



# Aditya Pandey

Researcher



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## Skill

Computational Fluid Dynamics



Finite Element Analysis



Discrete Element Method



Computer Languages



Microstructure Modeling



Machine Learning



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

## Interests

Numerical Modeling, Mechanical Testing and Printability of Additive Manufacturing.

## Education

2021-	Ph.D. candidate in Mechanical Engineering <i>Structure-Property correlation of Additively Manufactured Ni-based alloys.</i>	IIT Roorkee
2016-2018	M.Tech Mechanical Engineering Majoring in Design Engineering	IIT Dhanbad
2012-2016	B.Tech Mechanical Engineering Majoring in Mechanical Engineering	UPTU

## Publications

2024	Pandey, A. and Gaur, V., Interfacial characteristics of Nickel-based hybrid structures fabricated using directed energy deposition .Materials Science and Engineering: A. <a href="https://doi.org/10.1016/j.msea.2024.146934">https://doi.org/10.1016/j.msea.2024.146934</a>
2023	Pandey, A. and Gaur, V., Effect of dwell time on fatigue properties of wire arc additively manufactured IN718 alloy. International Journal of Fatigue. <a href="https://doi.org/10.1016/j.ijfatigue.2023.107863">https://doi.org/10.1016/j.ijfatigue.2023.107863</a>
2023	Pandey, A. and Gaur, V., A numerical study on microstructural features evolved across the melt pool in additively manufactured IN718 alloy, Material Science Engineering A. <a href="https://doi.org/10.1016/j.msea.2023.144763">https://doi.org/10.1016/j.msea.2023.144763</a>
2022	Pandey, A. and Gaur, V., Role of microstructural phases in enhanced mechanical properties of additively manufactured IN718 alloy. Material Science Engineering A . <a href="https://doi.org/10.1016/j.msea.2022.144484">https://doi.org/10.1016/j.msea.2022.144484</a>
2022	Pandey, A. and Gaur, V., Study on fatigue damage in additively manufactured IN718 Alloy, Procedia Structural Integrity. <a href="https://doi.org/10.1016/j.prostr.2022.12.128">https://doi.org/10.1016/j.prostr.2022.12.128</a>

## Awards and Scholarship

2016	National Scholarship
2016	Academic Excellence Award and State Scholarship
2015	Academic Excellence Award and State Scholarship

## Experience

2021-2022	IIT Roorkee (SERB-DST Project). Investigated the fatigue behavior of additively manufactured IN718 alloy.	Junior Research Fellow
2020	IIT Madras Worked on numerical modeling of high-velocity crash analysis for automotive vehicles.	Project Fellow
2019	First Bench, Chennai Taught physics to engineering aspirants for competitive examinations.	Physics Teacher

## Professional Skills

• Mechanical Testing

Tensile Test, Hardness Test and Fatigue Test.

• Mechanical Characterization

Optical Microscopy, Scanning Electron Microscopy (SEM), Chemical Composition.

• Softwares

Ansys, ABAQUS, Open FOAM, LIGGGHTS, SPPARKS, Hypermesh, ANSA, LS-Dyna, Python, C++, Fortran, MATLAB, MS-Office, Origin.