

## **Erik W. Klemetti**

*Associate Professor*

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### **Education**

Ph.D. in Geology - *Oregon State University, Corvallis, OR* (2005)

*Constraining the magmatic evolution of the Andean arc at 21°S using the volcanic and petrologic history of Volcán Aucanquilcha, Central Volcanic Zone, Northern Chile* - Advisor: Dr. Anita L. Grunder

B.A. in Geosciences with Honors; B.A. in History - *Williams College, Williamstown, MA* (1999)

Thesis: *The geochemistry and tectonic setting of the Vinalhaven Diabase, Coastal Maine Magmatic Province* - Advisor: Dr. Reinhard A. Wobus

### **Academic Appointments**

- *Chair*, Department of Geosciences, Denison University (2016-present)
- *Associate Professor of Geosciences, Denison University*: GEOS 111 Planet Earth; GEOS 211 Rocks & Minerals (2015-present)
- *Assistant Professor of Geosciences, Denison University*: GEOS 111 Planet Earth; FYS 102 Vulcan's Forge; GEOS 211 Rocks & Minerals; GEOS 240 Earth Resources; GEOS 312 Igneous and Metamorphic Petrology (2009-2015)
- *Postdoctoral Scholar, University of California Davis, Davis, CA* - Research: evaluating U-Th and Ra-Th ages of plagioclase feldspar and zircon within rhyolite eruptions (2006-09)
- *Consultant for MC-ICP-MS Lab, University of California Davis, Davis, CA* (2006-09)
- *Laboratory Research Supervisor, Nu Plasma MC-ICP-MS lab, University of Washington, Seattle, WA* (2004-06)
- *Instructor, Dept. of Geology, UC Davis, Davis, CA* - Freshman Research Seminar on "Volcanism and Human Culture" (2004-05)
- *Instructor, Dept. of Geosciences, Oregon State University* - GEOS 101 The Solid Earth; GEOS 305 Active Cascades Volcanism; GEOS e103 Introduction to Oceanography (2001-04)

### **Awards, Grants and Honors**

- *Mindlin Foundation - Science Communication Prize* (\$5,000)
- *National Science Foundation* – Grant EAR #1250323 (\$50,643) Title: *Collaborative Research: Recharge, Mixing and Eruption Triggering Mechanisms at Chaos Crags and 1915 Eruptions, Lassen Volcanic Center, California* (2013 to present)
- *Next Generation Digital Library Grant* – Creation of a digital library for the rock & mineral collection in the Dept. of Geosciences (with Moriana Garcia; 2010-11)
- *UC Davis Postdoctoral Scholars Assoc. Travel Grant* (2007 Goldschmidt Meeting, Cologne, Germany)
- *AGU Student Travel Grant* (2004 IAVCEI General Congress, Pucón, Chile)
- *Class of 1960 Scholar* (Geosciences Dept., Williams College; 1999)

**Publications (\*denotes former or current student)**

Coble MA, Burgess SD and Klemetti EW, 2017. *New zircon (U-Th)/He and U/Pb eruption age for the Rockland tephra, western USA*. Quaternary Science Reviews, doi: 10.1016/j.quascirev.2017.08.004

Klemetti EW, 2016. *Melts, mush, and more: Evidence for the state of intermediate-to-silicic arc magmatic systems*. American Mineralogist, doi: 10.2138/am-2016-5914

Kuhn-Sennert S, Klemetti EW, Bird D, 2015. *Role of Social Media and Networking in Volcanic Crises and Communication: Advances in Volcanology*, doi: 10.1007/11157\_2015\_13

Klemetti EW, Lackey JS, Starnes JK\*, 2014. *Magmatic lulls in the Sierra Nevada captured in zircon from rhyolite of the Mineral King pendant, California*: Geosphere, doi: 10.1130/GES00920.1

Klemetti EW and Clynne MA, 2014. *Localized rejuvenation of a crystallizing pluton captured in volcanic zircon from Lassen Volcanic Center, California*: PLOS One, doi: 10.1371/journal.pone.0113157

Walker BJ, Klemetti EW, Grunder AL, Dilles JH, Tepley III F, Giles D, 2013. *Crystal rearing during the assembly, maturation, and waning of an eleven-million-year crustal magma cycle: thermobarometry of the Aucanquilcha Volcanic Cluster: Contributions to Mineralogy and Petrology*, doi: 10.1007/s00410-012-0829-2.

Michelfelder GS, Feeley TC, Wilder AD, Klemetti EW, 2013. *Modification of the continental crust by subduction zone magmatism and vice-versa: across-strike geochemical variations of silicic lavas from individual eruptive centers in the Andean Central Volcanic Zone: Geosciences - Continental Accretion and Evolution*, doi: 10.3390/geosciences3040633.

