

# VASUNDHARA SINGH

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## EDUCATION

### IIT KHARAGPUR, WB, INDIA

Ph.D.: Metallurgical and Materials Engineering  
| 2017- 2024 |

### NIT DURGAPUR, WB, INDIA

M. Tech: Metallurgical and Materials Engineering  
| 2014-2016 | GPA:9.14 (**GOLD MEDALIST**)

### UIET CSJMU KANPUR, UP, INDIA

B.Tech: Materials Science and Metallurgical Engineering  
| 2010-2014 | GPA: 8.00

### ST. JOHN'S SCHOOL VARANASI, UP, INDIA

ISC | Class XII | 2010 | 70%  
ICSE | Class X | 2008 | 71%

## OBJECTIVE

Looking for a career where I can explore myself and be able to fulfil my goals and objectives in life, which include professional excellence and value-addition to academic career through dedicated work, creativity, perseverance and teamwork.

## WORK EXPERIENCE

Assistant Professor (consolidated) in the **Department of Materials and Metallurgical Engineering** at **National Institute of Advanced Manufacturing Technology** from 28<sup>st</sup> January 2025 - till present.

Assistant Professor (consolidated) in the **Department of Metallurgical and Materials Engineering** at **National Institute of Technology Srinagar** from 21<sup>st</sup> March 2024 - 27<sup>st</sup> January 2025.

Assistant Professor (consolidated) in the **Department of Metallurgical and Materials Engineering** at **Indira Gandhi Institute of Technology Sarang, Dhenkanal, Odisha** from 8<sup>th</sup> August 2016 – 1<sup>st</sup> July 2017.

## AREA OF INTEREST/ANALYTICAL TOOLS/ SOFTWARES

SEM Machine, Gleeble Thermo mechanical Simulation, Electr58-olytic Extraction set up, Welding (Electron Beam Welding), Origin Software, TSL OIM EBSD Analyser, XRD Analysis, Hardness, Wear, Diamond polishing, Electropolishing, Hydrometallurgy, Thermo Calc

## CONFERENCES

- Participated In Oral Presentation on “**Deformation Behaviour of EN25 Forged Steel: Effect of Non-Metallic Inclusions**” Under The “**Products**” Theme in **Indian Institute of Metals 75<sup>th</sup> Annual Meeting (IIM ATM 2021)**, Held On 13<sup>th</sup> To 15<sup>th</sup> Nov 2021.

- International Conference on Advance Minerals, Metals, Materials and Manufacturing and Modelling (ICAM<sup>5</sup> 2019) Presented Work on “Effect of Non-Metallic Inclusions (NMIs) in Crack Formation in Forged Steel Components” In NIT Warangal Under TEQIP III From 25-27<sup>th</sup> September, 2019.

#### RESEARCH PUBLICATIONS

1. Vasundhara Singh\*, Rashul Khan, Bharath Bandi, Gour Gopal Roy, Prakash Srirangam, **Effect of Non-metallic Inclusions (NMIs) on Crack Formation in Forged Steel**, *Materials Today: Proceedings*, Volume 41, Part 5, 2021, Pages 1096-1102, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2020.08.016>.
2. Singh, V\*, Srirangam, P., Chakrabarti, D., Roy G. G. **Hot Deformation Behavior of EN30B Forged Steels in The Presence of Non-metallic Inclusions**. *J. of Materi Eng and Perform* (2023). <https://doi.org/10.1007/s11665-023-07800-0>
3. Singh, V.; Srirangam, P\*; Roy, G.G. **Effect of Beam Oscillation on Microstructure and Mechanical Properties of Electron Beam Welded EN25 Steel**. *Materials* 2023, 16, 2717. <https://doi.org/10.3390/ma16072717>
4. Singh, V\*, Roy, G.G., Srirangam, P. *et al.* **Study of Hot Deformation Behavior of EN25 Steel in the Presence of Non-metallic Inclusions**. *J. of Materi Eng and Perform* (2024). <https://doi.org/10.1007/s11665-024-09247-3>
5. Singh, V\*, Roy, G. G., & Srirangam, P., **Unveiling Impact of Electron Beam Optics on Weld Attributes in EN30B Steel**. *Journal of Optics and Photonics Research* (2024). <https://doi.org/10.47852/bonviewJOPR42021952>
6. Vasundhara Singh, Mounarik Mondal, Henu Sharma, Kisor K. Sahu, Soumyabrata Basak, **A new paradigm in laser powder bed fusion (LPBF): Machine learning-driven integration in additive manufacturing**, JPGT-D-24-00520 (2025) (Under review).
7. Soumyabrata Basak, Mounarik Mondal, Sumit Kumar Sharma, Vasundhara Singh, Kisor Kumar Sahu, **Divulging the effect of electron beam welding of 347 austenitic stainless steel**, STJW (2025) (Under Review)
8. Soumyabrata Basak, Mounarik Mondal, Sumit Kumar Sharma, Kisor Kumar Sahu, Vasundhara Singh, **Dissimilar joining of Inconel 825 SS 316 L under laser beam welding and its microstructure property correlation** (2025) (Under drafting mode)
9. Soumyabrata Basak, Mounarik Mondal, Kisor Kumar Sahu, Vasundhara Singh, **Study the effect of Tool Travel speed of Friction stir welded Al 1052- Al 5052 on mechanical properties**. (2025) (Under drafting mode)
10. Mounarik Mondal, Vasundhara Singh, Henu Sharma, Kisor K. Sahu, Soumyabrata Basak, **New paradigm in additive manufacturing: Core innovations and embedding next-gen computations (IoT, AI, ML, digital twin and Industry 4.0 &5.0)** (2025) (Under drafting mode)

