

KAREN BOBBITT GRAN
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EDUCATION:

Ph.D. in Geology, University of Washington, 2005
M.S. in Geology, University of Minnesota, 2000
B.A. in Geology, Carleton College, 1996

EXPERIENCE:

2013-present: **Associate Professor**, Department of Geological Sciences, University of Minnesota Duluth
2007- 2013: **Assistant Professor**, Department of Geological Sciences, University of Minnesota, Duluth.
2006 – 2007: **Research Fellow & Graduate Program Coordinator** (Stream Restoration Science & Engineering), National Center for Earth-surface Dynamics, University of Minnesota, Minneapolis.
2000 – 2005: **Graduate Research/Teaching Assistant**, Department of Earth & Space Sciences, University of Washington, Seattle.
Spring 2000: **Visiting Instructor**, Department of Geology, University of St. Thomas.
Fall 1999: **Acting Technical Director**, Department of Geology, Carleton College.
1997 – 1999: **Graduate Research/Teaching Assistant**, Department of Geology & Geophysics, University of Minnesota, Minneapolis.
1996 – 1997: **Geologist/Technician**, Foth & Van Dyke, Eagan, Minnesota.

RESEARCH INTERESTS:

Fluvial processes and sediment transport, braided rivers, disturbed systems, stream restoration, volcanic geomorphology, interactions between physical landscape and ecological systems, landscape evolution, watershed history, sediment source delineation, lidar analyses

RECENT FUNDING HISTORY:

2013 Identifying and mitigating impacts from expanding urbanization to Duluth-area streams. Funding from the University of Minnesota's Center for Urban and Regional Affairs (CURA). PI: Gran. (Total UMD: \$37,147) (5/13 – 6/14)

2012 Climate and Human Dynamics as Amplifiers of Natural Change: a Framework for Vulnerability Assessment and Mitigation Planning, Funding from National Science Foundation's Water Sustainability and Climate Program. PI: Foufoula-Georgiou; Co-Is: Finlay, Roehrig, Gran. (Collaborative grant including Investigators Belmont, Parker, Rabotyagov, Kling at other institutions). (Total UMN: \$2,200,000; UMD portion: \$392,101). (9/12 – 8/17)

- 2012 Collaborative for Sediment Source Reduction: Greater Blue Earth River, Funding from Minnesota Department of Agriculture, PI: Gran, (Total \$180,000; UMD portion: \$113,331) (5/12-6/15).
- 2012 Predicting Erosional hotspots in North Shore streams from high-resolution spatial data, Funding from University of Minnesota Water Resources Center from funding to Water Resources Research Institutes through the US Geological Survey, PI: Gran, (UMD: \$16,547) (5/12-6/13).
- 2012 LiDAR-based bluff assessment for coastal land use planning, Funding from Minnesota's Lake Superior Coastal Program. PI: Host (UMD NRRI), Co-I: Gran, (UMD: \$34,723) (8/12-12/13)
- 2011 Improving experimental imaging capabilities from the micro scale to the landscape scale, Funding from University of Minnesota's I³ program, PI: Gran, Co-Is: Swenson, Hoxie, Johnson, Musselman, Host, Brashaw, (UMD: \$318,500) (7/11 – 6/16).
- 2011 Amity Creek Restoration Project, Funding from Minnesota Pollution Control Agency as part of U.S. Environmental Protection Agency's Great Lakes Restoration Initiative, PI: Axler, Co-Is: Host, Breneman, Brady, Schomberg, Gran, (Total: \$488,495; UMD Geological Sciences portion: \$60,588), (7/11 – 6/13).
- 2011 Greater Blue Earth River Sediment Reduction Strategy, Funding from Minnesota Pollution Control Agency 319 Project. PI: Marr, Co-Is: Belmont, Gran, Hobbs, Wilcock, (Total: \$300,000; run through St. Anthony Falls Laboratory at University of Minnesota, Twin Cities), (4/12 – 6/15).
- 2011 National Center for Earth-surface Dynamics (NCED) (Gran portion: \$39,152 + additional \$23,000 in 2012). (12/11 - 6/13). This amount was allocated to me as an NCED PI for related research. The original funding source is the National Science Foundation through their Science and Technology Center program. This funding runs through the St. Anthony Falls Laboratory at University of Minnesota, Twin Cities.
- 2010 Assessment of habitat improvement effectiveness on the Sucker River, Funding from the Center for Community and Regional Research at the University of Minnesota Duluth, PI: Gran, (UMD: \$5,979) (5/10 – 4/12).
- 2010 Water sustainability and climate in the Great Lakes region of East Africa, Funding from National Science Foundation's Water Sustainability and Climate Program, PI: Johnson, Co-Is: Austin, Gran, Guildford, Hecky, (UMD: \$136,809) (10/10-9/11).
- 2009 Decadal-scale channel evolution at Mount Pinatubo, Philippines, National Science Foundation, PI: Gran, (UMD: \$124,090) (3/09 – 2/12).
- 2008 Riparian vegetation controls on channel planform evolution, University of Minnesota Grant-in-Aid, PI: Gran, (UMD: \$27,726) (1/09 – 6/10).

