



University Of Pittsburgh

Swanson School of Engineering

Department of Mechanical Engineering and Materials Science

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There is an immediate opening for a postdoctoral research fellow position in Professor Albert To's research group (www.pitt.edu/~albertto) in the Department of Mechanical Engineering and Materials Science at University of Pittsburgh. We are seeking a highly motivated individual with a strong background in topology optimization, computational mechanics, and/or additive manufacturing (AM). Current research focus of our group is on the mechanics, design, and fabrication of lightweight AM structures. We have access to some top-notch computing facilities and to several state-of-the-art AM systems which include the Optomec LENS, ExOne M-Flex, and Stratasys Objet Connex machines. Successful candidate can choose to conduct research one of the following: (1) Develop topology optimization algorithms for different problems related to additive manufacturing, (2) model the failure of AM lattice structures, or (3) develop a new composite using an AM system.

The candidate must have the following qualifications:

- A PhD in mechanical engineering, materials science, or other related fields in the US
- Demonstrated expertise and research experience in topology optimization, computational mechanics, and/or additive manufacturing
- Strong computational skills and/or experimental skills
- Demonstrated strong verbal and written communication skills
- Demonstrated ability to work as a team and independently

Desirable criteria:

- Experience in programming in MATLAB, C, or C++ and in various CAD and FEA software packages, especially ANSYS, ABAQUS, SolidWorks and Inventor
- Experience in using laser sintering system or binder jetting system to develop new material
- Experience in mechanical testing and materials characterization
- Experience in mechanics of lattice structures, yield criteria, and homogenization theory

Position is now open until filled. Interested individual should submit a cover letter, their CV, and contact information of three references to Professor Albert To (albertto@pitt.edu).