
Fall 2027 - Graduate Student (MS or PhD) in Geomorphology and Landscape Evolution

The Surface Processes & Geomorphology group at the University of Kentucky, led by Dr. Joel Leonard, invites applications from prospective PhD and MS students interested in joining the group in Fall 2027.

Students will have the opportunity to lead research that explores how mountain landscapes evolve through the interactions of tectonics, climate, erosion, and weathering – and how these processes shape the carbon cycle and influence natural hazards. Students will develop a diverse set of skills, including quantitative geomorphology, field geology, geochronology, numerical modeling, and geospatial analysis to investigate the dynamics of Earth's surface.

Project Themes

Funding is available to support graduate students and research on a variety of potential projects within three broad themes:

- **Quantifying Mountain Landscape Evolution:** Isolating and measuring the rates, processes, and drivers that shape mountain landscapes, from individual hillslopes to entire mountain ranges. Potential projects in the Andes, Himalaya, and locations in the U.S.
- **Mountain Evolution and the Carbon Cycle:** Investigating how weathering, erosion, and landscape evolution interact with Earth's carbon cycle and influence long-term climate, integrating solid-earth geology, surface processes, and geochemistry.
- **Hazards in a Changing Climate:** Exploring geomorphic processes that generate natural hazards, developing workflows to leverage high-resolution topographic data and data processing techniques, and examining how changing environmental conditions influence landscape stability and hazard dynamics.

Research Environment

Students will have opportunities to integrate into a growing, dynamic, and collegial research environment at the Department of Earth and Environmental Sciences (EES) at the University of Kentucky, and to draw on the broader expertise and resources available at the Kentucky Geological Survey (KGS), which is housed on campus. KGS researchers can augment capacity within EES by providing additional perspectives, expertise, and opportunities for collaboration in areas relevant to individual projects, helping students connect their research with broader geological questions and applications.

Application

Graduate applications at University of Kentucky are due in early January; however, prospective students are strongly encouraged to contact Dr. Leonard via email in advance of the application deadline to discuss potential opportunities (joel.leonard@uky.edu). Please include a brief introduction, including your interests and goals for graduate study, as well as a CV and unofficial transcripts.

Anticipated start date: Fall 2027

Degree programs: PhD or MS

Institution: Dept. of Earth and Environmental Sciences, University of Kentucky, Lexington, KY

