

POSTDOCTORAL RESEARCH POSITION AT PRINCETON UNIVERSITY

FORM FINDING LAB

The Form Finding Lab at Princeton University, NJ, USA is searching for a postdoctoral researcher to support our recently awarded SEAS LACE Project X. In this project we propose to investigate 2D interlaced networks of elastic rods, found in textile crafts, and deliberately drive them into the large deformation realm to create novel 3D elastic (and thus reversible) structures with interesting mechanical properties. The research objectives of this proposal are threefold: to 1) use a mathematical approach to identify interlaced patterns for the purpose of shifting between 2D and 3D states, 2) investigate their reversible mechanical response and establish their performance envelope using an experimental and numerical approach, and 3) design, prototype, and demonstrate the feasibility of interlaced elastic networks at the architectural scale using robotic manufacturing.

Responsibilities Include:

- Conducting experimental and computational mechanics research as it relates to developing novel interlaced rod networks.
- Overseeing day-to-day graduate student research as it relates to project goals and meeting project milestones and go/no-go points.
- Working with a diverse team of co-PIs, artists, and graduate students.
- Presenting at conferences and leading journal publication efforts.
- Leading outreach effort of designing and robotically constructing a demonstrator.

Minimum Qualifications:

Doctoral degree in mechanical or civil engineering, physics or applied mathematics field, appropriate experience in computational mechanics and mechanics of slender systems, prototyping and artistic flair. Strong project management skills and a superior publication record.

Application:

Please send your CV and cover letter to sadriaen@princeton.edu. This is a 1-year position.

