshwari	2018	Completed
2.	Exploration of nano-fluids during turning using indigenously developed MQL system.	Atulya Tibrewal, Dhruv Vishwakarma, Manish Meena	2019	Completed
3.	Automated surveillance using integrated circuits.	Shivam Bhati, Shailesh Yadav, Raunak Anand	2020	Completed
4.	Implications of 3-D printing in scaffolds logistics	Aastha Upadhyaya, Pooja Meena	2020	Completed
5.	Energy and mechanical optimization for 3D printed biodegradable materials	Nikhil Rao, Raghav Thapar	2020	Completed
6.	Impact of additive manufacturing on supply chain network of automotive industry	Maitrik A. Shah, Shivendru Mathur, Kshitij Sharma	2021	Completed
7.	Development of an autonomous	Abhishek Choudhary,	2021	Completed

	navigation stack for medicines and food delivery robot and testing it using a simulator	Akshay Antony, Devinder Kumar Singh		
8.	Energy optimization in machining processes	Shrey Shukla, Swapnil Thakkar, Geesala Siva Abhishek Kumar	2022	Completed
9.	Life cycle assessment of coal based Indian thermal power plants	Akash Mishra, A Karthickeyan, Bharat Singh Rajpurohit	2022	Completed
10.	Optimization and prediction of mechanical properties of sintered WC-Co specimen using machine learning	Abhishek Paliwal, Dushyant Yadav, Vishal Yadav, Kaushal	2022	In-progress
11.	Design and development of projection based micro-stereolithography setup	Prathamesh Bhaktan	2022	In-progress

Patents

S.No.	**Title**	**Investigators**	**Application No. /Date**	**Status**
1.	A hydrogel based abrasive media for abrasive flow machining and process of preparation thereof.	**Varun Sharma** Pradeep Kumar Nitin Dixit	IN202011001189 Date: 10/01/2020	Published
2.	An ultrasonic assisted magnetic abrasive flow machining process and a device therefor.	**Varun Sharma** Pradeep Kumar Nitin Dixit	IN202111054926 Date: 21/11/2021	Published
3.	A tragacanth gum hydrogel-based abrasive media for abrasive flow machining and its method of preparation.	**Varun Sharma** Pradeep Kumar Nitin Dixit	IN202211012670 Date: 09/03/2022	Published
4.	Pulse-assisted hybrid cryo lubrication system	**Varun Sharma** D Narayana Swamy Naik Ramandeep Singh	IN202211044497 Date: 03/08/2022	Published
5.	Cutting tool insert and method of fabrication cutting tool insert	**Varun Sharma** Rohit Singh	202211050331 Date: 02/09/2022	Published

Research Publications

International Journals

2022	
1.	Choudhary, Neha, Ghosh Chandrachur, Varun Sharma, Roy Partha and Pradeep Kumar "Investigations on effect of pore architecture of additively manufactured novel hydroxyapatite coated PLA/Al_2O_3 composites scaffold for bone tissue engineering." ***Rapid Prototyping Journal***. (Accepted) **Impact Factor: 4.043 (Q2)**
2.	Choudhary, Neha, Varun Sharma, and Pradeep Kumar. "Polylactic acid-based composite using fused filament fabrication: Process optimization and biomedical application." ***Polymer Composites*** (2022). https://doi.org/10.1002/pc.27027

