

# BENJAMIN HUDSON

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## Education

- 2010 – 2014 **University of Colorado** Boulder, CO
- Ph.D. (anticipated 2014), Department of Geological Sciences, Institute of Arctic and Alpine Research, and Community Surface Dynamics Modeling System
- 2003 - 2007 **Brown University** Providence, RI
- A.B. Geological Sciences

## Professional Experience

- 2010- 2014 **Graduate Research Assistant, University of Colorado** Boulder, CO
- Planned and executed complex hydrologic, sediment transport, and geomorphic studies of Greenland rivers, deltas, and fjords using field and satellite based observations
  - Developed new and innovative methods to measure river hydrology and sediment transport leading to scientifically significant publications of work
  - Executed complex field campaigns to install monitoring equipment and make scientific measurements with very little logistical support
- 2007- 2010 **U.S. Department of Justice, Environmental Enforcement Section** Washington, DC
- Worked as paralegal assisting trial attorneys on lawsuits brought by the U.S. Government enforcing the Nation's environmental laws
  - Conducted a wide range of research, analytical, and administrative tasks to support cases

## Other Research and Field Experience

- March 2013 **Knik River Time Lapse Camera Project** Alaska
- Studied braided river geomorphology with time lapse camera and river discharge measurements
- December 2011 **Elwha River Restoration Sediment Monitoring Cruise** Washington State
- Deployed sediment monitoring tripod and performed sediment and oceanographic monitoring studies aboard the R/V Clifford Barnes
- Summer 2006 **Marine Biological Laboratory- Toolik Lake Field Station** Alaska
- Assisted graduate student studying the nitrogen cycle in tundra ecosystems as part of a Research Experience for Undergraduates (REU)
- Fall 2005 **Sea Education Association- Sea Semester** Pacific Ocean
- Interdisciplinary semester in Oceanography, Nautical Science, and Maritime Studies in Woods Hole, Mass. and aboard the SSV Robert C. Seamans
- Fall 2006/ Spring 2007 **Estimating Glacial Retreat in East Africa** Providence, RI
- Used Geographic Information Systems (GIS) to model glacial volume loss in the Rwenzori Mountains of Uganda over the past century and evaluated impacts on regional water supplies

## Papers

- Hudson, Ben**, Irina Overeem, Daniel McGrath, James Syvitski, Andreas Mikkelson, Bent Hasholt. 2013. **MODIS observed increase in duration and spatial extent of sediment plumes in Greenland fjords.** The Cryosphere Discussions. 7, 6101–6141
- Senier, Laura, **Ben Hudson**, Sarah Fort, Elizabeth Hoover, Rebecca Tillson, Phil Brown, 2008. **Brown Superfund Basic Research Program: A Multistakeholder Partnership Addresses Real-World Problems in Contaminated Communities.** Environmental Science and Technology 42(13): 4655-4662.

## Papers – In preparation

- Hudson, Ben**, Irina Overeem, James Syvitski, Andreas Mikkelson, Bent Hasholt. **Greenland glacier-river-fjord sediment dynamics: Insights using monthly to hourly fjord-river remote observations with implications for the use of sediment plumes as a proxy for river discharge.**
- Hudson, Ben**, Jon Warrick, Irina Overeem, James Syvitski. **MODIS observed coastal sediment plumes before and after dam removal on the Elwha River, Washington**
- Hudson, Ben**, Overeem, Irina. **A new technique to detect turbid water, and mask clouds in coastal, case two waters.**
- Overeem, Irina, **Ben Hudson**, Ethan Welty, Andreas Mikkelson, Dorthe Pederson, Adam LeWinter, Bent Hasholt. **River Inundation Reveals Ice Sheet Runoff Variations.**

## Presentations

- Hudson, Ben, Irina Overeem, Andreas Mikkelson, James Syvitski, 2013. **Poster Presentation, Estimating Freshwater Discharge from the Greenland Ice Sheet with MODIS.** 2013 American Geophysical Union. San Francisco, CA.
- Hudson, Ben, Irina Overeem, Andreas Mikkelson, James Syvitski, 2013. **Oral Presentation, Estimating Freshwater Discharge from the Greenland Ice Sheet with MODIS: Reflectance as a proxy for river braid plain inundation.** University of Colorado Hydrologic Sciences Student Research Symposium, Boulder, CO
- Hudson, Ben, Irina Overeem, Andreas Mikkelson, Jason Kean, James Syvitski, 2013. **Poster Presentation, Model-Assisted Discharge Estimates.** 2013 CSDMS Annual Meeting, Boulder, CO
- Hudson, Ben, Irina Overeem, Daniel McGrath, James Syvitski, 2012. **Oral Presentation, Towards understanding the dynamics of freshwater and sediment flux from the Greenland Ice sheet to the coast with MODIS imagery and oceanographic surveys.** 2012 American Geophysical Union - Ocean Sciences Meeting, Salt Lake City, UT
- Hudson, Ben, Irina Overeem, Maureen Berlin, Daniel McGrath, Ursula Rick, James Syvitski, Sebastian Mernild, Aaron Zettler-Mann, 2011. **Poster Presentation, Sediment plumes as proxy for melt on the Greenland Ice Sheet: Possible evidence for a long and intense 2010 melt season.** 2011 Arctic Workshop, Montreal, Canada

## Teaching

Spring 2011	<b>Teaching Assistant – Oceanography</b>	Boulder, CO
Fall 2010	<b>Instructor of Record – Introductory Geology Lab</b>	Boulder, CO
Spring 2007	<b>Teaching Assistant – Earth System History</b>	Providence, RI