

Kayla Iacovino, Ph.D.

Curriculum Vitae

Arizona State University
School of Earth and Space Exploration
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EDUCATION

2014 Ph.D., University of Cambridge

An unexpected journey: Experimental insights into magma and volatile transport beneath Erebus volcano, Antarctica

Supervisor: Dr. Clive Oppenheimer

2010 B.S., Arizona State University

Geological Sciences, *Cum Laude* (minor in Geography)

Undergraduate research supervisor: Dr. Gordon Moore

PROFESSIONAL EXPERIENCE

POST-DOCTORAL RESEARCH SCIENTIST

Oct 2016 – Present

Arizona State University, Tempe, AZ

NSF FESD Grant (Post-doc): [The Dynamics of Earth System Oxygenation](#)

NSF POST-DOCTORAL FELLOW

May, 2014 – Sept, 2016

U.S. Geological Survey, Menlo Park, CA

NSF EAR Grant (PI): [Quantifying total volatile budgets of explosive volcanic eruptions](#)

VISITING SCHOLAR

April, 2015 – Sept, 2016

Stanford University, Stanford, CA

PhD RESEARCH

Oct, 2010 – Feb, 2014

University of Cambridge, England

UNDERGRADUATE NASA/SPACE GRANT RESEARCH INTERN

March, 2007 – May, 2010

Arizona State University, Tempe, AZ

RESEARCH EXPERIENCE FOR UNDERGRADUATES

Summer, 2007

University of Minnesota, Minneapolis, MN

PUBLICATIONS

1. **Iacovino K**, Kim JS, Sisson T, Lowenstern J, Ri KH, Jang JN, Song KH, Ham HH, Oppenheimer C, Hammond JOS, Donovan A, Weber-Liu K, Ryu KR (2016) Quantifying gas emissions from the ‘Millennium Eruption’ of Paektu volcano, Democratic People’s Republic of Korea/China. *Science Advances*. doi: [10.1126/sciadv.1600913](https://doi.org/10.1126/sciadv.1600913)
2. Ri KS, Hammond JOS, Ko CN, Kim H, Yun YG, Pak GJ, Ri CS, Oppenheimer C, Weber-Liu K, **Iacovino K**, Ryu KR (2016) Evidence for partial melt in the crust beneath Mt. Paektu (Changbaishan), Democratic People’s Republic of Korea/China. *Science Advances* doi: [10.1126/sciadv.1501513](https://doi.org/10.1126/sciadv.1501513)

3. **Iacovino K**, Oppenheimer C, Scaillet B & Kyle PR (2016) Storage and evolution of mafic and intermediate alkaline magmas beneath Ross Island, Antarctica. *Journal of Petrology* doi:[10.1093/petrology/egv083](https://doi.org/10.1093/petrology/egv083)
4. **Iacovino K** (2015) Linking subsurface to surface degassing at active volcanoes: A thermodynamic model with applications to Erebus volcano. *Earth and Planetary Science Letters* doi:[10.1016/j.epsl.2015.09.016](https://doi.org/10.1016/j.epsl.2015.09.016)
5. **Iacovino K**, Moore GM, Roggensack K, Oppenheimer C & Kyle PR (2013) H₂O-CO₂ solubility in mafic alkalic magmas: Applications to volatile sources and degassing behavior at Erebus volcano, Antarctica. *Contributions to Mineralogy and Petrology* doi:[10.1007/s00410-013-0877-2](https://doi.org/10.1007/s00410-013-0877-2)

TEACHING EXPERIENCE

- 2016** Petrology (Guest Lecturer), Arizona State University
- 2013** Volcanic Hazards, Part IB (Supervisor), University of Cambridge
Magma Chambers, Part II (Supervisor), University of Cambridge
Eruption Styles, Part II (Supervisor), University of Cambridge
- 2012** Contributing scientist to the [Royal Geographical Society From the Field Programme](#) Developed A-levels (Grades 9-12 US equiv.) science curricula focused on volcanology
- 2010** Field Geology II (Teaching Assistant), Arizona State University
- 2009** Petrology Laboratory (Lecturer), Arizona State University
Petrology (Teaching Assistant), Arizona State University
Earth, Solar System, and Universe (Teaching Assistant), Arizona State University
Introduction to Geology (Teaching Assistant), Arizona State University

SELECTED RECENT ABSTRACTS

Iacovino, K., Kim, JS, Sisson, T., Lowenstern, J., Jan, JN, Song, KH, Ham, HH, Ri, KH, Donovan, A., Oppenheimer, C., Hammond, J., Liu, KS, Ryu, KR (2016) Oral Presentation. "Quantifying gas composition and yield from the 946 CE Millennium Eruption of Paektu volcano, DPRK/China" Goldschmidt Conference, Yokohama, Japan.

