Shemin Ge
Department of Geological Science, University of Colorado Boulder
Boulder, Colorado, USA 80309, Phone: 303-492-8323, email: shemin.ge@colorado.edu

Education

Ph.D. 1990, Hydrogeology, Johns Hopkins University, Baltimore, MD
M.S. 1985, Geotechnical Engineering, Univ. of British Columbia, Vancouver, BC, Canada
B.S. 1982, Geotechnical Engineering, Wuhan University of Technology, Wuhan, China

Professional Experience

2015–Present: Chair, Department of Geological Sciences, University of Colorado Boulder, USA
1993–Present: Assistant, Associate, full Professor, University of Colorado Boulder
2012–2014: Program Director, Hydrologic Sciences, US National Science Foundation
2010–2011: Blaustein Visiting Professor, Dept of Earth System Science, Stanford University
2010–2011: Visiting Scientist, US Geological Survey, Menlo Park, California, USA
2004: Visiting Scientist, Commonwealth Scientific & Industrial Research Org., Perth, Australia
2003: Visiting scientist, BP Institute for Multiphase Flow, University of Cambridge, England
1990–1993: Hydrogeologist, S.S. Papadopulos & Assoc., Inc., Bethesda, Maryland, USA

Selected Professional Activities and Awards

2018, Meinzer Award, Geological Society of America, Hydrogeology Division
2016, Birdsall-Dreiss Distinguished Lecturer. Geological Society of America, Hydrogeology Division, topics: 1. Fluid Induced Earthquakes: Insights from Hydrogeology and Poro-mechanics, 2. Groundwater Dynamics in Headwater Regions under a Changing Climate.
2012-2014, Leader, US Geological Survey Powell Center working group on Injection Induced Seismicity
2008-2013, Editor, Hydrogeology Journal
2003-2016, Associate Editor, Geofluids
2003-2007, Associate Editor, Journal of Ground Water
1999-2002, Chair: Hydrogeology Program Planning Group, Ocean Drilling Programs

Graduate Students Supervised as Principal Advisor

Ph.D.: Megan R. Brown (current), Claudia Corona (current), Sarah G. Evans (2017), Matthew Weingarten (2015), Lyndsay Ball (2012), Paula Cutillo (2003), S. Chereé Stover (2001), Gordon McCurry (2000), Miles Waite (1998).

M.S.: Katherine Pfeiffer (current), Steven Henning (2016), Nora Catolico (2015), Nadine Reitman (2013), Jessica C. King (2011), Miori Yoshino Harms (2010), Brent Aigler (2009), Kenneth Babcock, (2007), Gregory Robertson (2006), Katherine Kahn (2005), Stephanie Tomusiak, (2001), Steven Shultz (2001), John Marler (2000), David Kinner (1999), Jeffery Bails (1998), Jennifer Hinds (1997), Andrew Horn (1997), Minru Liao (1996), Barbara Breuer (1994).

Undergraduate Students (Honors Thesis, mentee): Alexis Ahlert (current), Toby Halamka (current), Christine Nims (2016), Naomi Ochwart (2015), IsabelVillaneda-van Vloten (2012), Christian Johnson (2012), Jonathan Galeano (2009), Alison Cech (2009), Angela Cook (2007), Jacob Bauer (2005).

Selected Publications

Evans, S.G., S. Ge, C. Voss, and N. Molotch, 2018, The role of frozen soil in groundwater discharge predictions for warming alpine watersheds, *Water Resources Research*, 54. doi: 10.1002/2017WR022098.

Brown, M.R. and S. Ge, 2018, Small earthquakes matter in injection induced seismicity. *Geophysical Research Letters*, 45. https://doi.org/10.1029/2018GL077472

Reed, A.L., A.P. Novelli, K.L. Doran, S. Ge, N. Lu, J.S. McCartney, 2018, Solar District Heating with Underground Thermal Energy Storage: Pathways to Commercial Viability in North America, *Renewable Energy*, doi: 10.1016/j.renene.2018.03.019.

Brown, M.R., S. Ge, A. F. Sheehan, and J.S. Nakai, 2017, Evaluating the Effectiveness of Induced Seismicity Mitigation: Numerical Modeling of Wastewater Injection near Greeley, *Journal of Geophysical Research:* Solid Earth, 122(8), pp 6569-6582.

Nakai, J.S., M. Weingarten, A.F. Sheehan, S.L. Bilek, and S. Ge, 2017, A possible causative mechanism of Raton Basin, New Mexico and Colorado earthquakes using recent seismicity patterns and pore pressure modeling. *Journal of Geophysical Research*: Solid Earth, 122. doi.org/10.1002/2017JB014415

Evans, S.G. and S. Ge, 2017, Contrasting hydrogeologic responses to warming in permafrost and seasonally frozen ground hillslopes, *Geophysical Research Letters*, 44, 1803–1813, *doi:*10.1002/2016GL072009.

Catolico, N., S. Ge, and J. McCartney, 2016, Numerical Modeling of a Soil-borehole Thermal Energy Storage System, *Vadose Zone Journal*, doi: 10.2136/vzj2015.05.0078;

Weingarten, M., S. Ge, J.W. Godt, B.A. Bekins, J.L. Rubinstein 2015, High-rate injection is associated with the increase in U.S.mid-continent seismicity, *Science*, 19 June, 348(6241), pp 1336-1340.

McGarr, A., B. Bekins, N. Burkardt, J. Dewey, P. Earle, W. Ellsworth, S. Ge, S. Hickman, A. Holland, E. Majer, J. Rubinstein, A. Sheehan, 2015, Coping with Earthquakes Induced by Fluid Injection, *Science*, 20 February, 347(6224), pp830-831.

Weingarten, M. and S. Ge, 2014, Insights into water level response to seismic waves: A 24 year high-fidelity record of global seismicity at Devils Hole, *Geophysical Research Letters*, 41, doi:10.1002/2013GL058418.

Keranen, K., M. Weingarten, G.A. Abers, B. Bekins, and S. Ge. 2014. Sharp increase since 2008 induced by massive wastewater injection. *Science*. 25 July, 345(6195), pp448-451.

Post, V., J. Groen, H. Kooi, M. Person, S. Ge, and M. Edmunds, 2013, Offshore fresh groundwater reserves as a global phenomenon, *Nature*, 74 (504), p71-78, doi:10.1038/nature12858

Ge., S., J. McKenzie, C.I. Voss, and Q. Wu, 2011, Exchange of groundwater and surface water mediated by permafrost response to seasonal and long term air temperature variation, *Geophysical Research Letters*, 38, L14402, doi:10.1029/2011GL047911, L14402

Ge, S., M. Liu, N. Lu, J. Godt, and G.Luo, 2009, Did the Zipingpu Reservoir Trigger the 2008 Wenchuan Earthquake? *Geophysical Research Letters*. 36, L20315, doi:10.1029/2009GL040349.

Ge, S. and E. Screaton, 2005, Modeling Seismically Induced Deformation and Fluid Flow in the Nankai Subduction Zone, *Geophysical Research Letters*, 32, L17301, doi:10.1029/2005GL023473.