Dr. SUDEEP KUMAR T.

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Education

	Degree	Year	Institute	Specialization
1	Postdoc	2025	Defence Institute of Advanced Technology	Hydrogen generation
2	PhD	2023	Defence Institute of Advanced Technology	High Entropy Alloys
3	M.Tech	2012	Government Tool Room and Training Centre	Tool Engineering
4	B.E.	2006	University BDT College of Engineering	Mechanical Engineering

Professional Experience

	Date (from-to)	Designation	Organization
1	Aug-2015 to Till date	Assistant Professor	Siddaganga Institute of Technology
2	July 2007 to Aug-2015	Project Leader	CYIENT Limited
3	July-2006 to Jun-2007	Design consultant	MSM Consultancy Services

Positions held

- CoE Coordinator during 2018, 2019, 2023, 2024, and 2025
- Department NAAC Coordinator since 2017
- NBA Coordinator for Criterion-3 during 2018-19 and Criteria-8&9 during 2023-24
- Faculty in charge of Robes committee in the convocation ceremony in 2016,2017
- Halcyon Coordinator since 2016

- Spandana Coordinator since 2016

Affiliations of Professional organizations

- Life Member - Institution of Engineers (India) (M-1533791)
- Life Member - Indian Society for Technical Education (LM124591)
- Life Member - International Association of Advanced Materials, Sweden (855181912847)
- Life Member - International Association of Engineers, Hong Kong (193503)

Awards and Honors

- Received BEST PAPER PRESENTATION award for the oral presentation at the International conference (ICASET-2021).
- Received CERTIFICATE OF BEST PAPER award for the oral presentation at the International conference (ICRDME -2023).
- Outstanding performance award from CYIENT in 2012.
- Best All-Round Associate Award – 2013 from CYIENT in 2013.

Courses Taught

Undergraduate Courses

- Strength of Materials
- Manufacturing Process – II
- Foundations of Mechanical Engg
- Metal Forming Processes
- Machine Tools and Machining Processes
- Computer Aided Design & Analysis-I
- Computer Aided Design & Analysis-II
- Computer Integrated Manufacturing
- Introduction to Mechanical Engineering
- Digital Manufacturing
- Jigs and Fixtures
- Samskrutika Kannada

Research Areas

- Corrosion
- Oxidation
- Electrolysis for Hydrogen generation

Sponsored Projects

Completed Projects: 1

1. Title: Effect of Silver addition on Stress Corrosion Cracking Resistance of Aluminum Alloy AA7085
   Funding Agency: DRDO
   Amount: 71 Lakhs
   Duration: 3 years
   Role: Co-PI

Publications

Journals

1. Sudeep Kumar T., Ayush Sourav, Sushil Yebaji, Lakshay Chauhan, Arvindha Babu, Arout Chelvane, Shanmugasundaram T., “Effect of heat treatment on the oxidation behavior of an AlCoCrFeNi2 near-eutectic high entropy Corrosion Science, Vol 221, 111298 (2023). https://doi.org/10.1016/j.corsci.2023.111298
2. Sudeep Kumar T., Lakshay Chauhan, K. Chakravarthy, Arout Chelvane, Shanmugasundaram T., “The improved galvanic corrosion resistance of a eutectic high entropy alloy through heat treatment”, Journal of Materials Research, Vol 37, pages 4211–4221 (2022). https://doi.org/10.1557/s43578-022-00787-9
3. Sudeep Kumar T., Ayush Sourav, B.S. Murty, Arout Chelvane, Shanmugasundaram T., “Role of Al and Cr on cyclic oxidation behaviour of AlCoCrFeNi2 high entropy alloy”, Journal of Alloys and Compounds, Vol 919, 165820 (2022). https://doi.org/10.1016/j.jallcom.2022.165820
4. Sudeep Kumar T., Ayush Verma, Shanmugasundaram T., “A novel Al1.5CoCrFeNi2 high entropy alloy for bond coat applications”, Transactions of the Indian Institute of Metals (2023). https://doi.org/10.1007/s12666-023-03074-1
5. Ayush Verma, Lakshay Chauhan, Sudeep Kumar T., Prashant Kumar Singh, Satya Gowtam Dommeti, Shanmugasundaram T., “Laser Cladding of CoCrCuFeNi and CoCrFeNi High-Entropy Alloys on DMR 249A Steel: Corrosion, Wear and Antibacterial Behaviour”, JOM, 75, pages 2701–2713 (2023). https://doi.org/10.1007/s11837-023-05861-z
6. Sushil Yebaji, Sudeep Kumar T., Ayush Verma, H. Natu, D. S. Gowtam, Shanmugasundaram T., “Effect of Post-Welding Treatment on Corrosion Behavior of Laser and Gas Tungsten Arc Welded (Fe50Mn30Co10Cr10)99C1 Interstitial High-Entropy Alloy”, JOM, (2023). https://doi.org/10.1007/s11837-023-06210-w
7. Lakshay Chauhan, Sudeep Kumar T., Arout Chelvane, Shanmugasundaram T, “Oxidation behavior of an ultra-high strength and ductile Ni-enriched

