

Biographical Sketch for John S. Gierke, Ph.D., P.E.,

a. Professional Preparation

Michigan Technological University	Civil Engineering	BSCE 1984
Michigan Technological University	Civil Engineering	MSCE 1986
Michigan Technological University	Environmental Engineering	Ph.D. 1990

b. Appointments

Professor – August 2009 to Present

Interim Chair – August 2009 to August 2010

Associate Professor - August 1996 to July 2009

Assistant Professor - July 1990 through August 1996

Department of Geological and Mining Engineering and Sciences

Coordinator Strategic Faculty Hiring Initiative – October 2008 to May 2009

Office of the Provost and Academic Affairs

Michigan Technological University, Houghton, Michigan 49931-1295

Summer Research Faculty Visitor - June 1991 to August 1991

Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee 37831.

c. Publications (**graduate student author, *undergraduate student author)

(i) Five Relevant Publications

Andrus*, A.B., K. A. Endsley*, S. Espino*, J. S. Gierke, "Mapping the Freshwater-Saltwater Interface in the Terminal Moraine of the Bering Glacier," Chapter 19 in *Bering Glacier: Interdisciplinary Studies of the Earth's Largest Temperate Surging Glacier, Special Paper 462*, R.A. Schuchman and E.G. Josberger, eds., The Geological Society of America, Boulder, Colorado, 341-350, 2010.

Fuchs*, V.J., J.R. Mihelcic, and J.S. Gierke, "Life cycle assessment of vertical and horizontal flow constructed wetlands for wastewater treatment considering greenhouse gas emissions," *Water Research*, Accepted Pending Revisions, revisions submitted 17 December 2010.

Fuchs**, V.J., J.S. Gierke, and J.R. Mihelcic, "Laboratory investigation of ammonium and nitrate removal in vertical flow regimes in planted and unplanted wetland columns," *Journal of Environmental Engineering*, in review, submitted 20 September 2010.

Huntzinger**, D. N., M. J. Hutchins**, J. S. Gierke, J. W. Sutherland, "Enabling Sustainable Thinking in Undergraduate Engineering Education," *International Journal of Engineering Education*, 23(2), 218-230, 2007.

Sherman**, H. M., J. S. Gierke, C. P. Anderson**, "Controls on Spatial Variability of Uranium in Sandstone Aquifers," *Ground Water Monitoring & Remediation*, 27(2), 106-118, 2007.
doi:10.1111/j.1745-6592.2007.00142.x

(ii) Five Other Significant Publications

Bachmann LeFevre**, N-J., D.W. Watkins, J.S. Gierke, and J. Brophy-Price, "Hydrologic Performance Monitoring of an Underdrained Low-Impact-Development Stormwater Management System," *Journal of Irrigation and Drainage Engineering*, 136(5), 289-353, 2010.

Bruning**, J.N., J.S. Gierke, and A.L. Maclean, "Identifying Lineaments for Groundwater Exploration using Remotely Sensed Imagery," *Photogrammetric Engineering & Remote Sensing*, accepted for publication, 22 December 2010.

Gierke, J.S., "Manually Constructed and Operated Water Wells," Chapter 16 in *Field Guide in Environmental Engineering for Development Workers: Water, Sanitation, Indoor Air*, Mihelcic, J.R., E.A. Myre, L.M. Fry, B.D. Barkdoll (eds), American Society of Civil Engineers (ASCE) Press, Reston, VA, 287-317, 2009.

"Huntzinger**, D.N., J.S. Gierke, S.K. Kawatra, T.C. Eisele, and L.L. Sutter, "Carbon Dioxide Sequestration in Cement Kiln Dust through Mineral Carbonation," *Environ. Sci. Tech.*, 43 (6), pp 1986–1992, 2009. doi: 10.1021/es802910z.