- 2008 A Preliminary Investigation of In-Stream Light Quality and Photochemistry at Amity Creek, VCAA Office at University of Minnesota Duluth, PI: Minor, Co-I: Gran, Austin (UMD: \$10,600) (5/08–6/09).
- 2006 Le Sueur River integrated sediment budget, Minnesota Pollution Control Agency, PI: Gran, Co-I: Jennings, Perg (initial PI), (\$482,000) (5/07 – 6/09); Extension for additional \$185,000 (7/09-6/11). Funding was run through St. Anthony Falls Laboratory at the University of Minnesota, Twin Cities.

COURSES TAUGHT:

Geology & Earth Systems
Geomorphology
Fluvial Geomorphology
Tectonic Geomorphology

Field Geology
Natural Hazards & Civilization
Introduction to Stream Restoration
Stream Restoration Practice

GRADUATE STUDENTS ADVISED:

University of Minnesota Duluth, Geological Sciences, M.S.:

Andrea Johnson (2011), Emily Dunn (2011), Grant Nietzel (2013), Martin Bevis, Courtney Targos, Nathaniel Mitchell, Pichawut Manopkawe

University of Minnesota Duluth, Water Resources Science, M.S.:

Jenny Jasperson, Molly Wick (2013), Virginia Batts

University of Minnesota (Twin Cities), Geology & Geophysics, Ph.D.:
(now Dept. of Earth Sciences)

Stephanie Day (2012), Ted Fuller (2013)

PUBLICATIONS: (**denotes student author*)

- Gran, K.B.**, Finnegan, N., *Johnson, A., Belmont, P., Rittenour, T., and Wittkop, C., 2013, Landscape evolution, valley excavation, and terrace development following abrupt postglacial base level fall. *GSA Bulletin*, doi: 10.1130/B30772.1.
- *Day, S., **Gran, K.**, Belmont, P., and Wawrzyniec, T., 2012, Measuring bluff erosion part 1: Terrestrial laser scanning methods for change detection and determining bluff erosion processes. *Earth Surface Processes and Landforms*, 13 p., doi:10.1002/esp.3353.
- *Day, S., **Gran, K.**, Belmont, P., and Wawrzyniec, T., 2013, Measuring bluff erosion Part 2: Pairing aerial photographs and terrestrial laser scanning to create a watershed-scale sediment budget. *Earth Surface Processes and Landforms*, 15 p., doi:10.1002/esp.3359.
- *Maalim, F.K., Melesse, A.M., Belmont, P., **Gran, K.B.**, 2013, Modeling the impact of land use changes on runoff and sediment yield in the Le Sueur watershed, Minnesota, using GeoWEPP. *Catena* v. 107, pp. 35-45. (*Maalim was a student at Florida International University.)
- Gran, K.B.**, 2012, Strong seasonality in sand loading and resulting feedbacks on sediment transport, bed texture, and channel planform at Mount Pinatubo, Philippines. *Earth Surface Processes and Landforms*, v. 37, n. 9, pp. 1012-1022, doi: 10.1002/esp.3241.
- Gran, K.B.**, Belmont, P., *Day, S.S., Finnegan, N.J., Jennings, C., Lauer, J.W., and Wilcock, P.R., 2011, Landscape evolution in south-central Minnesota and the role of geomorphic history on modern erosional processes. *GSA Today*, v.21, n.9, doi: 10.1130/G121A.1., pp. 7-9.

