

Postdoc opening at the University of Illinois in the area of composite materials

The Autonomous Material Systems (AMS) group at the Beckman Institute has a job opening for a post doctoral associate in the area of carbon fiber reinforced polymer (CFRP) composites. Composite materials are known for their unmatched high strength, toughness and low density. The AMS research team at the Beckman Institute is developing new manufacturing approaches for three dimensional CFRP structures which can match the performance of existing composite panels. The new manufacturing processes, which will use unusual polymers and processing approaches, aim to enable manufacturing of large CFRP structures in outer space. The project is federally funded, and the postdoc position is for one year, expected to be renewed annually for up to a total duration of three years.

The research is highly inter-disciplinary, and the candidate should demonstrate the ability to collaborate with other researchers from complementary areas including polymer chemistry, materials science, mechanics of materials and numerical modeling. The research is co-advised by Professors Nancy Sottos (Materials Science and Engineering) and Sam Tawfick (Mechanical Science and Engineering); with close collaboration with Professors Philippe Geubelle (Aerospace Engineering) and Jeffrey Moore (Chemistry).

The candidate should have knowledge and experience in at least two of the three following areas:

- CFRP composite manufacturing (experimental)
- Mechanical behavior of CFRP (experimental)
- Additive manufacturing and/or polymer extrusion (experimental)

To apply, please send a cover letter, a full resume, and the names and email addresses of three recommendation letter writers to (amsgroup@beckman.illinois.edu). Candidates must have a PhD in engineering (aerospace, mechanical, materials) with relevant experience.

The application deadline is 11/30/2021. The expected start date is January 2022.