

Gregory P. Waite, Associate Professor

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A. Professional Preparation

St. Norbert College	De Pere, WI	Mathematics	BA, 1996
University of Utah	Salt Lake City, UT	Geophysics	MS, 1999
University of Utah	Salt Lake City, UT	Geophysics	PhD, 2004
US Geological Survey	Menlo Park, CA	Mendenhall Postdoctoral Fellow	2004-2007

B. Appointments

2013-Present	Associate Professor, Michigan Technological University, Houghton MI
2018	Affiliate Scientist, US Geological Survey Hawaiian Volcano Observatory
2007-2013	Assistant Professor, Michigan Technological University, Houghton MI
2004-2007	Mendenhall Postdoctoral Fellow, US Geological Survey, Menlo Park, CA

C. Products (bold type indicates student first author)

(i) Products Most Closely Related to the Proposed Project

1. **Avouris, D.M.**, S.A. Carn, and G.P. Waite (2017), Triggering of volcanic degassing by large earthquakes, *Geology*, 45(8), 715-718, doi:10.1130/G39074.1.
2. Waite, G.P., and F. Lanza (2016), Nonlinear inversion of tilt-affected very long period records of explosive eruptions at Fuego volcano, *Journal of Geophysical Research: Solid Earth*, 121, doi:10.1002/2016JB013287.
3. Medici, E.F., J.S. Allen, and G.P. Waite (2014) Modeling shockwaves generated by explosive volcanic eruptions, *Geophysical Research Letters*, 41, 414-421, doi:10.1002/2013GL058340
4. Waite, G.P., P.A. Nadeau, and J.J. Lyons (2013), Variability in eruption style and associated very-long-period events at Fuego volcano, Guatemala, *Journal of Geophysical Research*, 118, 1526-1533, doi:10.1002/jgrb.50075.
5. **Nadeau, P. A.**, J. L. Palma, and G. P. Waite (2011), Linking volcanic tremor, degassing, and eruption dynamics via SO₂ imaging, *Geophysical Research Letters*, 38, L01304, doi:10.1029/2010GL045820.

(ii) Other Significant Products

1. **Lanza, F.**, and G.P. Waite (2018), A nonlinear approach to assess network performance for moment-tensor studies of long-period signals in volcanic settings, *Geophysical Journal International*, 215(2), 1352-1367, doi:10.1093/gji/ggy338.
2. **Lyons, J.J.**, G.P. Waite, M. Ichihara, and J.M. Lees (2012), Tilt prior to explosions and the effect of topography on ultra-long-period seismic records at Fuego volcano, Guatemala, *Geophysical Research Letters*, 39, L08305, doi:10.1029/2012GL051184.
3. **Dalton, M.P.**, G.P. Waite, I.M. Watson, and P.A. Nadeau (2010), Multiparameter quantification of gas release during weak strombolian eruptions at Pacaya Volcano, Guatemala, *Geophysical Research Letters*, 37, L09303, doi:10.1029/2010gl042617.
4. Waite, G. P., and S. C. Moran (2009), V_P Structure of Mount St. Helens, Washington, USA, imaged with local earthquake tomography, *Journal Volcanology and Geothermal Research*, 182(1-2), 113-122, doi:10.1016/j.jvolgeores.2009.02.009.
5. Waite, G.P., B.A. Chouet, and P.B. Dawson (2008), Eruption dynamics at Mount St. Helens imaged from broadband seismic waveforms: interaction of the shallow magmatic and hydrothermal systems, *Journal of Geophysical Research*, doi:10.1029/2007JB005259.

D. Synergistic Activities

1. Recruiting and mentoring undergraduate and graduate summer interns from historically underrepresented groups. This work has drawn geology students primarily from the University of Puerto Rico Mayagüez to Michigan Tech and provided mentored research experiences in volcano seismology. The undergraduate students have typically gone on to graduate school at Michigan Tech and elsewhere.
2. Developed and continuing to deliver a laboratory exercise about the energy radiated from volcanic eruptions to nearly 200 eighth grade Earth science students in rural Michigan annually. The experiment highlights the interdisciplinary nature of Earth science and the utility of quantitative data. By instrumenting a liquid nitrogen volcano with accelerometers and recording the explosion with an array of microbarometers, the students calculate physical parameters related to the explosion.
3. Received NSF CAREER award in 2011 to promote teaching, outreach, and interdisciplinary research on volcano dynamics. The fieldwork was conducted at open-vent volcanoes Fuego and Pacaya in Guatemala, together with the Instituto Nacional de Sismología, Vulcanología, Meteorología e Hidrología, which is tasked with monitoring Guatemalan volcanoes and assessing hazards. Among the goals of this work is increased hazard mitigation capacity through improved use of existing monitoring equipment.
4. Led week-long workshop for formal and informal educators during summer 2014 on the geology and geophysics of the Mid-continent Rift System. Objective was to embolden educators in Midwest states with skills to teach about geophysics and applications to tectonic history of N. America.
5. Recognized as the Michigan Technological University Outstanding Graduate Faculty Mentor for the 2012-2013 academic year.