- Gran, K.B.**, Montgomery, D.R., *Halbur, J.C., 2011, Long term post-eruption elevated sediment yields at Mount Pinatubo, Philippines. *Geology*, v. 39, n. 4, pp. 367-370.
- Belmont, P., **Gran, K.B.**, Schottler, S.P., Wilcock, P.R., *Day, S.S., Jennings, C., Lauer, J.W., Viparelli, E., Willenbring, J.K., Engstrom, D.R., Parker, G., 2011, Large shift in source of fine sediment in the Upper Mississippi River, *Environmental Science & Technology*, DOI: 10.1021/es2019109.
- Belmont, P., **Gran, K.**, Jennings, C.E., Wittkop, C., *Day, S.S., 2011, Holocene landscape evolution and erosional processes in the Le Sueur River, central Minnesota. In Miller, J.S., Hudak, G.J., Wittkop, C., and McLaughlin, P.I., eds., *Archean to the Anthropocene: Field Guides to the Geology of the Mid-Continent of North America: Geological Society of American Field Guide* 24, p. 439-455, doi:10.1130/2011.0024(21).
- Voller, V.R., Paola, C., **Gran, K.B.**, Hudleston, D., and Campbell, K.M., 2011, Designing graduate curriculum for stream restoration. Proceedings of the 2011 World Environmental and Water Resources Congress: Bearing Knowledge for Sustainability, ASCE Conference Proceedings, doi:10.1061/41173(414)270.
- *Dumke, J.D., Hrabik, T.R., Brady, V.J., **Gran, K.B.**, Regal, R.R., Seider, M.J., 2010, Channel morphology response to selective wood removals in a sand-laden Wisconsin trout stream. *North American Journal of Fisheries Management*, v. 30, n. 3, pp. 776-790.
- Gran, K.B.**, Belmont, P., *Day, S.S., Jennings, C., *Johnson, A., Perg, L., Wilcock, P.R., 2009, Geomorphic evolution of the Le Sueur River, Minnesota, and implications for current sediment loading. In James, L.A., Rathburn, S.L., and Whittecar, G.R., eds., *Management and Restoration of Fluvial Systems with Broad Historical Changes and Human Impacts: Geological Society of American Special Paper* 451, 12 p., doi: 10.1130/2008.2451(08).
- Gran, K.B.**, Montgomery, D.R., and Sutherland, D.G., 2006, Channel bed evolution and sediment transport under declining sand inputs. *Water Resources Research*, v. 42, W10407.
- Gran, K.B.**, and Montgomery, D.R., 2005, Spatial and temporal patterns in fluvial recovery following volcanic eruptions: Channel response to basin-wide sediment loading at Mount Pinatubo, Philippines. *GSA Bulletin*, v. 117, n. 1/2, p. 195-211.
- Tal, M., **Gran, K.B.**, Murray, A.B., Paola, C., and Hicks, M., 2004, Riparian vegetation as a primary control on channel characteristics in multi-thread rivers. Eds. Bennett, SH, Collison, AJC, Simon, A, *Riparian Vegetation and Fluvial Geomorphology*, Water Science and Application, v. 8, p. 43-58.
- Gran, K.B.**, and Paola, C., 2001, Riparian vegetation controls on braided stream dynamics. *Water Resources Research*, v.37, n.12, p.3275-3284.
- Montgomery, D.R., and **Gran, K.B.**, 2001, Downstream variations in the width of bedrock channels. *Water Resources Research*, v.37, n.6, p.1841-1846.
- Jacobson, R.B. and **Gran, K.B.**, 1999, Gravel routing from widespread, low-intensity landscape disturbance, Current River Basin, Missouri. *Earth Surface Processes and Landforms*, v. 24, n. 10, p. 897-917.

