

Dr. Harrison Lisabeth

hlisabeth@lbl.gov | 1 Cyclotron Rd. Berkeley, CA 94720 | Cell: 516-994-3973

Employment

- Research Scientist, Energy Geoscience Division, Earth and Environmental Science Area, Lawrence Berkeley National Laboratory (2020-present)
- Postdoctoral Employee, Energy Geoscience Division, Earth and Environmental Science Area, Lawrence Berkeley National Laboratory (2018-present)
 - Lab and Safety Manager for the Environmental and Applied Geophysics Lab, researching the effect of stress, temperature and chemical environments on the physical properties of fractured and intact rocks, permafrost and other geomaterials
- Postdoctoral Fellow, Stanford Center for Carbon Storage, Stanford University (2016-2018)
 - Lab and Safety manager of Stanford Stress and Crustal Mechanics Lab while conducting geomechanical research on the effect of pore fluid chemistry on the evolution of permeability in shales during fault slip
- Research Assistant, Rock Physics Laboratory, University of Maryland (2011-2016)
 - Lab and Safety manager of UMD Rock Physics Lab while conducting geomechanical research on hydrothermal alteration of carbonate and ultramafic rocks

Education

- Ph.D, University of Maryland, 2011-June 2016
 - Dissertation Title: Evolution of strength and physical properties of ultramafic and carbonate rocks under hydrothermal conditions
- A.B. (honors) Geological Sciences, Brown University, 2006-2010
 - Thesis Title: Volatile and halogen abundances in basaltic glass from the southern East Pacific Rise
- A.B. Literary Arts, Brown University, 2006-2010

Teaching and Mentorship

- Mentored BLUR intern Kimberly Vargas, LBNL, measuring seismic anisotropy in rocks from the Stanford Underground Research Facility (2018)
- Mentored PhD student Shaochuan Xu, Stanford University, measuring the viscoelastic properties of shale rocks (2017)
- Mentored Senior Thesis student Shayna Quidas, University of Maryland, quantifying deformation in experimentally deformed limestone (2015)
- Teaching Assistant, Petrology, University of Maryland, Lectured and led laboratory practicals for identifying rocks and minerals in hand samples and thin sections (2015)
- Mentored Senior Thesis student Thomas Braga, University of Maryland, measuring the strength of variably carbonated ultramafic rocks from northern Norway (2014)
- Teaching Assistant, Introduction to Physical Systems, Brown University, led lab practicals and graded homework and exams (2009-2010)

Fellowships and Awards

- American Geophysical Union, Mineral and Rock Physics Graduate Research Award (2017)
- Anne Wylie Dissertation Fellowship, University of Maryland (2016)
- Green Fellowship for Climate Change Research, University of Maryland (2015)
- ESSIC Travel Award, University of Maryland (2014-2015)
- 1st prize at American Association of Petroleum Geologists 2012 Annual Convention & Exhibition, **Lisabeth, H.**, Watter, K., Zhu, W., Effect of Temperature and Fluid Saturation on the Yielding Behavior of Carbonate Rocks (2012)

- Deans Fellowship, University of Maryland (2011)
- Undergraduate Teaching and Research Award, Brown University (2009-2010)

Service Activities

- Participant in Career Day at San Mateo Public Schools (2019)
- Demonstration and activity designer for hands on learning at Excelsior Science Workshop, San Francisco (August 2017-2018)
- Organizer of roundtable discussion on new technologies in oil and gas recovery at Friends Committee on National Legislation, Washington, DC (July 2015)
- Organizer and leader of UMD Geology Department Field Trip (August 2014)
- Participant in Career Day at DC Public Schools (2014-2016)
- Reviewer for Journal of Geophysical Research, Geophysical Research Letters, Frontiers in Geoscience Research (2013-present)
- Coordinator of Geophysics Table for Maryland Day (2011-2016)
- Workshop leader for Space in Prisons for Arts and Creative Expression (2008-2010)

Professional Organizations

- American Geophysical Union (2010-present)
- Geological Society of America (2010-present)
- American Association of Petroleum Geologists, University of Maryland Student Chapter Treasurer (2014-2016)

Selected Publications

Xing, T., W. Zhu, F. Fousseis, **Lisabeth, H.** (2018) Generating porosity during olivine carbonation via dissolution channels and expansion cracks. *Solid Earth*.

Lisabeth, H., Zhu, W., Kelemen, P.B., Ilgen, A. (2017) Experimental evidence for chemo-mechanical coupling during carbonation of ultramafic rocks, *Ear. and Plan. Sci. Lett.*, 474, 355–367.

Lisabeth, H., Zhu, W., Xing, T., De Andrade, V. (2017) Dissolution assisted pattern formation during olivine carbonation, *Geophys. Res. Lett.*, 44. 9622-9631.

Lisabeth, H., M. Zoback. (2017) An experimental study of the effects of adsorbing and non-adsorbing gases on friction and permeability evolution in clay-rich fault gouge. In *AGU Fall Meeting Abstracts*.

Zhu, W., F. Fousseis, **H. Lisabeth**, T. Xing, X. Xiao, V. De Andrade, and S.-i. Karato (2016) Experimental evidence of reaction-induced fracturing during olivine carbonation, *Geophys. Res. Lett.*, 43, 9535–9543.

Lisabeth, H., and W. Zhu (2015) Effect of temperature and pore fluid on the strength of porous limestone, *J. Geophys. Res. Solid Earth*, 120.

Kelemen, Peter, Park, Ah-hyung, Matter, Jurg, Gadikota, Greeshma, **Lisabeth, H.**, and Zhu, Wenlu. (2013) *Geo-Chemo-Mechanical Studies for Permanent CO2 Storage in Geologic Reservoirs*. United States: N. p.