

Dr. Ravinder Pal Singh (PhD)

Assistant Professor
CAD/CAM,
National Institute of Advanced Manufacturing Technology,
Ranchi- INDIA

Email: rpsingh@niamt.ac.in, ravinderpalsingh89@gmail.com,

Mobile: +918059166560, 8708940828

EDUCATION			
Year	Degree	Discipline	Institution
2020	PhD	Mechanical	IIT Delhi
2014	M Tech.	CAD/CAM	Maharishi Markandeshwar University- Mullana, Haryana
2010	B Tech.	Mechanical Engineering	S.S.I.E.T – Derabassi, Punjab Technical University, Jalandhar
2006	12 th	PCM	Army School, Ambala Cantt
2004	10 th	-	Army School, Ambala Cantt
ACADEMIC EXPERIENCE			
Dates	Title	Institution	
2020 onwards	Assistant Professor	Maharishi Markandeshwar (Deemed to be University), Mullana	
2010-2016	Assistant Professor	Maharishi Markandeshwar (Deemed to be University), Mullana	
KEY SKILLS			
Problem Solving and engineering skill (Materials/Manufacturing Optimization)			
Computer Literacy (MS Office, MATLAB, Minitab)			
Mechanical Design (AutoCAD, Solid work)			
Excellent Report Writing Skills (Technical Reports and Research Proposals)			
PUBLICATIONS			
International Journal Articles		20	
TEACHING INTERESTS		Additive Manufacturing, CAD/CAM, Non-conventional Manufacturing processes, Optimization Techniques, Industry 4.0,	
Number of Master dissertation supervised		1	

FDP/STP
Organised

1. *Emerging Trends in Mechanical Engineering, Sponsored by AICTE-ISTE 24-29 May-2021, Department of Mechanical Engineering, MMDU*

Patent

1. Patent Name: An Automatic Tri-axial Rotary Ultrasonic Bone Drilling Machine
Applicants: **Ravinder Pal Singh**, Pulak M Pandey, Dr. Asit Mridha, Dr. Ravi Gupta
Date of Filing: 01/08/2019; Date of Publication: 05/02/2021
Patent Application number: **201911031205**

2. Patent Name: Development of carbon/jute porcine hybrid unsaturated polyester
Applicants: **Ravinder Pal Singh**, Iti Dikshit, Dr N K Batra, Dr. Gian Bhushan
Date of Filing: 12/01/2022;
Patent Application number: **202211001655**

Research Publications

International SCI Publication

1. A. Jain, A. Mishra, V. Tiwari, G. Singh, **R. P. Singh**, and S. Singh, "Deformation Measurement of a SS304 Stainless Steel Sheet Using Digital Image Correlation Method," *Photonics*, vol. 9, no. 12, **2023**, doi: 10.3390/photonics9120912.
2. A. Raj, J. P. Misra, **R. P. Singh**, G. Singh, S. Sharma, and S. M. Eldin, "Performance analysis of WEDM during the machining of Inconel 690 miniature gear using RSM and ANN modeling approaches," *Rev. Adv. Mater. Sci.*, vol. 62, no. 1, p. 20220288, **2023**, doi: 10.1515/rams-2022-0288.
3. Raj Agarwal, **Ravinder Pal Singh**, Vishal Gupta, Jaskaran Singh. "Influence of cutting force on temperature, microcracks and chip morphology during rotary ultrasonic bone drilling: An in-vitro study" *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, Vol 44(1). pp-1-10 (**2022**)
4. **Ravinder Pal Singh**, Pulak Mohan Pandey, Muzamil Ahmad Mir, Asit Ranjan Mridha. "Thermal changes during drilling in human femur by rotary ultrasonic bone drilling machine: A histologic and ultrastructural study" *Journal of Biomedical Materials Research Part B: Applied Biomaterials*, Vol 110(5). pp-1023-1033 (**2022**)
5. **Ravinder Pal Singh**, Vishal Gupta, Pulak Mohan Pandey, Asit Ranjan Mridha. "Effect of drilling techniques on microcracks and pull-out strength of cortical screw fixed in human tibia: An in-vitro study." *Annals of Biomedical Engineering*, Vol 49(1). 382-393 (**2021**).
6. **Ravinder Pal Singh**, Pulak Mohan Pandey, Asit Ranjan Mridha. "Experimental investigations and statistical modeling of cutting force and torque in rotary ultrasonic bone drilling of human cadaver bone." *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine* Vol 234(2). pp-148-162 (2019)
7. **Ravinder Pal Singh**, Pulak Mohan Pandey, Asit Ranjan Mridha. "An in-vitro study of temperature rise during rotary ultrasonic bone drilling of human bone." *Medical engineering and physics*. Vol 79. pp-33-43 (2020).
8. **Ravinder Pal Singh**, Pulak Mohan Pandey, Asit Ranjan Mridha. "Effects of different drilling techniques on cutting force and temperature in femur, tibia, and fibula: A comparative study." *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine* Vol 234(8). pp-829-842 (2019)
9. Vishal Gupta, **Ravinder Pal Singh**, P M Pandey. "In vitro comparison of conventional surgical and rotary ultrasonic bone drilling techniques *IMechE, Part H:*