MAJOR REPORTS:

- Gran, K.B.**, Belmont, P., *Day, S., Jennings, C., Lauer, J.W., Viparelli, E., Wilcock, P., Parker, G., 2011, An integrated sediment budget for the Le Sueur River basin. Final report to the Minnesota Pollution Control Agency, June 2011, 128 p.
- Gran, K.**, Johnson, A., Belmont, P., Day, S., Wilcock, P., Viparelli, E., Parker, G., Jennings, C., Lauer, J.W., Azmera, L., Maalim, F.K., Thomas, A., and Melesse, A., 2009, An integrated sediment budget for the Le Sueur River basin, Interim Report 7/30/09, A report submitted to the Minnesota Pollution Control Agency, 144 p.

ABSTRACTS: (*denotes student author)

2014:

- Gran, K.B.**, 2014, Geologic history of western Lake Superior streams. Minnesota Lake Superior Stream Science Symposium, January 7-8, 2014, Duluth, MN.
- Gran, K.B.**, 2014, Stream restoration: An evolving practice. Minnesota Lake Superior Stream Science Symposium, January 7-8, 2014, Duluth, MN.
- Hansen, B., **Gran, K.**, Nieber, J., 2014, Cross River channel survey: Present day effects of historical logging structures. Minnesota Lake Superior Stream Science Symposium, January 7-8, 2014, Duluth, MN.
- Axler, R., Brady, V., Host, G., **Gran, K.**, Schomberg, J., *Neitzel, G., *Wick, M., *Jasperson, J., Henneck, J., Ruzycski, E., Will, N., Geissler, J., Kleist, C., Carlson, T., Anderson, K., Kubiak, K., Boheim, R.C., Magner, J., Breneman, D., Johnson, L., Story, B., 2014. Amity Creek Restoration Initiative, Minnesota, USA: Demonstration project to help restore and protect north shore Lake Superior Basin trout streams. Minnesota Lake Superior Stream Science Symposium, January 7-8, 2014, Duluth, MN.
- *Birkemeier, R., **Gran, K.B.**, Haensel, C., 2014, Monitoring the effectiveness of large wood at maintaining deep pool habitat through a 500-year flood event. Minnesota Lake Superior Stream Science Symposium, January 7-8, 2014, Duluth, MN.
- *Neitzel, G.D., **Gran, K.B.**, 2014, Monitoring event-scale stream bluff erosion with repeat terrestrial laser scanning: Amity Creek. Minnesota Lake Superior Stream Science Symposium, January 7-8, 2014, Duluth, MN.
- Riker-Coleman, K., **Gran, K.**, Hiller, K., 2014, Geomorphic effects of the Forbay Levee breach at Jay Cooke State Park. Minnesota Lake Superior Stream Science Symposium, January 7-8, 2014, Duluth, MN.
- *Wick, M., **Gran, K.** 2014, Identifying erosional hotspots in North Shore streams using airborne LiDAR. Minnesota Lake Superior Stream Science Symposium, January 7-8, 2014, Duluth, MN.

2013:

- Gran, K.B.**, Belmont, P., Finnegan, N., 2013, Changing patterns in sediment delivery in incising agricultural watersheds. Ecological Society of America national meeting, Minneapolis, MN.
- Gran, K.B.**, Belmont, P., Finnegan, N., 2013, Tracking sediment through the Holocene: Determining anthropogenic contributions to a sediment-rich agricultural system, north-central USA. European Geophysical Union annual meeting, Vienna, Austria.
- Gran, K.B.**, Riker-Coleman, K., Hiller, K., 2013, Seize the day: What to do when a 500-year flood strikes in your backyard. *Geological Society of America Abstracts with Programs*. Vol. 45, No. 7, p.792.

2012:

- Day, S.S., and **Gran, K.B.**, 2012, Using TLS to measure braided river bar movement in the Pasig-Potrero River on Mt. Pinatubo, Abstract submitted to the AGU.
- *Day, S.S., **Gran, K.**, and Paola, C., 2012, Ravine growth experiments to understand effects of changing hydrology, *Geological Society of America Abstracts with Programs*. Vol. 44, No. 7, p.418.

Finnegan, N.J., and **Gran, K.B.**, 2012, Natural or controlled experiment? Disentangling anthropogenic and geologic contributions to the sediment load of the Le Sueur River, MN, USA, Abstract submitted to the AGU.

