

Additive Manufacturing Researcher

Education

Required: Ph.D. in Mechanical Engineering or Material Science.

Experience

Minimum 3 years of experience in Additive Manufacturing field.

Job Description

Sentient Science Corporation, with offices in Buffalo, New York, and West Lafayette, IN, is a leader in predicting the durability and reliability of complex physical systems.

The company's technology works by modeling and simulating components and full systems of high value aerospace, defense, rail, industrial and renewable energy equipment. Our simulation and physics-based models enable design and qualification of new components, and asset monitoring and management of existing installed components to reduce costs of design, qualification, and operation.

We are seeking a highly motivated researcher with strong background and expertise in additive manufacturing (AM) process and simulation to work on projects in computational modeling of AM build process and in-situ inspection to detect defects during build process. Also, work on optimization analysis to develop topology and process optimization modules. The candidate will work with the Sentient team for core technology and commercial AM software development. Experience with AM microstructure, property and surface roughness modeling is an important preference. Compensation will be commensurate with experience. Additionally, Sentient offers competitive benefits and a relocation package.

Required Skills

- Ph.D. in Materials Science, Mechanical Engineering, or related fields.
- Strong background and expertise in additive manufacturing materials, microstructure, processes, and simulations
- Experience with optimization analysis, algorithms, and methods (including topology optimization and process optimization)
- Experience with Python, plus C or other programming languages

Preferred Skills

- Experience with geometric modeling
- Experience with AM property modeling
- Experience with in-process monitoring techniques to detect defects
- Experience with Finite Element Analysis
- Experience with government projects
- Strong writing and communication skills

Benefits:

- Unlimited paid-time-off

- Flexible working hours
- Fully remote option available from anywhere, preferably US
- Employer-sponsored health insurance
- Our commitment to **inclusion** across race, gender, age, religion, identity, and experience drives us forward every day

Please submit your resume to Behrooz Jalalahmadi, VP of Additive Manufacturing and Life Prediction Technologies, at bjalahmadi@sentientscience.com.