

Postdoctoral Research Fellow: Printed Microelectronics for Biological Applications Carnegie Mellon University, Pittsburgh PA

Job Description

Post Doctoral Research Associate – Department of Mechanical Engineering at CMU

Description

Job Summary

The Department of Mechanical Engineering is seeking to fill an opening for a postdoctoral fellow. The postdoctoral fellow will work in the Advanced Manufacturing and Materials Laboratory (AMML), Carnegie Mellon University, Pittsburgh PA (<https://advancedmanufacturing.us/>). The work will be directed by [Dr. Rahul Panat](#) and will be done in close collaboration with FHC Inc. (<https://www.fh-co.com/>). The fellow will carry out research in the areas of 3D printed microscale electronic devices and stretchable electronics. Examples of such devices include implantable micro-coils, electrodes of different types for sensitive sensors etc. The research will also involve modeling, fabrication, and testing of the devices in biological systems such as brain. A background in microfabrication, 3D printing, and structure-property relations is essential. The salary will be commensurate with research experience and technical background.

Core responsibilities will include:

- The candidate will be responsible for conducting research on 3D printing of microscale devices for implanting in biological systems such as brain
- Carry out modeling, fabrication, and testing of the devices
- Explore the relationship between manufacturing, device microstructure, the device mechanical and electrical properties, and its performance in biological environments
- Supervising and evaluating technical work of others in the group such as graduate students
- Prepare verbal presentations and manuscripts

Qualifications

- Doctorate in Mechanical Engineering, Manufacturing, Materials Science, or Electrical Engineering.
- Experience in printed electronics and/or microfabrication. An experience with ink preparation for printing is a plus. Having background in sensors/sensor testing, mechatronics, and experience with materials characterization techniques such as SEM and XRD will be highly advantageous.
- A strong aptitude and demonstrated accomplishment in micro or nanoscale manufacturing research. An understanding of structure-property relations for metallic materials.
- The candidate must have a strong publication record in relevant journals and excellent verbal and written English communication skills along with an ability to work effectively with others.
- The candidate must also have the ability to work well in a self-paced, independent manner, while working well in cooperation with team members and partners. Must be committed to meeting research project deadlines.

More Information

Please visit “Why Carnegie Mellon” to learn more about becoming part of an institution inspiring innovations that change the world www.cmu.edu/jobs/why-cmu. A listing of employee benefits is available at: www.cmu.edu/jobs/benefits-at-a-glance.

Carnegie Mellon University considers applicants for employment without regard to, and does not discriminate on the basis of, gender, race, protected veteran status, disability, or any other legally protected status.

How to Apply: Please send your CV directly to Dr. Panat at rpanat@andrew.cmu.edu

Primary Location: United States-Pennsylvania-Pittsburgh

Time Type: Full Time

Organization: Advanced Manufacturing and Materials Laboratory, ME Department, CMU