



# DEPARTMENT OF GEOGRAPHY

INDIANA UNIVERSITY

College of Arts and Sciences  
Bloomington

## SPRING 2019 - COLLOQUIUM SERIES

**Dr. Brian Yanites**

**Assistant Professor**

**Department of Earth and Atmospheric Sciences  
Indiana University**

### **“The Rubble in the Jungle: The Impact of Earthquakes, Typhoons, and Landslides on River Processes in Taiwan”**

**Abstract:** Intense precipitation or seismic events can generate clustered landslide processes across a landscape. These rare events have significant impacts on the landscape, however, the rarity of such events leads to uncertainty in how these events impact the entire geomorphic system over a range of timescales. The aggradation of river systems downstream of such events can increase flood and erosion hazards for years to centuries following the event. Taiwan is a steep, seismically active region and is highly prone to landslide and debris flows. In this talk, I explore the impacts of regional landslide events in two locations in Taiwan: the central region which experience an influx of landslide debris associated with the 1999 Chi-Chi earthquake; and the southern region which experienced intense landsliding associated with Typhoon Morakot in 2009. I present observations of the impact of the influx of sediment following these events has on the river systems draining these landscapes. These observations provide insight into what controls the evolution of river systems in Taiwan and the cascading impact of these events on the people living next to rivers. Finally, I finish with a conceptual model of how the propagation of landslide material through a drainage networks influences fluvial processes and landscape evolution.

**Friday, January 18, 2019**

**3:35 p.m. in Student Building 005**

(Refreshments provided at **3:15 p.m. in Student Bldg. 018**)

**Questions:** Dr. Taehee Hwang, (812) 856-2846