

Curriculum Vitae

Dr. Mohit Kumar (Research Scientist – Specialist II)

Academic Enhancement Department (AED),
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Academic Qualification (Undergraduate Onwards)

S.No.	Degree	Year	Subject	University/Institution	Marks (%/CGPA)
1.	Bachelor of Technology	2012	Mechanical Engineering	Kurukshetra University, Haryana India	72.57%
2.	Master of Technology	2016	Mechanical Engineering (Spl. Welding and Fabrication)	Sant Longowal Institute of Engineering and Technology, Punjab, India	9.42 CGPA
3.	Doctorate of Philosophy	2021	Mechanical Engineering (Spl. Fiber Reinforced Polymer Nanocomposites)	Thapar Institute of Engineering and Technology, Punjab, India NIRF Ranking: 16 th	9.33 CGPA

Ph.D. thesis title, Guide's Name, Institute/Organization/University, Year of Award.

Thesis Title: **“Investigations on the mechanical joints prepared from electron beam cured carbon epoxy nanocomposite laminates”**

Guide's Name: **Dr. J.S. Saini**, Associate Professor, Mechanical Engineering Department, Thapar Institute of Engineering and Technology, Patiala, India.

Dr. H. Bhunia, Professor, Chemical Engineering Department, Thapar Institute of Engineering and Technology, Patiala, India.

Institute/Organization/University: **Thapar Institute of Engineering and Technology, Patiala, India**

Year of Award: **2021**

Work experience (in chronological order)

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1	Assistant Professor	Chandigarh University, Punjab, India	16/09/2021	10/09/2024	15600- 39100+ AGP
2	Teaching Associate	Thapar Institute of Engineering and Technology, Punjab, India	20/07/2020	30/06/2021	NA
3	Senior Research Fellow (in sponsored project by DAE-BRNS, BARC)	Thapar Institute of Engineering and Technology, Punjab, India	01/09/2019	31/03/2021	NA
4	Junior Research Fellow (in sponsored project by DAE-BRNS, BARC)	Thapar Institute of Engineering and Technology, Punjab, India	01/09/2017	31/08/2019	NA
5	Assistant Professor	Seth Jai Prakash Mukund Lal Institute of Engineering and Technology, Haryana, India	29/08/2016	31/08/2017	NA
6	Sr. Production Engineer	Bimal Aluminiums (P) Ltd., Haryana, India	01/08/2012	12/07/2014	NA

Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant

S.No	Name of Award	Awarding Agency	Year
1	Gold Medal	Academic Achievement in M.Tech	2016
2	Ministry of Human Resources Development fellowship	Ministry of Human Resources Development (MHRD), India	2014-2016
3	Junior and Senior Research Fellowship	Department of Atomic Energy- Board of Research in Nuclear Science (DAE-BRNS), Bhabha Atomic Research Centre (BARC), Mumbai, India	2017-2021
3	Best Teacher Award	Chandigarh University	2022
4	Session Chair	International Conference on Advancements in Simulation and Experimental Techniques in Mechanical Engineering (ICASEME-2022) at Chandigarh University, India	2022

5	Reviewer	Journal of Process Mechanical Engineering”, Part E-SAGE, “Composites and Advance Materials”, SAGE, “Thin Walled Structures”, Elsevier, “Mechanical Systems and Signal Processing”, Elsevier, “Scientific Report” Nature etc.	2022-2024
6	Invited Speaker	International Conference on Eco-Friendly Fibers and Polymeric Materials King Mongkut’s University of Technology North Bangkok, Thailand	2024

Publications (List of papers published in SCI/Scopus Journals)

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1	Mohit Kumar Other authors: Ranvijay Kumar	Material Extrusion-based Additive Manufacturing of Sandwiched Acrylonitrile Butadiene Styrene /Glass Fibres Composites: Machine Learning Approach to Model Tensile Stress	Polymer Composites	--	1-14	2024
2	Mohit Kumar Other authors: K. Singh, H. Bhunia and J. S. Saini	Comparison of different failure criteria in numerical modeling of electron beam cured polymer nanocomposites	Journal of Composite Material	58	533-545	2024
3	Mohit Kumar Other authors: Manveer Rana and Ranvijay Kumar	Fused deposition modelling approach in recycled polypropylene/aluminum powder composites for sustainable development	Applied Science and Engineering Progress	18	1-8	2024
4	Mohit Kumar Other authors: Govind Vashishtha, Babita Dhiman, Sumika Chauhan	Bearing Response Prediction in Hydrothermal Aged Carbon Fiber Reinforced Epoxy Composite Joints using Machine Learning Techniques	Mechanics of Advance Composite Structures	-	1-6	2024

