

## **Dr. Leslie E. Hasbargen**

Assistant Professor  
Department of Earth Sciences  
219 Science 1  
State University College at Oneonta, New York  
Email: hasbarle@oneonta.edu  
Phone: 607-436-2741

### ***Educational Background***

**Ph.D.**, 2003, Geology, Dept of Geology and Geophysics, University of Minnesota, Minneapolis, MN. Supervisor: Prof. Chris Paola; email: [cpaola@umn.edu](mailto:cpaola@umn.edu); ph. 612-624-8025.

**B.S.**, 1993, (Highest Honors), Geological Sciences, Department of Geological Sciences, University of California, Santa Barbara.

Riverside Community College, California; 1988-1991 (no degree).

Northwestern College (Watertown, Wisconsin; pastoral preparatory college), 1980-81 (no degree).

### ***Areas of Specialization***

#### *Geomorphology:*

- Field mapping of geomorphic features using total station electronic distance measurement systems, optical and electronic level survey tools, photogrammetry, Global Positioning Systems (GPS), and ground penetrating radar (GPR)
- Computer-based mapping and analysis of spatial data
- Hillslope sediment transport processes
- Landscape evolution modeling
- Design, construction and automated monitoring of erosion experiments

#### *Fluvial geomorphology*

- flood mapping
- flood recurrence
- channel geometry
- sediment transport
- alluvial stratigraphy

### ***Honors and Awards***

- Academic Excellence Award for the Use of Instructional Technology from SUNY Oneonta, 2010.
- Nominated for the Biggs Earth Science Teaching Award, sponsored by the Geological Society of America for pre-tenure teachers who demonstrate excellence in Earth Science teaching, 2009-2010
- Nominated for *Excellence in Teaching Award* (Founder's Day Teaching Award), Indiana University Northwest, 2004.
- *Outstanding Teaching Assistant Award*, University of Minnesota, Dept. of Geology and Geophysics, 2000.

**Professional Affiliations**

- Member of American Geophysical Union
- Member of Geological Society of America

**Teaching Experience**

**Assistant Professor**, full time appointment beginning September 2007, Dept. of Earth Sciences, 219 Science 1, State University College at Oneonta, New York (current position).

**Visiting Assistant Professor, University of Delaware**, Fall 2004-Summer 2007, full time appointment. Courses taught: *Geological Hazards with labs*, *Fluvial Geomorphology*, *Surficial Processes*, *History of Geology (graduate seminar)*, *Field Methods in Environmental Science*, *Physical Geography*, *Intro to Geology*, *Hydrogeology*, Dept. of Geological Sciences, University of Delaware, Newark, DE, 19716. Supervisors: Prof. James E. Pizzuto, former Chair; email: [pizzuto@udel.edu](mailto:pizzuto@udel.edu); ph. 302-831-2710; and Prof. Sue McGeary, interim Chair, [smcgeary@udel.edu](mailto:smcgeary@udel.edu), ph. 302-831-8174.

**Visiting Assistant Professor, Indiana University-Northwest**, Fall 2003-Summer 2004, full time appointment. Courses taught: *Introduction to Earth Science lecture and labs*, *Environmental Geology lecture*, *Fluvial Geomorphology lecture*, Dept. of Geosciences, Indiana University Northwest, 3400 Broadway, Gary, IN, 46408. Supervisor: Prof. Atilla Tuncay, Acting Dean; email: [atuncay@iun.edu](mailto:atuncay@iun.edu); ph. 219-980-6730.

**Research Associate, University of Minnesota**, Summer 2003, full time appointment. National Center for Earth Surface Dynamics, University of Minnesota, Minneapolis, MN, 55414. Supervisor: Prof. Chris Paola; email: [cpaola@umn.edu](mailto:cpaola@umn.edu); ph. 612-624-8025.

**Ph.D. Candidate, University of Minnesota** 1994-2003, Dept. of Geology and Geophysics, University of Minnesota, 310 Pillsbury Drive SE, Minneapolis, MN, 55414. Supervisor: Prof. Chris Paola; email: [cpaola@umn.edu](mailto:cpaola@umn.edu); ph. 612-624-8025.