	Impact Factor: 3.531 (Q2)
3.	Dixit Nitin, Varun Sharma, and Pradeep Kumar. "Experimental investigations into ultrasonic assisted magnetic abrasive flow machining process." ***Materials and Manufacturing Processes***.(2022) **Impact Factor: 4.783 (Q2)**
4.	Singh, Aswani Kumar, Varun Sharma, and Pulak M. Pandey. "Predictive model for cutting forces and specific cutting energy in ultrasonic-assisted grinding process: a mechanistic approach." ***The International Journal of Advanced Manufacturing Technology*** (2022): 1-17. https://doi.org/10.1007/s00170-022-10068-8 **Impact Factor: 3.563 (Q2)**
5.	Singh, Aswani Kumar, and Varun Sharma. "Multi-objective optimization of grinding and vibration parameters of ultrasonic-assisted grinding with ultrasonically atomized novel green cutting fluid of Nimonic 80A." ***Journal of the Brazilian Society of Mechanical Sciences and Engineering*** 44, no. 9 (2022): 1-20. https://doi.org/10.1007/s40430-022-03728-z **Impact Factor: 2.361 (Q2)**
6.	Singh, R. and Sharma, V., 2022. Investigations on sintering mechanism of nano tungsten carbide powder based on molecular dynamics simulation and experimental validation. ***Advanced Powder Technology***, *33*(9), p.103724. https://doi.org/10.1016/j.apt.2022.103724 **Impact Factor: 4.96 (Q1)**
7.	Singh, R. and Sharma, V., 2022. Experimental investigations into tribological and machining characteristics of Al2O3 and ZrO dispersed Jatropha oil-based nanofluids. ***Journal of the Brazilian Society of Mechanical Sciences and Engineering***, *44*(8), pp.1-22. https://doi.org/10.1007/s40430-022-03661-1 **Impact Factor: 2.361 (Q2)**
8.	Kumar, Mohit, Shubham Shankar Mohol, and **Varun Sharma**. "A computational approach from design to degradation of additively manufactured scaffold for bone tissue engineering application." ***Rapid Prototyping Journal*** ahead-of-print (2022). https://doi.org/10.1108/RPJ-12-2021-0336 **Impact Factor: 4.043 (Q2)**
9.	Singh, Rohit, and **Varun Sharma**. "Experimental investigation for cutting performance of cemented carbide cutting insert developed through microwave sintering." ***International Journal of Refractory Metals and Hard Materials*** 106 (2022): 105867. https://doi.org/10.1016/j.ijrmhm.2022.105867 **Impact Factor: 4.804 (Q1)**
10.	Singh, Aswani Kumar, and **Varun Sharma**. "A comparative appraisal of sustainable strategy in Ultrasonic Assisted Grinding of Nimonic 80A using novel green atomized cutting fluid." ***Sustainable Materials and Technologies*** 32 (2022): e00423. https://doi.org/10.1016/j.susmat.2022.e00423 **Impact Factor: 10.681 (Q1)**
11.	Singh, Ramandeep, and **Varun Sharma**. "Experimental investigations into tribological and machining characteristics of Al_2O_3 and ZrO dispersed Jatropha oil-based nanofluids." ***Journal of the Brazilian Society of Mechanical Sciences and Engineering*** 44, no. 8 (2022): 1-22. https://doi.org/10.1007/S40430-022-03661-1 **Impact Factor: 2.361 (Q2)**
12.	Singh, Ramandeep, and **Varun Sharma**. "Machining induced surface integrity behavior of nickel-based superalloy: Effect of lubricating environments." ***Journal of Materials Processing Technology*** (2022): 117701. https://doi.org/10.1016/j.jmapro.2022.01.003 **Impact Factor: 6.162 (Q1)**
13.	Naik, Dungavath Narayana Swamy, and **Varun Sharma**. "Thermophysical investigations of Mango seed oil as a novel cutting fluid: A sustainable approach towards waste to value addition." ***Journal of Manufacturing Science and Engineering*** (2022): 1-48. https://doi.org/10.1115/1.4054002

