

TITLE: Research Engineer, Additive Manufacturing (U.S. Citizens preferred)

Overview

The Materials Measurement Laboratory of the National Institute of Standards and Technology is seeking qualified candidates (U.S. Citizens preferred) to develop metrologies for characterizing ceramic additive manufacturing processes, with an emphasis on designing and building custom measurement systems and testbeds in a collaborative national laboratory environment supporting hands-on experimental research and professional growth in advanced manufacturing.

Duties

- Design, build, and validate custom experimental setups
- Quantitative image analysis
- Developing data pipelines

Required Skills, Expertise and Qualifications

- Mechanical design and rapid prototyping (CAD, machining, 3D printing)
- Instrumentation integration (sensors, cameras, data acquisition systems)
- Experience with optical systems (imaging, UV projection)
- Automation and control systems (LabVIEW, Python, Arduino/Raspberry Pi)
- Hands-on laboratory skills and troubleshooting mindset
- Image processing and segmentation (ImageJ, MATLAB, Python/OpenCV)
- Statistical analysis of imaging data
- Experience with computer vision models (CNNs, object detection)
- Python scientific stack (NumPy, SciPy, pandas, scikit-learn, TensorFlow/PyTorch)
- Data pipeline development for large imaging datasets

Other Desirable Qualifications

- Experience in ceramics; materials background

Employment Terms: This opportunity is to be an associate researcher in the NIST's Materials Measurement Science Division. The initial appointment is for one year, with options to renew. Associate researchers are NOT Federal Employees, but they work along with NIST researchers and with NIST's often world-class instrumentation. Relocation expenses will not be provided. U.S. Citizens hired into associate positions may have the opportunity to seek longer-term Federal Employment.

Salary: from \$75,000 to \$85,000 annually, commensurate with the candidate's qualifications and experience

How to express interest: Persons (U.S. Citizens Preferred) who meet all of the required qualifications and who would be interested in taking this position are invited to express their interest by sending an email that briefly describes their qualifications along with a CV to 643assoc@nist.gov. US Citizens should note "US Citizen" and the opportunity title in the email subject line. All others should note "Non-US Citizen" and the opportunity title in the email subject line.