**Courses Taught (University level)**

*Lectures*: Introduction to Geology, Geologic Data and Analysis, Geomorphology, Glaciology and Glacial Geology, Environmental Geology, Fluvial Geomorphology, Geoscience Research Techniques, Historical Geology, Introduction to Earth Science, Science of Natural Disasters, Geological Hazards, Surficial Processes, Field Methods in Environmental Science, Field Geology, History of Geology, Physical Geography, Hydrogeology.

*Labs*: Introductory Geology, Introductory Earth Science, Sedimentology, Mineralogy, Geological Hazards, Science of Natural Disasters, Earth History, Solid Earth Geodynamics, Surficial Processes, Field Methods in Environmental Science, Field Methods in Geology.

*New Courses*: Death Valley Geology Field Trip (2011; 100% new material); Environmental Geophysics (2011; 100% new material); Introduction to Earth Science (2011; 75% new material); Fluvial Geomorphology (2010; 100% new material), Geoscience Research Methods (2009; 100% new material), Mojave-

Mecca Geology Field Trip (2010; 100% new material); Geologic Data and Analysis (2007; 100% new material), Geomorphology (70% new material), Glaciology and Glacial Geology (100% new material), Environmental Geology (50% new material).

## Scholarship

### *Publications (peer reviewed)*

- Bigi, A., L. Hasbargen, A. Montanari, and C. Paola, 2006, *Knickpoints and hillslope failures: Interactions in a steady state experimental landscape*, in Geological Society of America Special Paper 398, Tectonics, climate, and landscape evolution (edited by Sean D. Willett, Niels Hovius, Mark T. Brandon, and Donald M. Fisher), p. 295-308.
- Niemann, J. D., and L. E. Hasbargen, 2006, *A comparison of experimental and natural drainage basin morphology across a range of scales*, Journal of Geophysical Research, 110, F04017, doi:10.1029/2004JF000204.
- Hasbargen, Leslie E., and Chris Paola, 2003, *How predictable is local erosion rate in erosional landscapes?* in Prediction in Geomorphology (eds. P. Wilcock and R. Iverson), AGU Monograph 135.
- Hasbargen, Leslie E., and Chris Paola, 2000, *Landscape instability in an experimental drainage basin*, Geology, v. 28, no. 12, 1067-1070.

### *Conference Presentations*

- Aucoin, Christopher D., and Leslie Hasbargen, Using GPR, GPS and close-range photography to map and characterize dinosaur tracks in the Connecticut river valley, Geological Society of America Abstracts with Programs, Vol. 42, No. 5, p. 276, 2010. [http://gsa.confex.com/gsa/2010AM/finalprogram/abstract\\_180000.htm](http://gsa.confex.com/gsa/2010AM/finalprogram/abstract_180000.htm).
- Carroll, Emily M., and Leslie Hasbargen, Incompetent trunks and tributaries that don't play fair: gravel deltas at tributary junctions in central New York, Geological Society of America Abstracts with Programs, Vol. 42, No. 5, p. 242, 2010. [http://gsa.confex.com/gsa/2010AM/finalprogram/abstract\\_177333.htm](http://gsa.confex.com/gsa/2010AM/finalprogram/abstract_177333.htm)
- Hasbargen, Les, [\*Combining Old School Methods and New School Technology in an Earth Science Field Methods Course\*](#), poster presentation for On the Cutting Edge teaching workshop: Teaching Geoscience in the Field in the 21st Century, August 13-16, 2010.
- Todd, Ross and Leslie Hasbargen, [\*GPR Stratigraphy of fluvio-glacial landforms in central New York state\*](#), in Session #81, Recent Advances in Understanding the Geomorphology and Quaternary History of the Appalachian Region and Adjacent Regions (Posters), Northeastern Section and Southeastern Section Joint Meeting of Geological Society of America (13-16 March 2010). Abstract: [http://gsa.confex.com/gsa/2010NE/finalprogram/abstract\\_169534.htm](http://gsa.confex.com/gsa/2010NE/finalprogram/abstract_169534.htm)
- Kakolewski, Christopher, and Leslie Hasbargen, [\*Mapping and characterizing late glacial and Holocene alluvial fans in upstate New York\*](#), 2010, Session #81, Recent Advances in Understanding the Geomorphology and Quaternary History of the Appalachian Region and Adjacent Regions (Posters), Northeastern Section (45th Annual) and Southeastern Section (59th Annual) Joint Meeting of Geological

