Showmik Ahsan

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EDUCATION

Ph.D. in Materials Science and Eng.,

Fall 2023-Present

Wright State University (WSU), Dayton, OH

Dissertation: Microstructure Evolution of Forged Metals from 3D Printed Preforms

MS in Mechanical Eng.,

Spring 2021-Spring 2023

Wright State University (WSU), Dayton, OH

Thesis: Effect of Size and Shape on Nickel Based Super Alloy Processed using Laser Powder Bed Fusion Additive Manufacturing Method

BS in Mechanical Engineering, WSU, Dayton, OH

Fall 2016-Fall 2020

RELEVANT COURSES

Additive Manufacturing

• Engineering Programming with MATLAB

- Mechanics of Material
- Engineering Design and Solid Modeling • Mechanical Behavior of Metals • Finite Element Analysis
- Materials Testing Lab • Engineering Ceramics

• Study Abroad in Germany and Taiwan

COMPUTER SKILLS

 SolidWorks Matlab Abagus

• Python

RELEVANT WORK HISTORY

Graduate Research Assistant at WSU,

August 2022 – present

- Working in Additive Manufacturing (AM) Lab that houses various 3D printers such as Laser Powder Bed Fusion (LPBF) for metals and nylon, vat polymerization, material extrusion for polymers, inkjet printers for electronics, etc.
- Characterize (SEM/EBSD, XRD, microhardness, mechanical testing, etc.) nickel-based superalloy and stainless steel, both
 - o As processed using LPBF AM method, and
 - After forging

Graduate Research Assistant at SOCHE,

August 2021 – July 2022

Worked with Clark State College, STEM School, and Wright State University to develop curriculum for manufacturing ecosystem

Graduate Research Assistant at AFRL through UES Inc,

February 2021 – June 2021

- Chemical vapor deposition (CVD) of carbon nanotubes
- Scanning electron microscopy (SEM) and Raman spectroscopy

Additive Manufacturing Research at WSU

January 2020 – May 2020

- Review different AM processes for metal and polymers.
- Designed test artifacts using SolidWorks to investigate the effect of metal additive process parameters such as laser power, scan speed, layer thickness, etc. on print quality.

SERVICE

- President, WSU American Society of Mechanical Engineers (ASME),
- Student Member, ASME
- Member, CECS Dean's Student Advisory Board
- Study Abroad Ambassador, WSU

REFERENCES

• Available upon request