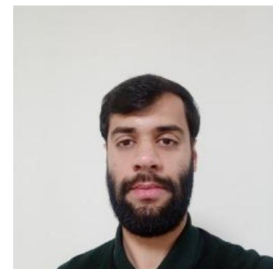


Resume

Personal details

Name	MUHAMMAD RAIHAN HASHMI
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Education

Feb 2024 - Feb 2026	Masters, Materials Science and Engineering POSTECH, Pohang, South Korea Additive Manufacturing and Finite Element Analysis
2019 - 2023	Bachelor of Engineering, Metallurgy and Materials Pakistan Institute of Engineering and Applied Sciences, Islamabad Thesis Title: Computational Study of Sintering Evolution Using DEM

Employment

Jul 2022 - Aug 2022	Corrosion Control Intern Oil and Gas Development Company Limited - Worked on corrosion protection techniques for pipelines such as cathodic protection (API 571) - Visited oil wells to understand their functioning - Conducted non-destructive testing on site - Familiarized with annual reports on corrosion by SGS and BureauVeritas - Internship Project: Measuring current values of pipelines protected using cathodic protection and diagnosing any problems; suggesting solutions for increase or decrease in current
Jun 2022 - Jul 2022	Quality Control Intern Al Badar Engineering Co (Pvt.) Ltd. - Worked on the production lines of automotive parts for Honda and Toyota - Worked with the Quality Control Department specifically for Honda parts manufacturing - Familiarized with equipment and processes including Pressure Die Casting, Sheet Metal Working, Die Casting, Coatings and Paints, CNC machines, and Electroplating - Internship Project: Understanding standards developed by the company and making sure of its implementation for manufacturing of motorcycle rims

Academic Projects

Sep 2024 - Jan 2025	Laser Powder Bed Fusion of lattice structures Manufactured light weight lattice structures using additive manufacturing and conducted their FEA analysis
Apr 2025	Optimization of LPBF parameters for different part sizes FEA simulations to determine optimum fabrication parameters as a function of size and validate them experimentally reducing cost, resources by avoiding hit and trial experimentations

Research Articles

Jan 2025	Thermomechanical behavior and microstructural evolution in nodes and struts of face-centered cubic lattice structures during laser powder bed fusion processing Journal of Alloys and Compounds, Elsevier, (POSTECH) 1st author
Apr 2025	Control of grain coarsening during sintering by varying the size distribution of alumina powder—a DEM study Journal of Materials Engineering and Performance, Springer Nature, (PIEAS) 1st author
Jul 2025	Computation- and process-based design for advanced structural high-entropy alloy development and analyses: A critical review Progress in Materials Science, Elsevier, (POSTECH) 1st author
Sep 2025	Ceramic insert enabled build plate thermal isolation for enhanced microstructure and residual stress mitigation in laser-based powder bed fusion of metals Additive Manufacturing, Elsevier, (POSTECH) Co-author
Sep 2025	Laser powder bed fusion of SAF 3207 hyper duplex stainless steel featuring strength-ductility synergy and columnar-to- equiaxed transition Submitted in: Materials Characterization, Elsevier, (POSTECH)
Dec 2025	Multiscale Computational Design of Hydrogen-Compatible Integrated Structural-Functional Alloys Submitted in: Progress in Materials Science, Elsevier, (POSTECH)
Dec 2025	Bifurcation analysis on formability coupled with microstructural evolution of dual-phase steels subjected to various stress states Under Revision: Next Materials, Elsevier

Conferences

Apr 2025	Thermomechanical profiling of nodes and struts in LPBF lattice structures The Korean Institute of Metal and Materials, Jeju, South Korea, Pg-53 (Presentation)
Oct 2025	Parametric study for size optimization for laser powder bed fusion fabricated parts The Korean Institute of Metal and Materials, Gwangju, South Korea, Pg-38 (Presentation)

Skills

LBPf	Metal Additive Manufacturing
Materials Testing and Characterization	

Languages

English	Fluent	Urdu	Fluent
French	Moderate	Korean	A1

Hobbies

■ Physical Training & Exercise	■ Fiction/Non-Fiction Reading
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