Gran, K.B., 2012, Monitoring the effectiveness of large wood at maintaining deep pool habitat... through a 500-year flood event, Presented at the 43rd Annual Binghamton Symposium, Jackson, WY.

Gran, K.B., Belmont, P., and Matteson, S., 2012, Ravine contributions to basin-wide sediment loads in an incising agricultural basin, south-central Minnesota USA, Geological Society of America *Abstracts with Programs*. Vol. 44, No. 7, p.341.

*Neitzel, G., and **Gran, K.B.**, 2012, Monitoring stream bluff erosion using repeat terrestrial laser scanning, Abstract submitted to the AGU.

*Wick, M.J., and **Gran, K.B.**, 2012, Identifying Riverine Erosional Hotspots Using Airborne Lidar, Abstract submitted to the AGU.

2011:

Gran, K.B., 2011, Sediment Loading in the Le Sueur River Watershed, from Post-glacial Times to Modern. Minnesota Water Resources Conference, October 18-19, 2011, in St. Paul, MN.

Wilcock, P.R., Belmont, P., and **Gran, K.B.**, 2011, Human Amplified Natural Change: An approach for vulnerability assessment and mitigation planning, *EOS, Transactions of the AGU*, Abstract # EP23B-0749.

2010:

*Day, S.S., and **Gran, K.B.**, 2010, The effects of changes in flow rate on erosion volumes in young incising river systems. *EOS, Transactions of the AGU*, Fall 2010.

*Day, S.S., **Gran, K.B.**, and Paola, C., 2010, The effects of increased flow rate on erosional processes in a young, evolving watershed. *Geological Society of America Abstracts with Programs*, v. 42, n. 5, p. 179.

Gran, K.B., 2010, Two decades of channel evolution following the eruption of Mount Pinatubo, Philippines. *EOS, Transactions of the AGU*, Fall 2010.

Gran, K.B., 2010, Two decades of channel evolution following the 1991 eruption of Mount Pinatubo, Philippines. *Geological Society of America Abstracts with Programs*, V. 42, n. 5, p. 316.

Gran, K., 2010, Two decades of channel bed evolution at Mount Pinatubo, Philippines. Gravel-Bed Rivers VII, Tadousse, Quebec, September 6-10, 2010.

Finnegan, N.J., **Gran, K.**, *Johnson, A., Belmont, P., Wilcock, P., Dietrich, W.E., 2010, The importance of downstream bed surface coarsening in predicting the wave of incision in response to a sudden base level drop at the mouth of a river: the Holocene Le Sueur River, Minnesota, USA. *EOS, Transactions of the AGU*, Fall 2010.

*Fuller, T.K., Sklar, L.S., and **Gran, K.B.**, 2010, Lateral bedrock erosion in an experimental channel: the influence of bed roughness on wear by bedload impacts. *Geological Society of America Abstracts with Programs*, v. 42, n. 5, p. 315.

*Fuller, T.K., Sklar, L.S., and **Gran, K.B.**, 2010, Lateral bedrock erosion in an experimental channel: the influence of bed roughness on wear by bedload impacts. *EOS, Transactions of the AGU*, Abstracts with Programs, Fall 2010.

2009:

- *Day, S.S., **Gran, K.B.**, Belmont, P., Jennings, C.E., Wawrzyniec, 2009, Using ground-based LiDAR to identify the processes of bluff erosion in the LeSueur River basin in Southern Minnesota. American Geophysical Union Annual Meeting, EP33A-0609.
- Gran, K.B.**, *Dunn, E., Tal, M., 2009, Incipient vegetation recovery in the braidplain nearly two decades after the eruption of Mount Pinatubo, Philippines. American Geophysical Union Annual Meeting, EP23C-0648.
- Gran, K.B.**, *Johnson, A.L., Belmont, P., *Day, S., Jennings, C.E., Wilcock, P., 2009, Impact of Holocene valley evolution on modern sediment loading in the Le Sueur River, Minnesota. Geological Society of American Annual meeting, October 18-21, 2009, *GSA Abstracts with Programs*, v. 41, n. 7, p. 228.
- Jennings, C.E., Belmont, P., Blumentritt, D., *Day, S.S., Engstrom, D.R., **Gran, K.B.**, *Johnson, A.L., Lauer, J.W., Parker, G., Schottler, S., Viparelli, E., Wilcock, P., 2009, Mapping to inform modeling of turbidity in agricultural watersheds of the Minnesota basin. Geological Society of America Annual meeting, October 18-21, 2009, *GSA Abstracts with Programs*, V. 41, n. 7, p. 167.

