

Post-doctoral position in dislocation-based micromechanics and *in situ* electron microscopy deformation

The Kacher Lab is currently looking for a dynamic researcher to aid in our efforts to understand the multiscale microstructural effects dictating the mechanical behavior of materials. As a team, we explore how microstructure and processing conditions affect bulk properties and local failure mechanisms using multiscale and *in situ*-based electron microscopy techniques. Currently, we are accepting applications for a post-doctoral position focused on understanding dislocation mechanics at the micro to nanoscale under a range of loading conditions. The work will involve *in situ* TEM using a custom-built quantitative micromechanical testing platform and *post mortem* analysis of dislocation/grain boundary interactions. The position is available beginning in August 2020 and will continue for one year from hire date, with yearly extensions to a second and third year possible depending on performance and funding.

Required Qualifications:

- A Ph.D. in Materials Science and Engineering, Mechanical Engineering, Physics, or a related discipline.
- Excellence in written and oral communication as evident by a strong publication and presentation track record.
- Expertise in electron microscopy-based characterization

Desired Qualifications:

Strong candidates will have experience in at least some of the following areas:

- TEM-based dislocation characterization
- EBSD-based analysis of microstructure and defect structures
- FIB-based TEM sample preparation
- *In situ* TEM nanomechanical testing
- Fatigue testing and failure analysis
- Corrosion/stress corrosion cracking

Interested candidates should send a cover letter, CV including a list of publications and presentations, three potential references with phone numbers and emails included to Prof. Josh Kacher (josh.kacher@mse.gatech.edu). Reviews of applications will begin immediately and will continue until the position is filled.