5	Mohit Kumar Other authors: M.M. Saleem, G.S. Malhi	Predictive Analysis of Fused Deposition Modeling of PLA Material Through Machine Learning development	AIP Proceedings	2986	-	2024
6	Mohit Kumar Other authors: Shubham Kumar, Gaurav Arora	Experimental and numerical investigation of high-density CNTs and EPOXY-BNNT composites	Recent Advances in Materials Manufacturing and Machine Learning	58	533-545	2024
7	Mohit Kumar Other authors: Manveer Rana and Ranvijay Kumar	Natural fillers added polymer composites for 3D Printing applications: A Review	Accepted for publication Materials today proceedings	-	-	2024
8	Mohit Kumar Other authors: Manish Sahu, Lakshman Singh	Sensitization studies on low cycle fatigue and cryogenic impact behavior of AISI 304 SS weldments	Accepted for publication AIP conference proceedings	-	-	2024
9	Mohit Kumar Other authors: Manish Sahu, Lakshman Singh	A critical review on Austenitic Steel: Sensitization and Healing	Accepted for publication Materials today proceedings	-	-	2024
10	Mohit Kumar Other authors: Nitin Dhiman, and J. S. Saini	Hygrothermal effect on strength of thermally cured glass epoxy nanocomposite made joints	Journal of Mechanical Engineering Sciences	237	5503-5798	2023
11	Mohit Kumar Other authors: J. S. Saini	Computational analysis of bi- directional carbon fiber/epoxy nanocomposites using different failure criteria	Journal of Process Mechanical Engineering	237	1286-1299	2022

12	Mohit Kumar Other authors: K. Singh and J. S. Saini	Metal inserts for performance improvement in GFRP nanocomposite joints under accelerated aging conditions	Polymer Composites	43	1448-1461	2022
13	Mohit Kumar Other authors: Manish Sahu,	On low cycle fatigue and impact behavior of sensitized AISI 304/304L SS butt weld joints	Under review In Adhesive and Adhesion Sciences	-	-	2024*
14	Mohit Kumar Other authors: J. S. Saini, H. Bhunia and S. Ray Chowdhury	Behavior of mechanical joints prepared from EB cured CFRP nanocomposites subjected to hygrothermal aging under bolt preloads	Applied Composite Materials	28	271-296	2021
15	Mohit Kumar Other authors: J. S. Saini, H. Bhunia and S. Ray Chowdhury	Aging of bolted joints prepared from electron beam cured MWCNT based nanocomposites with variable torques	Polymer Composites	42	4082-4104	2021
16	Mohit Kumar Other authors: J. S. Saini and H. Bhunia	Investigations on MWCNT embedded carbon/epoxy composite joints subjected to hygrothermal aging under bolt preloads	Fibers and Polymers	22	1957-1975	2021
17	Mohit Kumar Other authors: J. S. Saini and H. Bhunia	The effect of radiation curing on mechanical joints prepared from carbon nanotubes added carbon/epoxy laminates	Polymer Composites	41	4260-4276	2020

18	Mohit Kumar Other authors: J. S. Saini and H. Bhunia	Performance of Mechanical Joints Prepared from Carbon- Fiber-Reinforced Polymer Nanocomposites under Accelerated Environmental Aging	Journal of Materials Engineering and Performance	29	7511-7525	2020
19	Mohit Kumar Other authors: J. S. Saini and H. Bhunia	Investigations on the strength of mechanical joints prepared from carbon fiber laminates with addition of carbon nanotubes	Journal of Mechanical Science and Technology	34	1059-1070	2020

Books published by a single author or as an editor

1	Natural Products Inspired Scaffold - Applications in Tissue Engineering (Edited Book)	Mohit Kumar Other Editors: Ajay Sharma, Deepika Kathuria	Springer	2024
2	Harnessing Fiber-based Natural Biomaterials: For Tissue Engineering and Regeneration (Edited Book)	Mohit Kumar Other Editors: Manoj Kumar, Sanjay Mavink-ere Rangappa, Suchart Siengchin, Ajay Sharma	Elsevier (Accepted)	2024*
3	How to Engineer strong connections: Exploring Mechanical, Adhesive, and Hybrid joints in FRP composites (Edited book)	Mohit Kumar Other Editors: Manoj Kumar, Sanjay Mavink-ere Rangappa, Suchart Siengchin,	Elsevier (Accepted)	2024*

Detail of patents

S. No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
1	Scrap Crushing Apparatus with Dual- Sided Crushing Mechanism	Agarwal, Raj Mr.; Babbar, Atul Dr; Bhargave, Harshita Mrs.; Bhaumik, Swapan Prof. (Dr.); Dhawan, Vikas Dr.; Kumar, Mohit Dr. ; Dhiman, Vishal Mr.; Gajghate, Sameer Sheshrao	2021105724	17/08/2021	AusPat	Granted
2	A Solar Panel & Wind Turbine based Hybrid Energy Storage System	Babbar, Atul; Bhargave, Harshita Mrs.; Bhaumik, Swapan Prof. (Dr.); Chohan, Jasgurpreet Singh Dr.; Kumar, Mohit Dr. ; Dhiman, Vishal Mr.; Dosad, Jeevan Singh Mr.; Gajghate, Sameer Sheshrao	2021106227	20/08/2021	AusPat	Granted
3	Design of Warning system for car control based on nearby approaching objects	Gaurav Arora, Mohit Kumar, Abhimanyu gupta, Harsimran kaur	Filed	11/04/2021	Indian Patent	Filed

