



## 46<sup>th</sup> Annual Binghamton Geomorphology Symposium

### ***Laboratory Experiments in Geomorphology***

**Conveners:**

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**Date (tentative):** September 18 to 20, 2015 (Friday through Sunday)

**Location:** University at Buffalo, Buffalo, NY

**Purpose:**

While the discipline of geomorphology historically has been dominated by field research, many scientists have employed experimental methods to address key aspects of Earth surface processes. Numerous transformative ideas and concepts have emerged from such experimental endeavors, and this methodology now plays a central role within geomorphic research. This symposium seeks to bring together leading experts and emerging scientists actively engaged in laboratory-based experimental research of geomorphic systems. Themes have been selected based on geomorphic phenomena, and contributors will be asked to highlight the unique capabilities of their facilities and equipment, to discuss how their experimental research has or will transform the discipline of geomorphology, and to critically assess broader, cross-cutting issues concerning laboratory-based experimentation of geomorphic systems.

### **Pre-meeting fieldtrip:**

As the focus of the symposium is on laboratory-based experimental research, the pre-meeting fieldtrip will be comprised of a tour and hands-on demonstration of the experimental facilities at University at Buffalo. The university has three (3) fully-functional and diverse laboratories to examine Earth surface processes. These include: (a) the Wilkeson Hydraulics Laboratory, with tilting recirculating flume, mixing box, particle image velocimetry system, and wide array of current meters and bed profiling equipment; (b) the Statler Geomorphology Laboratory, with large flume for soil erosion and stream channel studies, an overland flow flume, and a stream corridor flume, all with rainfall simulators, photogrammetry, and other devices; and (c) the Jarvis Hydraulics Laboratory, comprised of several recirculating flumes, biofilm growth facilities, and a rotating room with a scaled-model of Lake Ontario. In addition, efforts will be made to setup a portable wind tunnel for demonstration.

### **Thematic sessions:**

We have identified eight (8) broad categories in the area of experimental geomorphology, spanning a wide range of environments and scales. This is not an exclusive listing, but helps frame and identify potential contributors. These broad categories are as follows:

- (1) *Granular flows and hillslopes* (granular and debris flows, mass movements, weathering, soil erosion)
- (2) *Fluvial processes* (flow, sediment transport, bedwaves, channels, networks)
- (3) *Aeolian processes* (airflow, sediment transport, dust emission, roughness elements, bedforms)
- (4) *Coastal and marine processes* (lakes, near-shore, oscillatory flow, deltas, turbidity currents)
- (5) *Glacial and periglacial geomorphology* (ice, ground ice, erosional and depositional landforms)
- (6) *Subsurface processes* (infiltration, exfiltration, geotechnical aspects of soils, hyporheic interactions)
- (7) *Landscape and planetary processes* (subsurface, tectonic, climatic, planetary geomorphology)
- (8) *Biophysical and ecogeomorphic processes* (experimentation with biological entities)

### **Important dates:**

Contact potential contributors: January 1, 2013

Final confirmations: March 1, 2013

Full paper deadline: March 1, 2014

Reviewed and revised papers submitted to editors in final form: December 1, 2014

Deadline for poster abstracts: June 1, 2015

Publication of final papers in Geomorphology and Elsevier book: August, 2015

Symposium dates: September 18 to 20, 2015

### **Further information:**

Please feel free to contact the conveners at any time if you would like additional information or to make suggestions.