Profile Summary

Working as PhD scholar specializing in solid-state hydrogen storage materials at TUS Midlands Midwest. Focused on advancing sustainable research through multiscale modelling, aiming to reduce experimental demands and enhance material behaviour predictions under harsh conditions. Strong background in additive manufacturing, finite element analysis, and computational modelling with an interest in sustainable energy solutions.

CONTACT

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Jaychandra Maurya
Research Scholar (PhD)

EDUCATION

Ph.D. in Solid-State Hydrogen Storage Materials
Technological University of the Shannon (TUS), Midlands Midwest, Ireland
| **[2024 – Present]**

- Research focused on sustainable hydrogen storage materials using multiscale modeling approaches.

Master of Technology (M.Tech) in Mechanical Engineering (Additive Manufacturing)
National Institute of Technology Warangal, India | **[CGPA 8.24]   [2022-2024]**

- Specialized in bimetallic joining of dissimilar materials.
- Conducted experimental work, material characterization, and finite element analysis.

Bachelor of Technology (B.Tech.) in Mechanical Engineering
MMMUT Gorakhpur, India **[CGPA 7.04] [2015-2019]**

Final year project on CFD simulation of a vortex flow meter around bluff body.

Participation & Achievements

- **Research Week and RUN-EU STUDENT RESEARCH COLLOQUIUM EMPOWERING IDEAS, SHAPING THE FUTURE 2025, TUS Midwest:**

  - Poster Presentation on Sustainable Energy Storage and Carbon Emission Mitigation.
  - "Thesis in 3" Presentation, TUS Midwest 2025: Presented work on advancements in sustainable energy storage solutions**.**
- **International Conference on Additive Manufacturing (ICAM 2024), NIT Warangal (March 4–6, 2024):**

  - Presented paper on "*Three-Dimensional Numerical Simulation of Laser Metal Deposition Method with Bead Profile Optimization"*, associated with National Centre for Additive Manufacturing (NCAM). (Maurya et al., 2025)

SKILLS

- Multiscale Modelling
- Artificial Neural Networks (ANN)
- Programming: Basic Python, APDL Scripting
- Software Tools:
  - SOLIDWORKS (3D CAD modelling)
  - ANSYS (Structural FEA, Transient Thermal Analysis, CFD Simulations)