Books Chapters/articles

S.No	Title	Author's Name	Publisher	Year of Publication
1	Advancement of abrasive-based nano-finishing processes: Principle, challenges and current applications (Book Chapter)	Mohit Kumar Other Editors: Manoj Kumar, Ankit Sharma, Atul Babbar	CRC press	2024
2	Focus on Carbon Fiber Reinforced Composites Manufacturing and Properties (Book Chapter)	Mohit Kumar Other Editors: Jarnail Singh	Springer	2024

3	Radiation Curing of Fiber Reinforced Polymer Composite Based Mechanical Joints”. In: Chowdhury, S.R. (eds) Applications of High Energy Radiations. Materials Horizons: From Nature to Nanomaterials (Book Chapter)	Mohit Kumar Other Authors: J.S. Saini, and H. Bhunia	Springer	2023
4	Electrospinning Based Nanofibers for 3D Printing Applications (Book Chapter)	Mohit Kumar Other Authors: Ranvijay Kumar, Rashi Tyagi, and Rupinder Singh	Reference Module in Materials Science and Materials Engineering, Elsevier	2022

List of Conferences attended

- i. International Conference on “CONFERENCE ON PRODUCTION AND INDUSTRIAL ENGINEERING” (CPIE-2016) 19-21st December 2016, at National Institute of Technology, Jalandhar, Punjab, India.
Paper presentation: Sensitization and low cycle fatigue behavior of thermally aged AISI 304 SS butt joints.
- ii. International Conference on “INTERNATIONAL CONFERENCE ON ENGINEERING MATERIALS METALLURGY & MANUFACTURING” (ICEMMM-2018) 15-16th February 2018, at SSN college of Engineering, Chennai, Tamilnadu, India.
Paper presentation: A sensitization studies on the metallurgical and corrosion behavior of AISI 304 SS welds.
- iii. International Conference on “NEW FRONTIERS IN ENGINEERING, SCIENCE & TECHNOLOGY (NFEST-2019) 18-22nd February 2019, at National Institute of Technology, Kurukshetra, Haryana, India.
Paper presentation: Effect of post weld thermal aging (PWTA) sensitization on micro-hardness and corrosion behavior of AISI 304 weld joints.
- iv. International Conference on “INTERNATIONAL CONFERENCE ON MATERIALS SCIENCE AND SUSTAINABLE MANUFACTURING TECHNOLOGY (ICMSSMT-2022) 20-21st May 2022, at Coimbatore, Tamilnadu, India.
Paper presentation: Improvement in corrosion resistance of AISI 316L stainless steel weld cladding using GTA remelting technique.
- v. International Conference on “3rd INTERNATIONAL CONFERENCE ON FUNCTIONAL MATERIALS, MANUFACTURING AND PERFORMANCES (ICFMMP-2022) 29-30th July 2022, at Division of Research and Development, Lovely Professional University, Punjab, India.
Paper presentation: Predictive Analysis of Fused Deposition Modeling of PLA Material Through Machine Learning.

- vi. International Conference on “ADVANCEMENTS IN SIMULATION AND EXPERIMENTAL TECHNIQUES IN MECHANICAL ENGINEERING (ICASEME-2022)” in Mechanical and Allied Industry (2022) 12-13th Oct, 2022, at Department of Mechanical Engineering, Chandigarh University, Punjab, India.
- vii. International Conference on “ECO-FRIENDLY FIBERS AND POLYMERIC MATERIALS” 19-20th Feb, 2024, at King Mongkut’s University of Technology North Bangkok, Thailand.

Other Information

- Master of technology (M. Tech) student guided – 4
- Capable of doing curve fitting, peak analysis, statistics, signal analysis, and image handling on Origin Data Pro 16 graphing software.
- Expertise in MS Word, MS PowerPoint, and MS Excel.
- Certified in design software like CREO, Solid Works, and AutoCAD.
- Expert in reference handling software such as Endnote and Mendeley that can store, organize and search all your references from just one library.
- Skilled in Data Handling, Statistical, and analytical tools such as Minitab.
- Expertise in ANSYS Workbench especially in modeling and simulations of composite laminates.

References

✚ **Dr. Jaswinder Singh Saini**
Associate Professor,
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✚ **Dr. Santosh K. Tiwari**
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I certify that the information furnished above are true to the best of my knowledge and belief

Place: Kurukshetra, Haryana, India



Mohit Kumar