- Society of America (13-16 March 2010). Abstract:  
[http://gsa.confex.com/gsa/2010NE/finalprogram/abstract\\_169943.htm](http://gsa.confex.com/gsa/2010NE/finalprogram/abstract_169943.htm)
- Hasbargen, Leslie, Cynthia Klink, Renee Walker, and Emmon Johnson, 2009, **Invited Speaker**, *Archaeology, Sedimentology, and GPR Stratigraphy of a Floodplain, Davenport, NY*, New York State American Physical Society Symposium on Physics and Archaeology, Ithaca College, November 20-21.
- Kakolewski, Christopher, and Leslie Hasbargen, 2009, *Late glacial and Holocene alluvial fans in Butternut Valley, upstate New York*, Geological Society of America Abstracts with Programs, Vol. 41, No. 7, p. 621.  
[http://gsa.confex.com/gsa/2009AM/finalprogram/abstract\\_166582.htm](http://gsa.confex.com/gsa/2009AM/finalprogram/abstract_166582.htm)
- Castendyk, Devin, Leslie Hasbargen, Tatiana Vislova, James Albanese, and James R. Ebert, 2009, *GEOFYRST: Creating majors with a pre-semester field trip for first-year students*, Geological Society of America Abstracts with Programs, Vol. 41, No. 7, p. 535.  
[http://gsa.confex.com/gsa/2009AM/finalprogram/abstract\\_162372.htm](http://gsa.confex.com/gsa/2009AM/finalprogram/abstract_162372.htm)
- Hasbargen, Leslie, Cynthia Klink, Renee Walker, and Emmon Johnson, 2009, *Combining Archaeology, Sedimentology, and GPR Stratigraphy to Elucidate Floodplain Development, Charlotte Creek, NY*, Geological Society of America Abstracts with Programs, Vol. 41, No. 7, p. 614.  
[http://gsa.confex.com/gsa/2009AM/finalprogram/abstract\\_163932.htm](http://gsa.confex.com/gsa/2009AM/finalprogram/abstract_163932.htm)
- Johnson, Emmon, Arjun Sridharan, Leslie Hasbargen, and Cynthia Klink, 2009, *Combining Geophysics and Computer Science to Visualize the Subsurface*, Northeastern Section 44th Annual Meeting Spring 2009, Session No. 16 Geoarchaeology: Sites, Substrate, Sources, and Context II, Geological Society of America Abstracts with Programs, Vol. 41, No. 3, p. 23.  
[http://gsa.confex.com/gsa/2009NE/finalprogram/abstract\\_155293.htm](http://gsa.confex.com/gsa/2009NE/finalprogram/abstract_155293.htm).
- Hasbargen, Leslie, Cynthia Klink, Emmon Johnson, and David Anthony, 2008, *Mapping Floodplain Stratigraphy at an Archaeological Site in Upstate New York Using Shallow Subsurface Geophysics*, Poster presentation, H53B-1038, Fall 2008 American Geophysical Union Convention, San Francisco, CA.  
<http://adsabs.harvard.edu/abs/2008AGUFM.H53B1038H>
- Hasbargen, Leslie, 2006, *Pits, Mounds and Soil Transport on Hillslopes in NW Delaware*, Fall American Geophysical Union National Convention, H44 Earth Surface: Processes and Landscapes.  
<http://adsabs.harvard.edu/abs/2006AGUFM.H53B0614H>
- Hasbargen, Leslie E., 2006, *Some characteristics of drainage basin realignment*, Spring American Geophysical Union Convention, Baltimore, MD.  
<http://adsabs.harvard.edu/abs/2006AGUSM.H53A..03H>
- Hasbargen, Leslie, 2003, *Comparing sediment yield and landscape change in an experimental steady state drainage basin*, American Geophysical Union National Convention, H51D-1116.
- Hasbargen, Leslie, and Chris Paola, 2002, *Erosion rate variability in steady state landscapes: sources and implications*, American Geophysical Union National Convention, session H03-Experimental Geomorphology.
- Bigi, Alessandro, Hasbargen, Leslie, and Chris Paola, 2002, *Coupling between knickpoint migration and hillslope failures: an experimental study*, American