	Impact Factor: 3.952 (Q2)
14.	Kumar, Mohit, Souvik Ghosh, Viney Kumar, **Varun Sharma**, and Partha Roy. "Tribo-mechanical and biological characterization of PEGDA/bioceramics composites fabricated using stereolithography." ***Journal of Manufacturing Processes*** 77 (2022): 301-312. **Impact Factor: 5.684 (Q1)**
15.	Singh, Ramandeep, and **Varun Sharma**. "Experimental investigations into sustainable machining of Hastelloy C-276 under different lubricating strategies." ***Journal of Manufacturing Processes*** 75 (2022): 138-153. https://doi.org/10.1016/j.jmapro.2022.01.003 **Impact Factor: 5.684 (Q1)**
16.	Rohit Singh and **Varun Sharma**. "CFD based study of fluid flow and heat transfer effect for novel turning tool configured with internal cooling channel." ***Journal of Manufacturing Processes*** 73 (2022): 164-176. https://doi.org/10.1016/j.jmapro.2021.10.063 **Impact Factor: 5.684 (Q1)**
2021	
17.	Nitin Dixit, **Varun Sharma**, and Pradeep Kumar. "Development and characterization of xanthan gum-based abrasive media and performance analysis using abrasive flow machining." ***Journal of Manufacturing Processes*** 67 (2021): 101-115. https://doi.org/10.1016/j.jmapro.2021.04.053 **Impact Factor: 5.684 (Q1)**
18.	Nitin Dixit, **Varun Sharma**, and Pradeep Kumar. "Research trends in abrasive flow machining: A systematic review." ***Journal of Manufacturing Processes*** 64 (2021): 1434-1461. https://doi.org/10.1016/j.jmapro.2021.03.009 **Impact Factor: 5.684 (Q1)**
19.	Nitin Dixit, **Varun Sharma**, and Pradeep Kumar. "Experimental investigations into abrasive flow machining (AFM) of 3D printed ABS and PLA parts." ***Rapid Prototyping Journal*** ISSN: 1355-2546 (2021). http://doi.org//10.1108/RPJ-01-2021-0013 **Impact Factor: 4.043 (Q2)**
20.	Anurag Deepak, Dinesh Kumar, and **Varun Sharma**. "Developing an effectiveness index for biomedical waste management in Indian states using a composite indicators approach." ***Environmental Science and Pollution Research*** 28 (2021): 64014–64029. https://doi.org/10.1007/s11356-021-13940-4 **Impact Factor: 5.10 (Q2)**
21.	Ramandeep Singh, Neetesh Kumar Sah, **Varun Sharma**. "Development and characterization of unitary and hybrid Al_2O_3 and ZrO dispersed Jatropha oil-based nanofluid for cleaner production." ***Journal of Cleaner Production*** 317 (2021): 128365. https://doi.org/10.1016/j.jclepro.2021.128365 **Impact Factor: 11.072 (Q1)**
22.	Neetesh Kumar Sah, Ramandeep Singh, **Varun Sharma**. "Experimental investigations into thermophysical, wettability and tribological characteristics of ionic liquid-based metal cutting fluids." ***Journal of Manufacturing Processes*** 65 (2021): 190–205. https://doi.org/10.1016/j.jmapro.2021.03.019 **Impact Factor: 5.684 (Q1)**
23.	Neha Choudhary, Anish Kumar, **Varun Sharma** and Pradeep Kumar. "Barriers in adoption of additive manufacturing in medical sector supply chain." ***Journal of Advances in Management Research*** 18 (2021): 637-660. https://doi.org/10.1108/JAMR-12-2020-0341 **Citescore: 5.0 (Q3)**
24.	Neha Choudhary, **Varun Sharma** and Pradeep Kumar. "Reinforcement of polylactic acid with bioceramics (alumina and YSZ composites) and their thermomechanical and physical properties for biomedical application." ***Journal of Vinyl and Additive Technology*** 27 (2021): 612-625. https://doi.org/10.1002/vnl.21837

