

Curriculum Vitae

Dr. Himanshu Kumar

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Web of Science: [GZB-2465-2022](#)



Total No of Publication	Citation	H-Index	SCI	Scopus	Book Chapters	Conference Proceedings	Conference Presentation
14	82	6	7	2	4	1	5

Source: Google Scholar

Experience

Jan 2024 – Dec 2024	Project Associate Center for Strategic and Sustainable Infrastructure, Indian Institute of Technology Jammu, Jagti, P.O. Nagrota, J&K, India
Aug 2023 – Nov 2023	Early Post-Doctoral Fellow Indian Institute of Technology Jammu, Jagti, P.O. Nagrota, J&K, India
Aug 2017 – Dec 2018	Assistant Professor Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai, Tamil Nadu, India
Jul 2014 – Jul 2015	Lab Instructor Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Chennai, Tamil Nadu, India

Education

Name of Exam	School/ University	Subject of study	Year of Passing	% of marks/ CGPA
Ph.D.	Indian Institute of Technology Jammu	Mechanical Engineering	Oct 2023	8.6
M. S.	National Cheng Kung University, Tainan, Taiwan (R.O.C)	Mechanical Engineering	Jun 2017	88.13 %
B. Tech.	Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Avadi, Chennai, T.N, India	Mechanical Engineering	Apr 2014	91.60 %
H.S.C.	Board of high school and Intermediate Education Uttar Pradesh	Science	May 2010	67.20 %
S.S.L.C.	Board of high school and Intermediate Education Uttar Pradesh	Science	May 2008	64.83 %

Research Interest

- Thermal Spray Coatings
- Tribology
- Materials for extreme environments
- High Entropy alloys
- Surface Engineering
- Mechanical Testing

Teaching Interest

- Manufacturing Technology
- Mechatronics
- Introduction to material science
- Surface Engineering
- Additive Manufacturing
- Modern Engineering Materials

Fellowship

Aug 2023 – Nov 2023	Institute's Early Career Post-Doctoral Fellowship Funding Agency: Indian Institute of Technology Jammu, India
Dec 2018 – Aug 2023	Half-Time Research Assistantship (HTRA) Funding Agency: Ministry of Human Resource Development, India
Aug 2015 – May 2017	Distinguished International Student Fellowship Funding Agency: Ministry of Education Taiwan Government, Republic of China

Awards/Recognition

2014	A cash award of INR 3,80,000 towards full tuition fee refund scholarship Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology Chennai
2014	University Gold Medal Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology Chennai

Professional Membership

Life Member	The Indian Thermal Spray Association Membership No: ITSA/LM/25
Life Member	Indian Institute of Metals Membership No: LM01-58936

Equipment Operating Skills

S. No.	Description of Equipment	Level
1.	Thermal Spray System, Make- Oerlikon Metco, Model- IRC5, and Robotics System Make- ABB India, Model- IRB 4400	Professional
2.	Wire arc additive manufacturing system, Make- Fronius, Model- TPS400i with Kawasaki robotic system	Intermediate
3.	Microhardness Tester, Make- Innova Test, Model- Falcon 400	Professional
4.	Tribometer, Make- Ducom Instruments, Model- POD 4.0	Professional
5.	Multipurpose Servohydraulic Universal Testing Machine, Make- walter+bai, Model- LFV 100kN	Intermediate
6.	Optical Microscope (OM), Make- OLYMPUS, Model- DSX510	Professional
7.	Finite element scanning electron microscopy (FESEM), Make- JEOL, Model- JSM7900F	Professional
8.	Energy Dispersive Electron Spectroscopy (EDS), Make- Oxford Instruments, Model- X-mas	Professional
9.	X-ray Diffraction Spectroscopy (XRD), Make-Empyrean, Model- Malvern Panalytical	Professional
10.	X-ray photo electron spectroscopy (XPS), Make- Thermo Scientific™, Model- Nexa™	Intermediate
11.	High Resolution Transmission Electron Microscopy (HRTEM), Make- JEOL, Model- NEOARM, JEM-ARM200F	Intermediate
12.	Electron Backscattered Diffraction (EBSD), Make, Oxford Instruments	Intermediate

Software Skills

S. No	Particular	Level
1.	CATIA v6	Intermediate
2.	Sold Works	Intermediate

3.	ZEMAX Optics Studio	Intermediate
4.	Pro-E	Intermediate
5.	Matlab	Intermediate

Extra Circular Activities

Short term courses and Faculty development program (FDP)