Geophysical Union National Convention, session H03-Experimental Geomorphology.

### ***Non-Refereed Publications***

- Hasbargen, Les, [The Depth to Gas-bearing Shale Units in Western Otsego County](#), SUNY Oneonta Faculty Research Show, February 12, 2010.
- Hasbargen, Leslie E., *Ongoing Flood Research in Otsego and Delaware Counties, New York*, web page (created January 2008; last modified July 24, 2008): [http://employees.oneonta.edu/hasbarle/NY\\_Research/NY\\_Research.htm](http://employees.oneonta.edu/hasbarle/NY_Research/NY_Research.htm)
- Hasbargen, Leslie E. *Ground Penetrating Radar Study of a Flood Plain*, web page (created July 12, 2008; last modified July 24, 2008): [http://employees.oneonta.edu/hasbarle/Pine Lake Archaeology Site.htm](http://employees.oneonta.edu/hasbarle/Pine_Lake_Archaeology_Site.htm).

### ***Seminar Presentations***

- Hasbargen, Leslie, 2009, *Archaeology, Sedimentology, and GPR Stratigraphy of a Floodplain, Davenport, NY*, presented to the Earth Sciences Department, SUNY Oneonta, November 12, 2009.
- Hasbargen, Leslie, *Research Needs and Potential Collaborative Projects for Ground Penetrating Radar and Electromagnetic Induction Profiling*, presented to the GPR working group of faculty at SUNY Oneonta (Anthropology, Earth Sciences, Math and Computer Sciences), May 1, 2009.
- Hasbargen, Leslie, 2009, *Flood mapping and sediment transport in Otsego County streams, NY*, presented to the Earth Sciences Department, SUNY Oneonta, March 26, 2009.
- Klink, Cynthia (Anthropology), Les Hasbargen (Earth Sciences), Emmon Johnson, Renee B. Walker (Anthropology), David Anthony (Hartwick College), *Linking Floodplain Stratigraphy to Archaeological Setting at Pine Lake, New York*, presented at the 9<sup>th</sup> Annual Faculty Research Show, SUNY Oneonta, February 12, 2009.
- Hasbargen, Leslie, Tyson Robb, Anthony Grimes, and Roy Widrig, 2009, *Flood mapping and sediment transport in Otsego County streams, NY*, presented at the 9<sup>th</sup> Annual Faculty Research Show, SUNY Oneonta, February 12, 2009.
- Hasbargen, Leslie, 2009, *June 2006 Flood in Delaware and Otsego Counties, New York, and research needs for flood hazards*, guest lecturer for Environmental Sociology (SOCL 290 taught by Dr. Greg Fulkerson), SUNY Oneonta, February 2009.
- Hasbargen, Leslie, 2008, *Mapping floodplain stratigraphy at an archaeological site in upstate New York using shallow subsurface geophysics*, presented to the Earth Sciences Department, SUNY Oneonta, September 25, 2008.
- Hasbargen, Leslie, 2008, *Erosion in steady state drainage basins: an experimental approach*, seminar presented to the Department of Geological Sciences and Environmental Studies at Binghamton University, May 9, 2008.
- Hasbargen, Leslie, 2008, *Flood Recurrence in Delaware and Otsego Counties, New York*, (poster) presented at the Faculty Research Show, SUNY College at Oneonta, March 8, 2008.

