

**Faculty Name:**

Katayun Barmak

**Faculty Email:**

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**Lab:**

Barmak Lab

**Project Title:**

Automated Grain Boundary Detection in Bright-Field Transmission Electron Microscopy Images

**Description:**

Most technologically useful materials are polycrystalline microstructures composed of a myriad of small monocrystalline grains separated by grain boundaries. The aim of the project is to further advance the use of machine learning to automatically trace grain boundaries in bright-field transmission electron micrographs for subsequent statistical analysis of microstructural metrics, both static and dynamic. The project has had a strong track record of undergraduates as coauthors on manuscripts.

**Location of Research:**

On Site

**# of hrs/week:**

10

**Department/Program:**

Applied Physics and Applied Mathematics

**Eligibility:**

BS, First Year, BS, Second Year

**To apply, please contact:**

Katayun Barmak

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