Journal of Engineering in Medicine Vol 234(4). pp-398-411 (2019)

**International
SCOPUS
Publication**

1. P. Kumar, M. Sharma, G. Singh, and **R. P. Singh**, "Experimental investigations of machining parameters on turning of Ti6Al4V: optimisation using Taguchi method," *Int. J. Interact. Des. Manuf.*, **2023**, doi: 10.1007/s12008-023-01363-z

2. **Ravinder Pal Singh**, N K Batra, Sahil Dayal. "Influence of machining parameters on surface roughness in AL6063-W composite by wire EDM process: Experimental investigations and process optimization" *Material Today Proceedings* (2022)

3. N K Batra, **Ravinder Pal Singh**, Sahil Dayal. "Experimental investigation and statistical modelling of cutting speed in AL6063-W composite by wire EDM process" *Material Today Proceedings* (2022)

4. Iti Dikshit, **Ravinder Pal Singh**. "Experimental investigations and statistical modeling of specific wear and coefficient of friction in a novel carbon fiber reinforced composite," *International Journal of Surface Engineering and Interdisciplinary Materials Science* (2022)

5. Iti Dikshit, Gian Bhushan, **Ravinder Pal Singh**, " Statistical modeling and optimization of density in a novel carbon/jute fiber reinforced hybrid composite" *Material Today Proceedings* (2022)

6. Mayank Srivastava, Jasvinder Singh, Dipesh Kumar Mishra, **Ravinder Pal Singh** " Review on the various strategies adopted for the polishing of silicon wafer—A chemical perspective" *Material Today Proceedings* (2022)

7. Neeraj Sharma, **Ravinder Pal Singh**, Gurminder Singh " Micro- Drill on Al/SiC Composite by EDD Process: An RSM-MOGO Based Hybrid Approach" *International Journal of Light Weight Materials and Manufacture* (2022) **Accepted**

**International
Conference**

Ravinder Pal Singh, Pulak Mohan Pandey. "Comparison Of Conventional And Ultrasonic Drilling On Cutting Force In Porcine And Human Femur." *Proceedings of the ASME 2020 15th International Manufacturing Science and Engineering Conference MSEC2020*

Study on micro-cracks of pure titanium using Wire EDM through RSM approach" *International conference on Trends in Material Science and Inventive Materials (ICTMIM 2022)*

Book Chapter

Arun Kumar, **Ravinder Pal Singh**, Gurminder Singh, Pulak Mohan Pandey "Role of Additive Manufacturing in Industry 4.0 for Maintenance Engineering. *Applications and challenges of maintenance and safety engineering in industry 4.0*. Hershey, PA: IGI Global (2020)

Raj Agarwal, Jaskaran Singh, Vishal Gupta, **Ravinder Pal Singh** "The Concept of Rotary Ultrasonic Bone Machining during Orthopaedic Surgeries" *Advanced Manufacturing Processes ; CRC press* (2022)