#### PROJECTS / INTERNSHIPS

1. At **University of Warwick, Coventry, UK** for 2.5 Months (29 June 2019- 15 Sep 2019) on job title “Contribution of Non-Metallic Inclusions on Forged Steels Failure” ..... (June 2019)
2. At **Indian Institute of Technology BHU, UP, India** for 8 Months (01 September 2015 – 30 April 2016) on job title “Study on Optimization of Conditions Affecting Alkaline Leaching in EAF dust for Zinc Recovery” ..... (September 2015)
3. In **Jindal Stainless Limited (JSL), Jajpur, Odisha, India** for 45 Days (15 May - 30 June 2015) during Internship on “Water Modeling of Tundish” .....(May 2015)
4. At **Indian Institute of Technology Kanpur, UP, India** for 8 Months (2 July 2013 - 7 August 2014) on job title “Metallographic Failure Analysis of Barrel Samples” .....(July 2014)

## ACADEMIC ACHIEVEMENT

- Participated in debate on “USE OF MATERIALS IN MOVIES” held at **IIT, KANPUR** on February 19<sup>th</sup> 2012 and was declared “**WINNER**” among 10 teams of the debate organized by Indian Institute of Metals Kanpur Chapter.
- Participated in “**METAXTEMPORE’12**” held at **IIT, KANPUR** on 16<sup>th</sup> October, 2012 under “Indian Institute of Metals Kanpur Chapter” was declared “**RUNNER-UP**” out of 13 teams of the event.
- Participated in event named **ROCKET-WAR** in held on 21<sup>th</sup> November 2012 at **CSJM UNIVERSITY**, Kanpur and was declared **WINNER** of the event.

## POSITION OF RESPONSIBILITY

- **Team member** for technical events on **National Metallurgist Day** presented by **Dhatu Mitra** on 14<sup>th</sup> November 2024 in the department of Metallurgical & Materials Engineering at **NIT Srinagar**, Hazaratbal, JK, India.
- **Organizing team member** in organizing 5 days’ workshop on RAiEM 2024 “**Recent Advances in Extractive Metallurgy**” from 27<sup>th</sup> August to 31<sup>st</sup> August 2024 in the department of Metallurgical & Materials Engineering at **NIT Srinagar**, Hazaratbal, JK, India
- **Volunteer for the N.K. BATRA QUIZ** 2013-2014 held at **IIT-Kanpur** on 1<sup>st</sup> September 2013 and contributed in organizing the event successfully.
- **Organized** the event named “**DANCING**” in annual cultural fest **SPANDAN’13** of CSJM University Kanpur in march 2013.
- **Volunteer in Job Fair** at IBM department of CSJM University KANPUR held in February.
- **Organized** an event named “**TREASURE HUNT**” in the technical fest (TECHMART-2012) held on 21<sup>th</sup> November 2012 and won the most popular event award.
- **Co-ordinator of the event** named “**WAXO CASTING**” in TECHMART-2012 held on 20<sup>th</sup> November 2012 at CSJM University, Kanpur.

## REFEREES

**Prof. Gour Gopal Roy**  
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I hereby, declare that all the information provided above are correct and upto the mark.

Thank You

Dr. Vasundhara Singh