Fraunhofer USA

Center Midwest - Coatings and Diamond Technologies Division

International Internship – Additive manufacturing development

Overview

Fraunhofer USA, Inc. Center Midwest is located on the campus of Michigan State University in East Lansing, Michigan. We are currently seeking initiative-taking, dependable, and technically competent individuals to join our additive manufacturing team for composite material development. We are a polymer extrusion and resin printing lab. Team members will conduct research both compounding and creating their own polymer feedstock for usage with metal fused filament fabrication as well as bioabsorbable polymers with nanoparticles for biomedical applications. As a team member, you will help design and conduct experiments, generate and present data in a meaningful report. We bridge the gap between academic research and industrial research. At times, you will also work with companies on current additive manufacturing needs and execute experiments based on a customer's needs.

Current areas of research include:

- Developing a bioresorbable SLA resin for biomedical applications
- Compounding and printing microstructure bioresorbable polymers for CT and ultra sound imaging
- Compounding and printing metal structures through fused filament fabrication and sintering
- Optimizing material and print geometries for densification of metal and ceramic prints
- Translation of polymers onto pellet extrusion printings

Responsibilities

- Leading research on active projects including:
    - Material characterization
    - Material fabrication
    - Printing and optimization of prints
    - Post analysis and collaboration with partners
- Maintenance and upkeep of printing lab
- Supporting the center with modeling and printing of components for research projects across the center
- Data collection and reporting, processing collected data into meaningful reports
- Maintaining a detailed and accurate laboratory notebook

Requirements

- Within one year of completing a bachelor's degree or master's degree in natural science such as material science, mechanical engineering, polymer chemistry, chemical engineering, biosystems engineering etc.
- Experience working in a printing lab, wet chemistry lab or similar laboratory environment
- Experience in data processing and manipulation such as MS Excel, Python or MATLAB
- Interest in advancing additive manufacturing and pushing the limits of its capabilities
- Preference of 9-12 months for an internship

Contact:

Please send cover letter and resume to ccdadministration@fraunhofer.org.

Note: Both Bachelors and Master's thesis projects are available. Position starts near June to August 2026. This is a paid internship of $1420.00 bi-weekly.