- Hasbargen, Leslie, 2008, *Recurrence Intervals for the 2006 Flood in Delaware and Otsego Counties, New York*, presented to the Earth Sciences Department, SUNY Oneonta, February 8, 2008.
- Hasbargen, Leslie, 2008, *2006 Flood Recurrence Delaware and Otsego County*, seminar presented to Sidney High School Hydrology Class, Sidney, New York, January 9, 2008.
- Hasbargen, Leslie, 2007, *Introduction to Global Mapper, a light weight GIS*, seminar presented at SUNY Oneonta Earth Sciences Seminar, October, 2007.
- Hasbargen, Leslie E., October 2004, **Invited speaker**, *Experimental Landscape Evolution*, Dept. of Geology, University of Delaware.
- Hasbargen, Leslie E., March 2004, **Invited speaker**, *Dynamics of Eroding Drainage Basins*, Dept. of Earth Science, University of Memphis.
- Hasbargen, Leslie E., October 2002, **Invited speaker**, *Dynamics of Eroding Landscapes*, University of Minnesota, Duluth.

### ***Student Research Presentations (Les Hasbargen as sponsor)***

- Grimes, Anthony, *An Investigation of Sediment Entrainment Theories with an Emphasis on Grain Shape Analysis*, presented at Student Research Day, SUNY Oneonta, April 21, 2009.
- Johnson, Emmon and Arjun Sridharan, *Combining Geophysics and Computer Science to Visualize the Subsurface* (co-sponsor with Cynthia Klink), presented at Student Research Day, SUNY Oneonta, April 21, 2009.
- Wagner, Brenden, *Butternut Watershed Study* (co-sponsor with Thomas Horvath), presented at Student Research Day, SUNY Oneonta, April 21, 2009.
- Partridge, Waylon, *The Archaeological Application of EMI Profiler at Pine Lake, NY*, presented at Student Research Day, SUNY Oneonta, April 21, 2009. Faculty Sponsor: Leslie Hasbargen.
- Eichler, Jill, *The Framework for the Development of a Lake Management Plan for Canadarago Lake*, poster presented at Student Research Day, SUNY Oneonta, April 16, 2008.
- Grimes, Anthony, *An Exploration of Sediment Entrainment Theories using the June 2006 Flood Conditions: A Preliminary Investigation*, presented at Student Research Day, SUNY Oneonta, April 16, 2008.
- Widrig, Roy, *Erosion of Low Order Drainages in the Glacial Sediments of Central New York*, presented at Student Research Day, SUNY Oneonta, April 16, 2008.

### ***Research Proposals and Grants***

- Faculty Development Grant* from SUNY Oneonta, Fall 2010, \$822, for two presentations with student co-authors at the Geological Society of America National Convention, October 2010.
- Faculty Development Grant* from SUNY Oneonta, Fall 2009, \$956, for presentation of a paper at the Geological Society of America National Convention, October 2009.
- National Science Foundation Research Proposal* (NSF #0969468), MORE MPG: Maximizing Opportunities for Retention in Energy-related Majors - Physics and Geosciences, Devin Castendyk (PI), Leslie E. Hasbargen (co-PI), Sunil Labroo (co-PI), \$999, 129. Submitted September 29, 2009, not funded.

