JOHNS HOPKINS
WHITING SCHOOL
of ENGINEERING

Wissenschaftlicher Mitarbeiter (Master / Promotion / Postdoc) in 3D Printing / Computational Design / Soft Materials

The Mueller Lab (muellerlab.com) in the Whiting School of Engineering at Johns Hopkins University is inviting applications for multiple fully-funded positions for PhD students and Postdoctoral Fellows in the areas of 3D Printing and Additive Manufacturing, Computational Design and Optimization, and Mechanical Metamaterials. Additional positions may be available for Master's theses.

The successful candidate(s) will develop novel 3D printing techniques, materials, and designs for Unmanned Aerial Vehicles (UAVs), prosthetics and exoskeletons, soft robotics, and other technologically advanced applications. The positions are in collaboration with other groups in the school, including the JHU Topology Optimization Group (ce.jhu.edu/topopt) and Mechanics of Soft Adaptive Materials Lab (nguyenlab.wse.jhu.edu), the Army Research Lab (arl.army.mil), and Bell Textron (bellflight.com).

The candidates must hold a master's or PhD in Mechanical Engineering, Materials Science, Chemical Engineering, or a related discipline, and be experts in at least one of the following areas

- Hardware-, material-, and software-design for 3D Printing, desirably with a focus on Direct-Ink Writing
- Complex fluids, including non-Newtonian materials and rheological characterization
- Active and multifunctional materials for application in (multistable) mechanical metamaterials
- Computational design including topology optimization and numerical modeling

Application

Interested applicants should email their application materials to Prof. Jochen Mueller (jochen@jhu.edu) and include (i) Curriculum Vitae with a complete publication list, (ii) contact information of at least three references, and, if applicable, (iii) three representative publications. Evaluation of candidates will begin immediately and continue until the positions are filled. Initial appointments will be for 12 months with the option to renew.

The Mueller Lab

The Mueller Lab's research is embedded at the intersection of Additive Manufacturing, Functional Matter, and Computational Design. We develop fabrication processes that enhance the structural complexity, material versatility, and throughput speed in 3D printing. We employ modern computational tools, such as numerical modeling, optimization, and machine learning to explore the new design space. The results are (meta)materials, structures, and processes with outstanding properties and novel functionality.

Jochen Mueller Assistant Professor Johns Hopkins University

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Johns Hopkins University

Founded in 1876, Johns Hopkins University (jhu.edu) is America's first research university and home to nine world-class academic divisions working together as one university. Ranked number 12 in the world by The Timer Higher Education, JHU is home to the Applied Physics Lab, the world-renowned Johns Hopkins Medicine, and 39 Nobel laureates. Johns Hopkins University is an equal opportunity employer. Women and underrepresented minorities are especially encouraged to apply.

Baltimore

Baltimore (baltimore.org) is a major city in Maryland with a long history as an important seaport. Fort McHenry, birthplace of the U.S. national anthem, “The Star-Spangled Banner,” sits at the mouth of Baltimore’s Inner Harbor. Today, this harbor area offers shops, upscale crab shacks and attractions like the Civil War-era warship the USS Constellation and the National Aquarium, showcasing thousands of marine creatures. Baltimore, one of the oldest cities in the U.S., sits in the heart of the bustling East Coast, less than an hour north of the capital, Washington D.C., about 1.5 hours south of Philadelphia, and 2.5 hours south of New York City.

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