complex concentrated alloy", Journal of Alloys and Metallurgical Systems, Vol 8, 100113 (2024). https://doi.org/10.1016/j.jalmes.2024.100113

8. Ayush Sourav, Ankit Singh Negi, Pranjal Chauhan, Sudeep Kumar T, Shanmugasundaram T, "Study of phase evolution and phase stability in a novel FCC based Al30Ti35Mg5V10Fe8Cr12 lightweight high-entropy alloy processed by mechanical alloying", Journal of Alloys and Metallurgical Systems, Vol 9, 100142 (2025). https://doi.org/10.1016/j.jalmes.2024.100142
9. Akhtar Kureshi, Sudeep Kumar T, Ayush Sourav, Ayush Verma, Shanmugasundaram T., "Comparison of corrosion behavior of high strength aluminum alloy welded using various fusion and solid-state welding processes", Welding International, Vol 39, pages 489-498 (2025). https://doi.org/10.1080/09507116.2025.2498580
10. Sudeep Kumar T., R K Satapathy, Shanmugasundaram T., "High temperature wear behavior of aerospace grade VT18Y Titanium alloy", Journal of Engineering Tribology (2025).

Conference Proceedings

1. Giridhar S.Kulkarni, G S Shivashankar, Sudeep Kumar T., B.K.Vijay kumar, "Effect of processing parameters on Tensile Strength of GFRP with Liquid Silicon Rubber and reinforced with fine Aluminum Powder and Silica Powder", Materialstoday: Proceedings, Vol 4, 10, Pages 11279-11284 (2017). https://doi.org/10.1016/j.matpr.2017.09.051
2. Sudeep Kumar T., G.S.Shivashankar, KartikDhotey, JagjitSingh, "Experimental study wear rate of glass fibre reinforced epoxy polymer composites filled with Aluminum powder", Materialstoday: Proceedings, Vol 4, 10, Pages 10764-10768 (2017). https://doi.org/10.1016/j.matpr.2017.08.025.
3. Latha Shankar B, Sudeep Kumar T., G S Shivashankar, "Numerical and experimental analysis on load sharing & optimization of the joint parameters of polymer composite multi bolted joints", IOP Conference Series: Materials Science and Engineering 149 (1), 012132 (2016). DOI:10.1088/1757-899X/149/1/012132

Book Chapters

- Handbook of High Entropy Alloys: Fundamentals to Applications.
  ISBN: 978-1-032-85557-8

Reviewer of Journals

- Materials Today Communication
- High Temperature Materials and Processes
- Journal of Mines, Metals and Fuels

Editor/ Reviewer of Journal

- Materials Today Communication
- High Temperature Materials and Processes
- Journal of Mines, Metals and Fuels

Patents

- “Compact Allen hex key set for hexagonal shaped fasteners and method of manufacturing thereof”, Application no: 202441067981

Invited Lectures, talks and workshops

- Invited Lecture on “Car body design concepts of Indian Railways” by Mr. Ramaprasad Alilaghatta, Subject Matter Expert, Quest Global Limited on 10th March 2018