	Impact Factor: 2.297 (Q2)
25.	R. Durgaprasad Reddy, Haytham Elgazzar, and **Varun Sharma**. "Investigations of personalized and sustainable approach of oral drug delivery systems through additive manufacturing" ***Rapid Prototyping Journal*** ISSN: 1355-2546. https://doi.org/10.1108/RPJ-09-2021-0240. **Impact Factor: 4.043 (Q2)**
26.	Aswani Kumar Singh and **Varun Sharma**. "Thermo-physical and tribological characteristics of ionic liquid-based rice bran oil as green cutting fluid." ***Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology*** (2021): 13506501211046154. https://doi.org/10.1177%2F13506501211046154 **Impact Factor: 1.77 (Q3)**
27.	Rohit Singh and **Varun Sharma**. "Nano tungsten carbide interactions and mechanical behaviour during sintering: A molecular dynamics study." ***Computational Materials Science*** 197 (2021): 110653. https://doi.org/10.1016/j.commatsci.2021.110653 **Impact Factor: 3.300 (Q2)**
28.	Rohit Singh and **Varun Sharma**. "Numerical modelling of residual stresses during orthogonal cutting of Ti6Al4V using internally cooled cutting inserts." ***Journal of Manufacturing Processes*** 65 (2021): 502-511. https://doi.org/10.1016/j.jmapro.2021.03.042 **Impact Factor: 5.684 (Q1)**
29.	Mohit Kumar and **Varun Sharma**. "Additive manufacturing techniques for the fabrication of tissue engineering scaffolds: a review." ***Rapid Prototyping Journal*** 27.6 (2021): 1230-1272. https://doi.org/10.1108/RPJ-01-2021-0011 **Impact Factor: 4.043 (Q2)**
30.	Shubham Shankar Mohol and **Varun Sharma**. "Functional applications of 4D printing: A review." ***Rapid Prototyping Journal*** ISSN: 1355-2546. (2021). https://doi.org/10.1108/RPJ-10-2020-0240 **Impact Factor: 4.043 (Q2)**
31.	**Varun Sharma**, S. K. Moinuddin, Archita Choudhary, Pramod Kumar, Prateek Kala, Yasmin Sultana, Rahul Shukla, and Dalip Kumar. "Investigations of process parameters during dissolution studies of drug loaded 3D printed tablets." ***Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*** 235.5 (2021): 523-529. https://doi.org/10.1177/0954411921993582 **Impact Factor: 1.617 (Q4)**
32.	Rishi Parvanda, Prateek Kala, and **Varun Sharma**. "Bibliometric Analysis-Based Review of Fused Deposition Modeling 3D Printing Method (1994–2020)." ***3D Printing and Additive Manufacturing*** (2021). https://doi.org/10.1089/3dp.2021.0046 **Impact Factor: 5.449 (Q2)**
2020	
33.	Aswani Kumar Singh, Amresh Kumar, **Varun Sharma**, and Prateek Kala. "Sustainable techniques in grinding: State of the art review." ***Journal of Cleaner Production*** 269 (2020): 121876. https://doi.org/10.1016/j.jclepro.2020.121876 **Impact Factor: 11.072 (Q1)**
34.	R Durgaprasad Reddy and **Varun Sharma**. "Additive manufacturing in drug delivery applications: A review." ***International Journal of Pharmaceutics*** 589 (2020):119820 https://doi.org/10.1016/j.ijpharm.2020.119820 **Impact Factor: 6.510 (Q1)**
35.	Rohit Singh and **Varun Sharma**. "Molecular dynamics study of tensile behaviour for cold and linear friction welded single crystal tungsten." ***Journal of Molecular Graphics and Modelling*** 99 (2020): 107655. https://doi.org/10.1016/j.jmgm.2020.107655 **Impact Factor: 2.942 (Q2)**

36.	**Varun Sharma**, Pulak Mohan Pandey, Uday Sankar Dixit, Anish Roy, and Vadim V. Silberschmidt. "Finite element simulations of conventional and ultrasonically assisted turning processes with plane and textured cutting inserts." ***Journal of Micromanufacturing*** 3.1 (2020): 54-68. https://doi.org/10.1177/2516598419878022
37.	Nitish P. Gokhale, Prateek Kala, **Varun Sharma**, and Murali Palla. "Effect of deposition orientations on dimensional and mechanical properties of the thin-walled structure fabricated by tungsten inert gas (TIG) welding-based additive manufacturing process." ***Journal of Mechanical Science and Technology*** 34.2 (2020): 701-709. https://doi.org/10.1007/s12206-020-0115-6 **Impact Factor: 1.81 (Q3)**
2019	
38.	Nitish P. Gokhale, Prateek Kala, and Varun Sharma. "Thin-walled metal deposition with GTAW welding-based additive manufacturing process." ***Journal of the Brazilian Society of Mechanical Sciences and Engineering*** 41.12 (2019): 1-12. https://doi.org/10.1007/s40430-019-2078-z **Impact Factor: 2.360 (Q2)**
39.	Varun Sharma, and Pulak M. Pandey. "Mechanistic based cutting force model during ultrasonic assisted turning with self-lubricating cutting inserts." ***Journal of Advanced Manufacturing Systems*** 18.01 (2019): 133-155. https://doi.org/10.1142/S0219686719500070 **Citescore: 2.5 (Q4)**
2018	
40.	Sharma, Varun, and Pulak M. Pandey. "Experimental investigations and statistical modeling of surface roughness during ultrasonic-assisted turning with self-lubricating cutting inserts." ***Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*** 232.6 (2018): 709-722. https://doi.org/10.1177/0954408917738127 **Impact Factor: 1.620 (Q3)**
2017	
41.	Prateek Kala, Pulak M. Pandey, Girish C. Verma, and Varun Sharma. "Understanding flexible abrasive brush behavior for double disk magnetic abrasive finishing based on force signature." ***Journal of Manufacturing Processes*** 28 (2017): 442-448. https://doi.org/10.1016/j.jmapro.2017.04.010 **Impact Factor: 5.684 (Q1)**
42.	Varun Sharma, and Pulak Mohan Pandey. "Geometrical design optimization of hybrid textured self-lubricating cutting inserts for turning 4340 hardened steel." ***The International Journal of Advanced Manufacturing Technology*** 89.5 (2017): 1575-1589. https://doi.org/10.1007/s00170-016-9163-6 **Impact Factor: 3.56 (Q2)**
43.	Uday Sankar Dixit, V. Yadav, Varun Sharma, Pulak M Pandey, Anish Roy, and Vadim V. Silberschmidt. "Estimation of cutting forces in conventional and ultrasonic-vibration assisted turning using inverse modelling." ***International Journal of Additive and Subtractive Materials Manufacturing*** 1.3-4 (2017): 265-289. http://doi.org/10.1504/IJASMM.2017.089923
44.	Prateek Kala, Varun Sharma, and Pulak M. Pandey. "Surface roughness modelling for double disk magnetic abrasive finishing process." ***Journal of Manufacturing Processes*** 25 (2017): 37-48. https://doi.org/10.1016/j.jmapro.2016.10.007