2008:

- Belmont, P., Wilcock, P., Parker, G., **Gran, K.**, Jennings, C., Perg, L., Lauer, W., Viparelli, E., *Day, S., and *Johnson, A., 2008, Watershed context for a sediment routing model in the Le Sueur River, southern Minnesota. Geological Society of America Annual Meeting, Abstract 283-8.
- Belmont, P., Viparelli, E., Parker, G., Lauer, W., Jennings, C., **Gran, K.**, Wilcock, P., Melesse, A., 2008, Parameterization of a complex landscape for a sediment routing model of the Le Sueur River, southern Minnesota, *Eos Transactions of the AGU*, v. 89(53), Fall Meeting Suppl., Abstract H33K-02, Invited.
- *Day, S.S., Belmont, P., **Gran, K.**, Jennings, C., Wilcock, P., *Johnson, A., Perg, L., 2008, Using Ground Based LiDAR to quantify bluff erosion in the LeSueur River watershed in southern Minnesota, *Eos Transactions of the AGU*, v. 89(53), Fall Meeting Suppl., Abstract H53C-1084.
- Gran, K.B.**, 2008, Role of historic land cover change vs. post-glacial recovery on current sediment loading in two rural Minnesota watersheds. MYRES III Conference (Meeting of Young Researchers in Earth Sciences), New Orleans, Louisiana, May 20-23, 2008.
- Gran, K.**, Belmont, P., *Day, S., Jennings, C., *Johnson, A., Perg, L., and Wilcock, P., 2008, Sediment sources to the Le Sueur River, Minnesota, over multiple temporal and spatial scales. Geological Society of America Annual Meeting, Abstract 123-13.
- Gran, K.**, Minor, E., and *Huggett, R., 2008, The role of local geology and topography on suspended sediment and organic carbon in a Minnesota North Shore bedrock stream, *Eos. Trans. of AGU*, v. 89 (53), Fall Meeting Suppl., Abstract H53B-1042.
- *Johnson, A., **Gran, K.**, Belmont, P., and Jennings, C., 2008, Investigating timing and pattern of valley excavation, Le Sueur River, south-central Minnesota, in *Fluvial Deposits and Environmental History*, 39th Annual Binghamton Geomorphology Symposium, Austin, TX, October 9-11, 2008.
- Parker, G., Belmont, P., **Gran, K.**, Jennings, C., Lauer, J., Perg, L., Viparelli, E., Wilcock, P., 2008, Effect on rivers of massive changes in hydrologic regime due to human intervention (invited). EGU General Assembly 2008, Geophysical Research Abstracts, Vol. 10, EGU2008-A-12136.

2007:

- *Day, S.S., Belmont, P., Perg, L., *Johnson, A., **Gran, K.**, Jennings, C., Wilcock, P., 2007, An integrated sediment budget for the Le Sueur River in southern Minnesota. *EOS Trans. of the AGU, Fall Meeting Suppl.*, v. 88, n. 52, Abstract H21A-0195.
- *Day, S.S., *Johnson, A.L., **Gran, K.B.**, Jennings, C., Perg, L., 2007, Sediment loading in the Le Sueur River, Minnesota River watershed. *GSA Abstracts with Programs*, v. 39, n. 6, p. 243.
- Gran, K.B.**, Day, S.S., Jennings, C., *Johnson, A., Lauer, J.W., Parker, G., Perg, L., Wilcock, P., 2007, Evaluating sediment sources, storage, and policy implications in the agricultural Le Sueur River watershed, central Minnesota. *GSA Abstracts with Programs*, v. 39, n. 6, p. 32.
- Belmont, P., Perg, L., *Day, S., Jennings, C., **Gran, K.**, *Johnson, A., Wilcock, P., 2007, Characterization of sediment sources in the Le Sueur River watershed, southern Minnesota. *EOS Trans. of the AGU, Fall Meeting Suppl.*, v. 88, n. 52, Abstract H21A-0194.