S. No	Topic	Host Organization	Duration
1.	GIAN course on "Atomistic modelling for microstructural evolution".	Indian Institute of Technology Bombay, Maharashtra, India	18 Sept – 1 Oct 2022
2.	Introduction to the principle of an AFM	Park Systems	31 Jan 2022
3.	Orientation programme on "Advance materials and processes for sustainable intelligent manufacturing".	DAV Institute of Engineering and Technology, Jalandhar, Punjab, India	7 – 12 Jun 2021
4.	Short term course on "Mechatronics, Instrumentation, Intelligent and Bio-Inspired Materials".	Indian Institute of Information Technology Bhagalpur, Bihar, India	10 – 14 Feb 2021
5.	Faculty development program on "Advanced Materials & Engineering".	College of Engineering and Management, Kolaghat, West Bengal	22 – 26 Jan 2021
6.	Faculty development program on "Research Methodology".	Indian Institute of Information Technology, Nagpur, Maharashtra, India	1 – 5 Dec 2020
7.	Faculty development program on "Tribology in Design and Manufacturing".	Indian Institute of Technology Jammu, Jammu & Kashmir, India	23 – 27 Nov 2020
8.	Faculty development program on "Sustainability Engineering".	Indian Institute of Technology Jammu, Jammu & Kashmir, India	26 – 30 Oct 2020
9.	Short term training programme on "Recent advances in Tribology and Surface Engineering: Series 2 of 4- Tribology of machine Components and Applied Tribology".	Saintgits College of Engineering, Kottayam, Kerla, India	14 – 19 Sept 2020
10.	Short term training programme on "Recent advances in Tribology and Surface Engineering: Series 3 of 4- Introduction to Special topics like- Nano tribology, Bio tribology, Space Tribology, Biomimetics and Tribology in Industry".	Saintgits College of Engineering, Kottayam, Kerla, India	12 – 17 Oct 2020
11.	Short term course on "Laser Micromanufacturing, Surface and Material Processing".	Indian Institute of Technology Indore, Madhya Pradesh, India	15 – 17 Jul 2020
12.	Faculty development program on "3D Printing & Design".	Indian Institute of Technology Jammu, Jammu & Kashmir, India	9 – 13 Mar 2020
13.	Faculty development program on "Advanced Composites: Design and Manufacturing".	Indian Institute of Technology Jammu, Jammu & Kashmir, India	26 – 30 Dec 2019
14.	GIAN course on "Fusion Welding Processes and Methodologies".	Indian Institute of Technology Madras, Tamil Nadu, India	16 – 20 Dec 2019
15.	Short term course on "Tribology in Machine Elements: Fundamental and Recent Advances".	Indian Institute of Technology Jammu, Jammu & Kashmir, India	9 – 13 Dec 2019

Webinar and Workshop

S. No	Particulars	Date
1.	Webinar on Additive Manufacturing: Reinventing design and Manufacturing” organized by Mc Graw Hill.	1 Jul 2021
2.	Pre conference workshop on Digital Aerospace Manufacturing, organized by Indian Space Research Organization (ISRO).	16 Dec 2021
3.	Workshop on “XRD for Research and Orthogonal Data Analysis” organized by Malvern Panalytical.	6-7 Jul 2021
4.	Workshop on “Empowering knowledge on ethical publishing: Mastering the art of identifying predatory, fake and cloned journals” organized by Elsevier research academy.	8 Jun 2022
5.	Workshop on “Effective writing skills for promoting research-what do we need to know?” organized by Elsevier research academy.	13 Dec 2021
6.	Workshop on “Ethics of publication” organized by Elsevier research academy”	23 Nov 2021
7.	Workshop on “360-degree view on research management and academic journal publishing” organized by Elsevier research academy.	12 Nov 2021
8.	Workshop on “Open Science: A multifaceted framework to improve science and health outcomes” organized by Elsevier research academy.	29 Oct 2021
9.	Workshop on “Read Quality-Publish Quality-Write Creativity” organized by Elsevier research academy,	3 Jul 2020
10.	Author workshop jointly organized by Springer Nature and Indian Institute of Technology Jammu.	22 Nov 2019
11.	National webinar on “Implementation of National Education Policy 2020” organized by College of Engineering & Management, Kolaghat, West Bengal	25 Mar 2021
12.	Workshop on “Under actuated robotic systems and control” organized by Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology Chennai.	17 Aug 2013
13.	Workshop on “Overview of Variable Frequency Electrical Drivers, Refrigeration & air-conditioning” organized by Vellore Institute of Technology Vellore.	3 Aug 2013
14.	Workshop on “Micro air-vehicle” organized by Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology Chennai.	10 Jul 2012

Industrial Training/ Projects

6 - 11 Jun 2011	Summer training at EMA India limited, Kanpur, Uttar Pradesh, India
21-30 May 2012	Vocational training at Heavy engineering corporation limited, Ranchi, Jharkhand, India
27 Dec 2013 – 25 Mar 2014	Project entitled “Capacity assessment of broaching tools by time synthesis method” at Addison &Co., Ltd. Sriperumbudur, Tamilnadu, India

Research Output

Book Chapter:

1. Amritbir Singh, **Himanshu Kumar**, and Shiva. S, Additive Manufacturing Introduction, Fundamentals, Types, and Applications, In: Rathee, S., & Srivastava, M. (Eds.). Wire Arc Additive Manufacturing: Fundamental Sciences and Advances (1st ed.). Pages- 1-24, CRC Press. 2024, ISBN: 9781003363415, <https://doi.org/10.1201/9781003363415-1>
2. **Himanshu Kumar**, S.G.K. Manikandan, M. Kamaraj, and S. Shiva, Effect of Laser Surface Melting on Atmospheric Plasma Sprayed High-Entropy Alloy Coatings, In: Kumar, A., Kumar, A., & Kumar, A. (Eds.). Laser-based Technologies for Sustainable Manufacturing (1st ed.). Pages- 207-234, CRC Press. 2023, ISBN: 9781003402398, <https://doi.org/10.1201/9781003402398-9>

3. Mohd Rafiq Parray, **Himanshu Kumar**, Amritbir Singh, Bunty Tomar, and S. Shiva, Synthesis of nanomaterial coatings for various applications, In: Raina, A., Ul Haq, M.I., Victoria, P.I., Mohan, S.R.J., & Anand, A. (Eds.). *Nanomaterials for Sustainable Tribology* (1st ed.). Pages- 167-190, CRC Press. 2023, ISBN: 9781003306276, <https://doi.org/10.1201/9781003306276-11>
4. **Himanshu Kumar**, Chandra Kumar, S. G. K. Manikandan, M. Kamaraj & S. Shiva, Laser Re-Melting of Atmospheric Plasma Sprayed High Entropy Alloy. In: Radhakrishnan, J., Pathak, S. (eds) *Advanced Engineering of Materials Through Lasers*. *Advances in Material Research and Technology*. Pages- 105-127, Springer, Cham. 2022, ISBN: 978-3-031-03830-3, https://doi.org/10.1007/978-3-031-03830-3_5

Journal Publication:

1. **Himanshu Kumar**, S. G. K. Manikandan, M. Kamaraj and S. Shiva, Investigating the high temperature tribological efficacy of AlCoCrFeNiTi high entropy alloy coating, **Journal of Tribology**, Apr 2025, 147(4): 041401, <https://doi.org/10.1115/1.4066863>
2. **Himanshu Kumar**, S. G. K. Manikandan, M. Kamaraj and S. Shiva, High temperature tribological behaviour of atmospheric plasma sprayed CoCrFeNiW_{0.3} + 5 at.% C high entropy alloy coating, **Journal of Material Science**, 2024, 59, Pages- 3904–3918 <https://doi.org/10.1007/s10853-024-09475-x>
3. **Himanshu Kumar**, Gaurav A. Bhaduri, S. G. K. Manikandan, M. Kamaraj and S. Shiva, Effect of Laser Surface Processing on the Microstructure Evolution and Multiscale Properties of Atmospheric Plasma Sprayed High-Entropy Alloys Coating. **Journal of Thermal Spray Technology**, 2023, 32, Pages- 831–850, <https://doi.org/10.1007/s11666-022-01491-0>
4. **Himanshu Kumar**, Gaurav A. Bhaduri, S. G. K. Manikandan, M. Kamaraj and S. Shiva, Effect of Annealing on Microstructural and Tribological Properties of CoCrFeNiW_{0.3} + 5 at.% C High Entropy Alloy. **Journal of Materials Engineering and Performance**, 2023, 32, Pages- 6293–6306, <https://doi.org/10.1007/s11665-022-07547-0>
5. **Himanshu Kumar**, Gaurav A. Bhaduri, S. G. K. Manikandan, M. Kamaraj and S. Shiva, Influence of Annealing on Microstructure and Tribological Properties of AlCoCrFeNiTi High Entropy Alloy Based Coating. **Metals and Materials International**, 2023, 29, Pages- 645–658. <https://doi.org/10.1007/s12540-022-01264-y>
6. **Himanshu Kumar**, Gaurav A. Bhaduri, S. G. K. Manikandan, M. Kamaraj and S. Shiva, Microstructural Characterization and Tribological Properties of Atmospheric Plasma Sprayed High Entropy Alloy Coatings. **Journal of Thermal Spray Technology**, 2022, 31, Pages- 1956–1974, <https://doi.org/10.1007/s11666-022-01422-z>
7. **Himanshu Kumar**, and S. Shiva, Experimental investigation on stir casting of a metal matrix composite material, **Journal of Micromanufacturing**, 2022, 5(2), Pages -101-106, <https://doi.org/10.1177/25165984211015761>
8. **Himanshu Kumar**, R Velu, and E. Balasubramanian, A novel freeform lens design for collimating UV light emitted from an LED with large divergent angle, **Optik**, 2019, 181, Pages- 1039-1048, <https://doi.org/10.1016/j.ijleo.2018.12.057>

References

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Declaration

I affirm that all the aforementioned information is accurate and truthful to the best of my knowledge.

Date: 27/05/2024

Place: Jammu

A handwritten signature in blue ink, appearing to read 'Himanshu', enclosed in a circular scribble with a long horizontal tail extending to the right.

Himanshu Kumar