Klemetti EW, Deering CD, Cooper KM and Roeske SM, 2011. *Magmatic perturbations in the Okataina Caldera Complex at thousand-year timescales recorded in single zircon crystals from the Mt. Tarawera region, New Zealand*: Earth and Planetary Science Letters, v.305, p. 184-194.

Klemetti EW and Grunder AL, 2008. *Volcanic evolution of Volcán Aucanquilcha: a long lived dacite volcano in the Central Andes of northern Chile*: Bulletin of Volcanology, v. 70, no. 5, p. 633-650.

Grunder AL, Klemetti EW, Feeley TC and McKee CL, 2008. *Eleven million years of arc volcanism at the Aucanquilcha Volcanic Cluster, northern Chilean Andes: Implications for the lifespan and emplacement of batholiths*: Plutons and Batholiths – Wallace Pitcher Memorial Issue, Transactions of the Royal Society of Edinburgh: Earth Sciences, v. 97, no. 4.

Wobus, RA, Newton JL, Klemetti EW, Cardoos NC and Hawkins DP, 2006. *Silurian metavolcanic rocks of Vinalhaven Island, Penobscott Bay, Maine: Arc to backarc transition?* Northeastern Geology & Env. Science, v. 28, no. 4, p. 342-357.

**Recent Meeting Abstracts/Presentations (\* denotes former or current student)**

Edmond JE, Klemetti EW, 2017, Correlating the Eruptive Products of the Tumalo Volcanic Field in the Oregon Cascades and Examining the Zircon from the Tumalo Tuff: GSA Annual Meeting 2017.

Klemetti EW, Clynne MA, Kent AJR, Tepley III F, 2017, Magmatic storage conditions over the past 825,000 years at the Lassen Volcanic Center revealed in zircon model ages, compositions and melt inclusions: IAVCEI Scientific Assembly 2017

Klemetti EW, Clynne MA, Kent AJR, Bertollett EM\*, Hernandez LD\*, Coble M, 2015, The Influence of Crystal Mush on Magmatism Under Arc Volcanoes Recorded in Zircon from the Lassen Volcanic Center, California and Mount Hood, Oregon (*Invited*): American Geophysical Union Fall Meeting 2015.

Klemetti EW, Stelten MA, Claiborne LL, Kent AJR, Clynne MA, Bertollett EM\*, Hernandez LD\*, 2014, *Crystal mush storage conditions across the Cascades Range inferred from zircon age and trace element compositions*: GSA Annual Meeting 2014.

Hernandez LD\*, Klemetti EW, Clynne MA, 2014, *U-Pb Zircon ages and trace element compositions for eruptive units between 193-588 Ka, Lassen Volcanic Center, northern California*: GSA Annual Meeting 2014.

Bertollett EM\*, Klemetti EW, Clynne MA, 2014, *U-Th Zircon ages and compositions of the Eagle Peak and Twin Lakes, Lassen Volcanic Center, northern California*: GSA Annual Meeting 2014.

Klemetti EW, Clynne MA, Ring M\*, Bertollett EM\*, 2013. *Localized rejuvenation of a crystallizing pluton recorded in zircon from the Lassen Volcanic Center, southern Cascade Range, California*: AGU Fall Meeting 2013.

Klemetti EW, Williamson AL\*, Greene DC, Lackey JS, 2013. *Geothermobarometry of the Castle Creek quartz monzodiorite support rapid Cretaceous subsidence of the Mineral King metamorphic pendant, Sierra Nevada, California*: GSA Annual Meeting 2013.

Klemetti EW, Lackey JS, Starnes JK\*, Wooden J, 2011. *Ancient and modern rhyolite: Using zircon trace element compositions to examine the origin of volcanic rocks*: AGU Fall Meeting 2011.

Klemetti EW, 2010. *Using the 2010 Eyjafjallajökull eruption as an example of citizen involvement in scientific research*: AGU Fall Meeting 2010.

Starnes, JK\*, Klemetti EW, Lackey JS, Loewy SL and Wooden J. *New U-Pb SHRIMP-RG zircon ages of the Mineral King Roof Pendant Rhyolite units revise the volcanic history of the Sierra Nevada, California*: GSA Annual Meeting 2010. (Presenter: Starnes)

Klemetti EW, Cooper KM and Deering CD, 2009. *Changes in rhyolite composition over the last*

*60,000 years at the Okataina Caldera Complex, New Zealand recorded in zircon trace element zonation*: Geological Society of American Annual Meeting 2009.

