



# Rajneesh Jaisawal

Phd Scholar



09 January 1995



Department of Mechanical and Industrial Engineering, Indian Institute of Technology Roorkee, Roorkee - 247 667, India



+91 6307753788



<https://fame-iitr.in/members/>



[rajneesh\\_j@me.iitr.ac.in](mailto:rajneesh_j@me.iitr.ac.in)

## Skills

Mechanical Characterization

Mechanical Testing

Operating FE-SEM

Finite Element Analysis

(\*)[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert).]

## Interests

Mechanical Testing, Fatigue, Corrosion-fatigue, Damage Mechanism, Materials Characterization

## Education

- 2021 - Ph.D. candidate in Mechanical Engineering IIT Roorkee  
*Fatigue Properties of Al-Mg alloys and their weld joints*
- 2018-2020 M.Tech in Computer Aided Design and Manufacturing MNNIT Allahabad  
Majoring in Mechanical Engineering
- 2013-2017 B.Tech in Mechanical Engineering NIT Manipur  
Majoring in Mechanical Engineering

## Publications

- 2024 Rajneesh Jaisawal, Vedit Gaur, and Shahnawaz Ahmed. "The combined effect of corrosive media and its temperature on the fatigue performance of AA5086-H321 weld joints." *International Journal of Fatigue*, 188 (2024): 108522.<https://doi.org/10.1016/j.ijfatigue.2024.108522>.
- 2024 Rajneesh Jaisawal, Vedit Gaur, and Shahnawaz Ahmed. "Fatigue intergranular cracking in the weld joints of AA5086 in air." *International Journal of Fatigue* 182 (2024): 108186.<https://doi.org/10.1016/j.ijfatigue.2024.108186>
- 2023 Rajneesh Jaisawal, Vedit Gaur, and Shahnawaz Ahmed. "On improved fatigue properties of aluminum alloy 5086 weld joints." *International Journal of Fatigue* 174 (2023): 107712.<https://doi.org/10.1016/j.ijfatigue.2023.107712>

## Awards and Fellowships

- 2021 Project fellowship through DRDO for Ph.D. from IIT Roorkee
- 2018 MHRD fellowship for M.Tech from MNNIT Allahabad

## Experience

2021-2024 IIT Roorkee (DMRL-DRDO)  
Worked on the project "Fatigue Behavior of Al-Alloy for Marine Applications".

## Professional Skills

- Mechanical Testing  
Tensile Test, Compression Test, Hardness Test, Bend Test, Impact Test, Corrosion Test, Fatigue and Fracture Test, Corrosion-fatigue Test.
- Mechanical Characterization  
Optical Microscopy, Scanning Electron Microscopy (SEM), Electron Back Scattered Diffraction (EBSD), Chemical Composition.
- Softwares  
MATLAB, Abaqus, SolidWorks