

Geomorphology at UA has been growing! Our group has been busily expanding into new areas of study, from wildfires and debris flows to novel landscape evolution models. Here's a bit of what we've been up to recently:

Jon Pelletier has started a new 10-year project funded by BHP aimed at understanding the controls on erosion in reclaimed mine sites in the southwestern U.S. Jon is also working hard to develop the next generation of ultra-fast landscape evolution models aimed at understanding how climate change affects landscape form.



Luke McGuire and his group have been focused on studying the role of disturbance events, such as wildfire and drought, on erosion rates and geologic hazards. The group's work over the last year to develop improved models for post-wildfire debris flow hazards has been supported by an award through Science Foundation Arizona.



Alexander Prescott (PhD student) is in his third year with Dr. Pelletier, focused on numerical modeling of the interaction between sediment yield and climate change. He continues work on a global, spatially-distributed model of fluvial suspended sediment yield, and is just starting a landscape evolution modeling project with Dr. Andy Cohen and the Hominin Sites and Paleolake Drilling Project. His work is supported by a NSF Graduate Research Fellowship.



Carissa Raymond (MS student) has been working with Dr. McGuire to understand the connections between rainfall intensities and post-wildfire debris flows throughout Arizona. She recently presented her research at the GSA Rocky Mountain and Cordilleran combined section meeting.

Hui Tang (Postdoc) has focused his research on debris flows, landslides, floods, and tsunamis. He has recently been working on post-wildfire debris flows at Las Lomas after the 2016 Fish Fire in southern California. His proposal "Flood frequency analysis and hazard assessment using geospatial, climate big data and machine learning" is funded by AI for Earth (Microsoft), Climate Change Program this year.



Tyler Doane (Postdoc) recently finished his Ph.D. at Vanderbilt University where he worked with David Furbish on exploring the consequences and characteristics of various models for hillslope sediment transport. He is now a postdoctoral research associate working broadly on the statistics of microtopography and its impact on sediment transport and land-surface evolution at a variety of scales.

After successfully defending his dissertation in May, **Zack Williams** is working to publish two of the chapters from his dissertation and he has begun a postdoc at UNC Wilmington on coupled human-natural coastal systems.

During her time at UA, **Phairot Chatanantavet** worked on landscape evolution modeling aimed at understanding the landscape and sedimentary basin response to climatic changes. She has moved back to Thailand to enjoy time with family and finish projects from her time at UA. She intends to find an academic or government position in Thailand.

Undergraduate students **Iaos Lizarazu** and **Jake Ridlinghafer** participated in GeoPathways research internships with Luke McGuire and Ann Youberg (AZGS) over the summer. They collected post-wildfire debris flow data and analyzed sediment samples from sites in Arizona and New Mexico.