- Student Research Grant* from the Research Foundation, State University of New York, *Ice Margins: Then and Now*, by Christopher Keefe, Faculty Sponsor: Leslie Hasbargen, November 2009; not funded.
- Student Research Grant* from the Research Foundation, State University of New York, *Marcellus Shale: Contaminant Effects on a Local Scale*, by Leandra Baker, Fiona Lowry, and Molly Reed (\$1200). This project will investigate drinking water quality from private wells in Otsego County.
- Student Research Grant* from the Research Foundation, State University of New York, *Geotechnical Mapping of Dinosaur Footprints in the Connecticut River Valley*, by Christopher Aucoin (\$1141). The project maps dinosaur trackways with photogrammetry, GPS, GPR and total station.
- Student Research Grant* from the Research Foundation, State University of New York, \$1200, *Marcellus Shale: Contaminant Effects on a Local Scale*, by Leandra Baker, Fiona Lowry and Molly Reed, Faculty Sponsor: Leslie Hasbargen, 2009-2010.
- Student Research Grant* from the Research Foundation, State University of New York, \$1150, *Butternut Watershed Nutrient and Stream Load Study*, by Brenden Wagner, Faculty Sponsors: Thomas Horvath and Leslie Hasbargen, April 2009.
- Student Research Grant* from the Research Foundation, State University of New York, \$660, *Stratigraphy of Glacial Landforms Using Ground Penetrating Radar*, by Ross Todd, Faculty Sponsors: Leslie Hasbargen, April 2009.
- Student Research Grant* from the Research Foundation, State University of New York, \$300. *Stream Gravel Transport and the June 2006 Flood in Central New York*, by Anthony Grimes (student), Faculty Sponsor: Dr. Leslie Hasbargen, Earth Sciences Department, SUNY Oneonta, March 14, 2008.
- Student Research Grant* from the Research Foundation, State University of New York, \$446. *Framework for the Development of a Lake Management Plan for Canadarago Lake*, by Jill Eichler (student), Faculty Sponsor: Dr. Leslie Hasbargen, Earth Sciences Department, SUNY Oneonta, March 14, 2008.
- Faculty Research Grant* from the Research Foundation, State University of New York, \$2488. *Documentation of the June 2006 Flood Heights in Otsego County, New York*, by Leslie E. Hasbargen, 2008.
- National Science Foundation Research Proposal, Model Comparison and Inference From an Experimental Drainage Basin*, EAR #6707154, \$392,446; submitted 7/16/2007; received enthusiastic reviews, but was not funded (6/20/2008); Co-PI with Jeff Niemann at Colorado State University, Fort Collins, Colorado.
- National Science Foundation Research Proposal, Dynamic Tests of Landscape Evolution Models with an Experimental Drainage Basin*, EAR# 0617381, \$361,827; submitted 1/17/2006; received enthusiastic reviews, but was not funded (7/05/2006); resubmitted in July 2007 (Co-PI with Jeff Niemann at Colorado State University, Fort Collins, Colorado).
- Geological Society of America research grant* (\$1500) to investigate erosion in a small scale drainage basin, 1997.
- Summer research grant* (\$1500), University of Minnesota, Department of Geology and Geophysics, 1999.

***Manuscript and Proposal Reviews***

*Proposal Reviewer* for the National Science Foundation, Geomorphology and Land Use Dynamics

*Manuscript Reviewer* for the following scientific journals

- Geological Society of America Bulletin
- Geology
- Journal of Geophysics Research-Earth Surface
- Geophysical Reviews
- Nature Geoscience

*Textbook Manuscript Reviews* for McGraw-Hill

***Current Research Projects***

- Dinosaur trackway mapping using differential GPS, total station, photogrammetry, and ground penetrating radar
- Mapping tributary deltas on trunk streams in Otsego County
- Mapping glacial and fluvial landforms in Otsego County
- Mapping floodplain stratigraphy with ground penetrating radar at Pine Lake Environmental Campus of Hartwick College
- Characterization of alluvial stratigraphy in Otsego County
- Water quality monitoring in Otsego County streams
- Development of a geologic database for Otsego County, to provide background information for risk assessment in regard to natural gas drilling

***College and Community Service***

***Committee appointments***

- Petrology Faculty Search Committee, Chair, 2010-2011
- Structural Geologist Position Search Committee, 2009-2010
- Graduate Committee (SUNY Oneonta), 2009-2011
- Wetlands Soil Scientist Faculty Search Committee (SUNY Oneonta), Fall 2007
- Curriculum Committee (SUNY Oneonta), 2007-2011
- Environmental Science Program committee (SUNY Oneonta), 2007-2011

***Community Service***

- Secretary and Board of Director member for Butternut Valley Alliance, a nonprofit 501(C)(3) organization comprising citizens living in the Butternut Valley committed to preserving the character, environmental integrity, and way of life in the valley
- Watershed Committee for the Butternut Valley Alliance
- Creation of a model for the depth to gas-bearing shale which applies to western Otsego County, available online.

*Last modified: November 5, 2010*