ES322 Geomorphology – Fall Term 2014 - Journal Reading and Class Presentation Exercise
No Class Thursday 11/6/14; Readings and Powerpoint Summaries Due Tuesday November 11, 2014

Science is conducted in a variety of ways with a variety of applications. The academic discipline of Geomorphology crosses over many study areas (geology, biology, chemistry, archeology, engineering). One of the primary ways in which scientists communicate is through publication of research in scientific journals. The Journal of Geophysical Research (JGR) - Earth Surface is one such publication that is produced by American Geophysical Union. This exercise involves the following tasks:

(1) students reading a high-level journal article, compiling a list of key words and technical terms,
(2) students defining/explaining the key words using web and instructor resources,
(3) students preparing a 10-minute powerpoint summary of the article,

The learning objectives include:

(1) familiarization with applications in the sub-discipline of geomorphology,
(2) experience reading scientific journal articles,
(3) encountering, managing, and deciphering technical scientific terms and analytical techniques,
(4) organizing thoughts and presenting written / oral summaries to colleagues.

For this project, the instructor has assembled a sampling of 6 articles recently published in the JGR Earth Surface. These articles cover a wide range of surface process topics that will be introduced in ES322. The articles are written for technical specialists who have advanced graduate degrees and specialized training in geology/geomorphology. Your goal is to read the assigned article, tackle the language and the science from an introductory perspective, and work your way through summarizing what you've learned from the experience. During this process you will learn as much about what you don't know, as you do.

The following is the list of student article assignments randomly selected by the instructor:

Dylan Castle
Wilcox et al., 2014, Rapid reservoir erosion, hyperconcentrated flow, and downstream deposition triggeredby breaching of 38 m tall Condit Dam, White Salmon River, Washington
http://www.wou.edu/las/physci/taylor/g322/wilcox_etal_2014_white_salmon_river_dam_breach.pdf

Katie Halvorson
Marshall and Roering, 2014, Diagenetic variation in the Oregon Coast Range: Implications for rock strength, soil production, hillslope form, and landscape evolution
http://www.wou.edu/las/physci/taylor/g322/marshall_roering_2014_OCR_rock_strength.pdf

Kaitlyn Hugmeyer
McGuire et al., 2014, Development of topographic asymmetry: Insights from Dated cinder cones in the western United States
http://www.wou.edu/las/physci/taylor/g322/McGuire_etal_2014_cinder_cone_topography.pdf

Thomas Licata
Anderson and Pitlick, 2014, Using repeat lidar to estimate sediment transport in a steep stream
http://www.wou.edu/las/physci/taylor/g322/Anderson_Pitlick_2014_lidar_river_sedimentation_Olympics.pdf

Ian McBride
Venditti and Church, 2014, Morphology and controls on the position of a gravel / sand transition: Fraser River, British Columbia
http://www.wou.edu/las/physci/taylor/g322/venditti_church_2014_fraser_river_gravel.pdf

Brianna Young
Balser et al., 2014, Timing of retrogressive thaw slump initiation in the Noatak Basin, northwest Alaska, USA
http://www.wou.edu/las/physci/taylor/g322/Balser_etal_2014_Alaska_slumps.pdf

The presentations will be 10 minutes in length with a bulleted synopsis and key figures/tables, as needed, synthesizing the content of the chosen reading. Similar to the written summaries, the general presentation format should include: (1) Introduction to the Problem / Issue, (2) Summary of Main Points, (3) Final Discussion of the Relevance, (4) References Cited.

Example Powerpoint Summary Template
http://www.wou.edu/las/physci/taylor/g322/example_seminar_presentation_summary_bemis_etal_2007.pptx
Example Journal Article:
http://www.wou.edu/las/physci/taylor/g322/bemis_etal_2011_cinder_cones.pdf