Pre-2007 (listed chronologically):

- Gran, K.B.**, Montgomery, D.R., and Daag, A., 2006, Basin-scale erosion at Mount Pinatubo, Philippines, and implications for long-term sediment yield following volcanic eruptions. *GSA Abstracts with Programs*, Fall Meeting, Paper No. 71-10.
- Jennings, C.R., Regan, C., Blumentritt, D.J., **Gran, K.**, Gunderson, L., Kuehner, K., Perg, L., Schottler, S., Thorleifson, L.H., and Wright, H., 2006, Turbidity in the Minnesota River – coordinating a basin-wide study. *GSA Abstracts with Programs*, Fall Meeting, Paper No. 112-22.
- Gran, K.B.**, Montgomery, D.R., Sutherland, D., and Lisle, T., 2004, Experiments in eruption recovery: Channel bed and sediment transport adjustments as sand inputs decline. *EOS Trans. of the AGU*, v. 85, n.47, Fall Meeting Supplement, Abstract H34A-0360.
- Balco, G., Anders, A., Finnegan, N., **Gran, K.**, Mitchell, S., Stone, J.O.H., 2002, Be-10 measurements of soil balance and landscape stability in the Pacific Northwest. *EOS Trans. of the AGU*, v. 83, n. 47, Fall Meeting Supplement, Abstract H22B-0895.
- Gran, K.B.**, and Montgomery, D.R., 2002, Watershed and channel recovery on the east flank of Mount Pinatubo. *GSA Abstracts with Programs*, Vol. 34, No. 6.
- Gran, K.B.**, Tal, M., and Paola, C., 2002, (INVITED) Riparian vegetation controls on channels formed in non-cohesive sediment. *EOS Trans. of the AGU*, v. 83, n. 19, Spring Meeting Supplement, Abstract OS21A-02.
- Gran, K.B.**, and Montgomery, D.R., 2001, Watershed recovery following extreme sediment loading at Mount Pinatubo, Philippines. *EOS Trans. of the AGU*, v.82, p.F17.
- Tal, M., **Gran, K.**, and Paola, C., 2001, Riparian vegetation: Controls on channel planform in noncohesive beds. *EOS Trans. of the AGU*, v.82, p.F415.
- Gran, K.B.**, and Montgomery, D.R., 2000, Channel-bed recovery following extreme sediment loading at Mount Pinatubo. *EOS Trans. of the AGU*, v.81, n.48, p.F491.
- Gran, K.B.**, and Paola, C., 1999, Effects of riparian vegetation on braided stream dynamics: Experimental results. *EOS Trans. of the AGU*, v. 80, n. 46, p. F446.
- Bobbitt, K.E.**, and Jacobson, R.B., 1996, Controls on channel instability at the drainage-basin scale, Current River basin, Missouri. *EOS Trans. of the AGU*, v.77 n.17, p. S 125.
- Bobbitt, K.E.**, Doswell, K., and Twining, K., 1995, Lithologic mapping with Landsat TM band ratioed images, Dagger Mountain, Big Bend National Park, Texas. *The Eighth Keck Research Symposium in Geology (Abstracts Volume)*, v. 8, p. 130-133.
- Garrettson, M., Bodrie, V., and **Bobbitt, K.**, 1995, Organic carbon content of soils: Variations in crop type and soil texture. *Journal of the Minnesota Academy of Science*, v. 59 n. 3, p. 4.

INVITED TALKS:

