High Throughput Experimentation and Machine Learning for Accelerated Discovery of Materials

A postdoctoral fellowship is available immediately to work on combining high throughput experimentation and machine learning to accelerate discovery of structural metallic glasses. The position is expected to be for two years.

The position is part of a larger collaboration funded by Department of Energy and will be based at Stanford Synchrotron Radiation Lightsource at SLAC national Accelerator Lab. A successful candidate will work on two separate but related tasks: 1) support high throughput wide angle scattering program at SSRL and developing on-the-fly analysis tools to improve data quality and coverage in real time; 2) work with machine learning experts in the collaboration team to build quantitatively accurate predictor for metallic glasses with technologically optimized mechanical and corrosion properties. The position involves working closely with at least one other postdoctoral fellow – focused on high throughput mechanical characterization – and computational and machine learning experts.

Qualifications:

- A recent Ph.D. in physics, chemistry, materials science or related field.
- Extensive experience with x-ray diffraction, preferably at a synchrotron source.
- Strong experimental, analytical and computational skill.
- Ability to convert mathematical algorithms into efficient code, preferably in python.
- Exposure to machine learning not required but desired.
- Willingness to learn and bridge knowledge/experience gaps.
- Ability to work both independently and in a team environment.
- Ability to work and communicate effectively with a diverse population; good interpersonal skills are essential.
- Leadership, including the ability to coordinate efforts, and to guide other high throughput experimentalists through data collection and preliminary data analysis.
- Effective written and verbal communication skills.

Please send CV, names and email addresses of 2-3 references, and a brief summary of accomplishments and research interests to Apurva Mehta, email: mehta@slac.stanford.edu