### **Book Reviews**

Klemetti EW, *Geomedia: Books: Iceland's eruption of biblical proportions explored in 'Island on Fire'*: Earth, July 16, 2015, <https://www.earthmagazine.org/article/geomedia-books-icelands-eruption-biblical-proportions-explored-island-fire>

Klemetti EW, *Geomedia: Books: Vivid anecdotes abound in "Eruption: The untold story of Mount St. Helens"*: Earth, October 26, 2017, <https://www.earthmagazine.org/article/geomedia-books-vivid-anecdotes-abound-eruption-untold-story-mount-st-helens>

### **Outreach**

- *Rocky Planet* – a blog on geosciences, part of Discover – <http://blogs.discovermagazine.com/rockyplanet>
- *Eruptions* (2009-2017) – A blog on worldwide volcanism, part of *Wired Science* – <http://www.wired.com/category/eruptions>
- *Eruptions Twitter (@eruptionsblog)*
- *NASA Earth Observatory* – Caption writer and consultant
- *Interviewed on BBC, NPR, Associated Press, Scientific American and other media outlets*

### **Advisees**

- Jesslyn Starnes '11 - Keck Geology project 2010-11, GEOS Senior thesis
- Matt Ring '12 - Summer research 2011, GEOS senior thesis
- Katherine Sylvia '12 - ENVS senior thesis
- Amy Williamson '13 - Summer research 2012, GEOS senior thesis
- Connor Toth '15 - Summer research 2013
- Elisabeth Bertolett '15 - Summer research 2013-14, GEOS senior thesis
- Lindsey Hernandez '16 - Summer research 2014
- Reed Patrick '19 – Early Experience summer project 2016
- Jemila Edmond '18 – Summer research 2017
- Summer Aldred '20 – Early Experience summer project 2017

### **Service – University**

- Chair, Department of Geosciences (2016-present)
- Board of Trustees Enrollment Committee (2017-present)
- Environmental Studies program committee member (2013-2015)
- Denison University Campus Sustainability Committee (member, 2011-2013; Chair 2011-12)
- Denison Science Association Lecture Series Co-organizer (2010-11)

### **Service - Discipline**

- Associate Editor, *American Mineralogist* (2017-present)

- Session convener, IAVCEI Scientific Assembly, Portland, OR (2017)
- AGU Walter Sullivan Award for Excellence in Science Journalism (Selection Committee Member, 2015-present)
- Council on Undergraduate Research - Geosciences Division (Councilor, 2013-2015)
- AGU Volcanology, Geochemistry and Petrology section Education and Outreach Committee (member, 2013-present)
- Session convener, GSA Annual Meeting, Vancouver, BC (2014)
- Session convener, AGU Fall Meeting, San Francisco, CA (2011)
- Panelist, Geoblogging Workshop, AGU Fall Meeting (2011)
- Reviewer – Nature, Geology, Journal of Volcanology and Geothermal Research, Bulletin of Volcanology, Journal of Petrology, American Mineralogist, Contributions to Mineralogy and Petrology (2008 to present)
- National Science Foundation Reviewer: Earth Sciences Petrology Section (2008-present)
- Session Co-Chair, Goldschmidt Meeting 2008, Vancouver, BC (2008)

### **Workshops**

- *MELTS Workshop*, IAVCEI Scientific Assembly 2017, August 2017.
- *SERC On the Cutting Edge – Teaching Mineralogy, Petrology and Geochemistry*, University of Minnesota, August 2011
- *Workshop on the Liberal Arts*, Denison University, May 2010
- *Workshop on Advising*, Denison University, May 2010

### **Invited Talks**

- Miami University of Ohio, Departmental Seminar (March 2017)
- Oregon State University, CEOAS Seminar (June 2016)
- USGS Cascade Volcano Observatory (May 2016)
- University of Delaware, Departmental Seminar (April 2016)
- University of Pittsburgh, Departmental Seminar (March 2016)
- The Ohio State University, Departmental Seminar (March 2016)
- Ohio University, Departmental Seminar (September 2015)
- USGS Volcano Science Center – Menlo Park (August 2014)
- Centre College, Fall College Colloquia Series (September 2013)
- Kent State University, Departmental Seminar (April 2013)
- Case Western Reserve University, Departmental Seminar (May 2012)
- Bowling Green State University, Departmental Seminar (April 2011)
- Michigan State University, Departmental Seminar (April 2011)
- Gustavus Adolphus College, Departmental Seminar (January 2011)
- Western Michigan University, Departmental Seminar (January 2010)
- University of Iowa, Departmental Seminar (November 2009)
- Smithsonian Institute, Mineral Sciences Seminar (May 2008)
- USGS Volcanic Hazards Program – Menlo Park, VHP Seminar (April 2008)
- Oregon State University, VIPER Seminar (March 2008)

- UC Berkeley, Isotope Seminar (February 2008)
- Volcanological Society of Sacramento, Monthly Seminar (February 2008)