	Impact Factor: 5.684 (Q1)
2016	
45.	**Varun Sharma** and Pulak M. Pandey. "Recent advances in ultrasonic assisted turning: A step towards sustainability." ***Cogent Engineering*** 3.1 (2016): 1222776. https://doi.org/10.1080/23311916.2016.1222776 **Citescore: 3.1 (Q2)**
46.	**Varun Sharma** and Pulak M. Pandey. "Recent advances in turning with textured cutting tools: a review." ***Journal of Cleaner Production*** 137 (2016): 701-715. https://doi.org/10.1016/j.jclepro.2016.07.138 **Impact Factor: 11.072 (Q1)**
47.	**Varun Sharma** and Pulak M. Pandey. "Comparative study of turning of 4340 hardened steel with hybrid textured self-lubricating cutting inserts." ***Materials and Manufacturing Processes*** 31.14 (2016): 1904-1916. https://doi.org/10.1080/10426914.2015.1127951 **Impact Factor: 4.616 (Q2)**
48.	**Varun Sharma** and Pulak M. Pandey. "Optimization of machining and vibration parameters for residual stresses minimization in ultrasonic assisted turning of 4340 hardened steel." ***Ultrasonics*** 70 (2016): 172-182. https://doi.org/10.1016/j.ultras.2016.05.001 **Impact Factor: 4.0 (Q1)**
49.	**Varun Sharma**, Girish C. Verma, and Pulak M. Pandey. "Magnetic Abrasive Finishing Process: State of the Art." ***International Journal of Applied Engineering Research*** 10 (2015): 27601-27607.

International Conferences

2021	
1.	Ramandeep Singh and Varun Sharma. "Experimental Investigations into Ionic Liquid-Based Nanofluids for Machining Difficult-to-Cut Materials." **In *ASME International Mechanical Engineering Congress and Exposition***, 85567 (2021): V02BT02A062. ***American Society of Mechanical Engineers*** https://doi.org/10.1115/IMECE2021-73071 **ASME 2021 International Mechanical Engineering Congress and Exposition** **November 1–5, 2021, Virtual, Online**
2.	Aswani Kumar Singh and **Varun Sharma**. "Comparative Life Cycle Assessment of Various Grinding Strategies for Nickel Base Superalloys." In ***ASME International Mechanical Engineering Congress and Exposition***, vol. 85567, p. V02BT02A063. American Society of Mechanical Engineers, 2021. https://doi.org/10.1115/IMECE2021-73073 **ASME 2021 International Mechanical Engineering Congress and Exposition** **November 1–5, 2021, Virtual, Online**
2020	
3.	Anurag Deepak, **Varun Sharma**, Dinesh Kumar. "Study of biomedical waste management performance indicators in Indian states." ***Recent Advances in Operations Management Applications: Proceedings of CIMS 2020,*** pp. 209-222, Springer, Singapore 2022. **International Conference of Industrial and Manufacturing System (CIMS 2020),** Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab, Oct 09-11, 2020.
2019	
4.	Lokesh Kumar Patel, Aswani Kumar Singh, **Varun Sharma**, and Prateek Kala. "Analysis of a hybrid ultrasonic horn profile using finite element analysis." ***Materials Today: Proceedings*** 41 (2021): 772-779.

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