- January 2014, Minnesota Lake Superior Stream Science Symposium, Duluth, MN: *Geologic History of Western Lake Superior Streams.*
- January 2014, Minnesota Lake Superior Stream Science Symposium, Duluth, MN: *Stream Restoration: An Evolving Practice.*
- August 2013, Ecological Society of America national meeting, Minneapolis, MN: *Understanding changes in non-field contributions to suspended sediments.*
- February 2013, CEREGE (Centre Europeen de Recherche et d'Enseignement des Geosciences de l'Environnement), University of Aix-Marseille, France: *Tracking sediment through the Holocene: Determining anthropogenic contributions to a sediment-rich agricultural system, north-central USA.*
- October 2012, University of Northern Illinois: *Two decades of channel evolution following the eruption of Mount Pinatubo, Philippines.*
- April 2012, Association for Women Geoscientists and American Institute of Professional Geologists joint meeting, Roseville, Minnesota: *Evolving sediment sources in the Minnesota River basin: Implications for resource management.*
- January 2012, Near-channel sediment management forum, Mankato, Minnesota: *Role of Geomorphic and Recent History on Near-Channel Erosion.*
- November 2011, Water Resources Science Seminar, University of Minnesota Duluth: *Sediment loading in the Le Sueur River basin, Minnesota, from post-glacial times to modern.*
- October 2011, Minnesota Pollution Control Agency: *Sediment Loading in the Le Sueur River Watershed, from Post-glacial Times to Modern.*
- February 2011, Minnesota Geological Survey: *Impact of Holocene valley evolution on modern sediment loading in the Le Sueur River, Minnesota.*
- April 2010, University of Minnesota, Department of Geology and Geophysics: *Two decades of channel evolution following the eruption of Mount Pinatubo, Philippines.*
- April 2010, National Center for Earth-surface Dynamics: *Two decades of channel evolution following the eruption of Mount Pinatubo, Philippines.*
- June 2009, Environmental Protection Agency, Midcontinent Research Division, Duluth, Minnesota: *Watershed disturbances and sediment loading in south-central Minnesota.*
- April 2009, Water Resources Science Seminar, University of Minnesota: *Watershed disturbances and sediment loading in south-central Minnesota.*
- March 2009, Philosophy Department Seminar, University of Minnesota Duluth: *Stream restoration: State of the science in a societal context.*
- March 2008, Twin Ports Freshwater Folks, Duluth, Minnesota: *Watershed geomorphology as a tool for understanding sediment problems in the Twin Ports and Greater Minnesota and beyond.*
- July 2006, Minnesota River TMDL and Lake Pepin TMDL Joint Meeting, Southern Research and Outreach Center, Waseca, Minnesota: *Causes and consequences of stream instability.*
- July 2006, National Center for Earth-surface Dynamics Stream Restoration Partners Group Meeting, Richmond, California: *Current status of graduate education in stream restoration.*
- March 2006, Stream Restoration Training Summit Workshop, Heber Valley, Utah: *Graduate certificate program in Stream Restoration Science & Engineering (SRSE).*

March 2006, University of Minnesota, Duluth, Department of Geological Sciences, Duluth, Minnesota: *Fluvial recovery following extreme sediment loading at Mount Pinatubo, Philippines.*

February 2005, Washington State Department of Natural Resources, Olympia, Washington: *Channel recovery following extreme disturbances at Mount Pinatubo, Philippines.*

October 2004, Center for Water and Watershed Studies, University of Washington, Seattle, Washington: *Channel recovery following extreme disturbances at Mount Pinatubo, Philippines.*

February 2004, Humboldt State University, Arcata, California: *Channel bed recovery following extreme sediment loading at Mt. Pinatubo, Philippines.*

May 2003, Terrestrial Environment Research Center, University of Tsukuba, Japan: *Channel recovery from extreme disturbances, Mt. Pinatubo, Philippines.*

February 2003, Terrestrial Environment Research Center, University of Tsukuba, Japan: *Riparian vegetation controls on braided river morphology.*

May 2002, Spring AGU Meeting, Washington, DC: *Riparian vegetation controls on channels formed in non-cohesive sediment.*

FELLOWSHIPS, SCHOLARSHIPS, AND AWARDS:

2005-2006	Joseph A. Vance Fellowship
2001-2004	EPA STAR Graduate Fellowship
2000-2001	Outstanding Teaching Award, Dept. of Earth & Space Sciences, Univ. of WA
1998-1999	Francis Gibson Fellowship, Dept. of Geology & Geophysics, Univ. of MN
1997-1998	Graduate School Fellowship, University of Minnesota
1995-1996	Duncan Stewart Fellowship, Department of Geology, Carleton College

PROFESSIONAL AFFILIATIONS:

Geological Society of America
American Geophysical Union
National Association of Geoscience Teachers
Northwoods Women in Science