McCray, J.E., G.R. Tick, J.W. Jawitz, M.L. Brusseau, J.S. Gierke, R.W. Falta, R.C. Knox, D.A. Sabatini, J. Harwell, M.D. Annable, A.L. Wood, C.G. Enfield, “Remediation of NAPL Source-Zones: Lessons Learned from Legacy Field Studies” *Ground Water*, Accepted for publication fall 2010.

d. Synergistic Activities

(1) *Principal investigator for the Michigan Tech Remote Sensing for Hazard Mitigation and Resource Protection in Pacific Latin America Project, National Science Foundation Partnerships for International Research and Education, where research is conducted on developing, applying, and testing remote sensing in geologic hazards and water resources in Costa Rica, Ecuador, El Salvador, Guatemala, Nicaragua, and Panama; (2) *Departmental coordinator of summer internship program for undergraduate students from the University of Puerto Rico—Mayaguez; (3) *Advisor for Aqua Terra Tech Enterprise, a multidisciplinary undergraduate team involved in hydrological consulting and research (www.aquaterratech.org); (4) Research on hydrology of glacier melting in Alaska and invited participant in workshops on the future impacts of climate change on glaciers and the hydrology of the Andes; (5) Graduate advisor for M.S. students in Michigan Tech’s Peace Corps Masters International programs in geohazards and in civil and environmental engineering where students conduct their masters research whilst serving in the U.S. Peace Corps.

e. Collaborators and Other Affiliations

(i) *Collaborators and Co-Editors*: McCray, John M. (Colorado School of Mines), Galárraga-Sánchez, Remigio (Escuela Politécnica Nacional, Ecuador), Sabatini, David A. (University of Oklahoma)
(ii) *Graduate Advisor*: Neil J. Hutzler, Michigan Technological University
(iii) *Thesis Advisor* for 22 M.S. and 3 Ph.D. graduates, co-advisor for 3 M.S. and 3 Ph.D. graduates; currently advising 1 Ph.D. student and 11 M.S. students (*last five years denoted in bold, active students in italic*; +Served/serving as co-advisor, ++Served as co-advisor, student at different university): **Alonso, Carla A.** (Michigan Tech), **Anderson, Cecilia P.** (ERM-West), **Bachmann, Nancy-Jeanne** (Emmons & Olivier Resources, Inc), **Benjakul, Rungroj** (Michigan Tech), **Bruning, Jill N.** (at home mother), Carpenter, Michael D. (GEI Consulting), Castor, Meaghan G. (searching for employment), **Drake, Briana** (Michigan Tech), Ebsch, Jeffery (Coleman Engineering), ++El-Beshry, Manar (Ministry of Water Resources and Irrigation, Egypt), **Fish, Randy E.** (Michigan Tech), **Fader, Caleb** (Peace Corps, serving in Uganda), **Fuchs, Valerie J.** (Post-doc, Yale University), **Paterson, Essa L. (Gross)** (maternity leave from Michigan Tech), Gu, Yingxin (McGill University), Harrison, Elizabeth (Los Alamos National Laboratory), **Hegemann, Robert** (Michigan Tech), +Hein, Gretchen L. (Lecturer at Michigan Tech), **Houston, Jacqueline** (Michigan Tech), **Huntzinger, Deborah N.** (Post-doc, University of Michigan), +**Hutchins, Margot J.** (AASHE), +Keating, Gordon (Los Alamos National Laboratory), Kremer, Theodore J. (Malcolm Pirnie, Inc.), **Kucharski, Matthew J.** (searching for employment), Mackenzie, Heidi L. (Grenkowitz) (Ford Motor Company), Muraski, Jennifer L. (Montgomery Watson), **Myre, Elizabeth A.** (Consulting Engineering), +Quinnan, Joseph (ARCADIS), +Ritchie, Beatrice (unknown), **Rios Sanchez, Miriam** (Michigan Tech), Sanders, Deborah L. (ERM-West), Sawall, R. Hardy (Geotrans), Schmunk, Steven W. (Marquette Intermediate School District), Sherman, Heidi M. (at home mother, part-time consulting), **Shonsey, Cara W.** (Research Assistant, Michigan Tech), **Smith, Daniel** (Michigan Tech), **Smith, Gwynneth** (Michigan Tech), Stright, Lisa E. (Stanford University), Taege, Deborah A. (AMEC), ++**VanAntwerp, Darby J.** (RMT), **Vincent, Ashlee K.** (Peace Corps, serving in Suriname), Wang, Congli (Consulting), +Wojick, Christopher L. (Lecturer at Michigan Tech).