Iacovino, K., Kim, JS, Sisson, T., Lowenstern, J., Jan, JN, Song, KH, Ham, HH, Ri, KH, Donovan, A., Oppenheimer, C., Hammond, J., Liu, KS, Ryu, KR (2015) Poster Presentation. "New Constraints on the Geochemistry of the Millennium Eruption of Mount Paektu (Changbaishan), Democratic People's Republic of Korea/China" AGU Fall Meeting, San Francisco, CA.

Iacovino, K., Sisson, T., Lowenstern, J. (2014) Oral Presentation. "Evidence of a pre-eruptive fluid phase for the Millennium Eruption, Paektu volcano, North Korea" AGU Fall Meeting, San Francisco, CA.

Iacovino, K., Peters, N., Oppenheimer, C. (2013) Poster Presentation. "Toward a unified method for the quantification of volatiles in magmas via FTIR" Goldschmidt Conference. Florence, Italy.

Iacovino, K., Oppenheimer, C., Scaillet, B., Kyle, P.R. (2013) Oral Presentation. "Experimental constraints on the storage conditions and evolution of alkaline lavas at Erebus volcano, Antarctica: A case for CO₂-dominated volcanism" IAVCEI Scientific Assembly. Kagoshima, Japan.

SELECTED PRESENTATIONS

- 2016 Goldschmidt, Yokohama, Japan (talk, [abstract](#))
- 2015 Peninsula Geological Society seminar (talk, [abstract](#))
- 2014 AGU Fall Meeting (talk, [abstract](#))
- 2014 Stanford Univ. Chain Gang Lecture Series (talk)
- 2014 USGS Volcano Science Center (talk, [archived](#))
- 2014 Gangplank Brown Bag, Chandler, AZ (public lecture)
- 2014 PyData Conference, London, England (talk, [archived](#))
- 2013 Goldschmidt, Florence, Italy (poster, [abstract](#))
- 2013 Mt. Paektu Group Meeting, Pyongyang, DPRK (talk)
- 2013 IAVCEI Scientific Assembly, Kagoshima, Japan (talk)
- 2013 Cambridge Univ. Expeditions Society (talk)
- 2012 Goldschmidt, Montreal, Canada (talk, [abstract](#))
- 2012 Le Studium Erebus Conference, Orléans, France (talk)
- 2012 Darwin College Lunchtime Seminar Series (talk)
- 2011 AGU Fall Meeting (poster, [abstract](#))
- 2010 Arizona NASA Space Grant Consortium (talk)
- 2009 AGU Fall Meeting (talk, [abstract](#))
- 2009 Arizona NASA Space Grant Consortium (poster)
- 2008 Arizona NASA Space Grant Consortium (talk)

GRANTS, HONORS, AND AWARDS

2016 AAAS Research Grant (\$5,000)
2014 NSF Post-doctoral Fellowship Grant EAR-1349486 (PI, \$174,000)
2013 Software Sustainability Institute Fellowship (£3,000)
2013 Volcanofiles Chile Expedition (£10,000)
2012 Volcanofiles Chile Expedition (£14,000)
2011 US Antarctica Service Medal
2010-2013 Philip Lake Fund Research Grant
2010-2013 William Vaughan Lewis Research Grant
2010 Cum Laude graduation honors, Arizona State Univ.
2010 Outstanding Teaching Assistant Award, Arizona State Univ.

MEDIA EXPERIENCE

2016 Earth Magazine Profile "[Down to Earth With: Volcanologist Kayla Iacovino](#)"
2016 CNN Profile "[Meet the Trekkie who became a real-life volcanologist](#)"
2016 Physics Today cover story "[Volcano research flows from North Korea](#)"
2015 Korea Econ Inst podcast "[Seismology and Mt. Baekdu: Science Diplomacy in North Korea](#)"
2014 Essay, SinoNK.com "[Of Eruptions and Men: Science Diplomacy at North Korea's Active Volcano](#)"
2014 Profile for [Medium.com](#)
2014 Profile for [Tested.com](#)
2014 Interviewed for [de Volkskrant](#) newspaper
2014 Radio New Zealand "[Kayla Iacovino: volcanoes and North Korea](#)"
2013 NPR Science Friday "[World's Largest Volcano Discovered on Pacific Seafloor](#)"
2011 NPR Science Friday "[Exploring Science at the End of the Earth](#)"
2010 NPR Science Friday "[A Visit To Antarctica](#)"

PUBLIC SERVICE and CONTRIBUTIONS TO DIVERSITY

- Member, [Advisory Committee](#) to the Aircraft Carrier Industrial Base Coalition for National U.S. Navy Aircraft Carrier Month
- Creator of webseries "[Science at the Survey](#)", a series of videos featuring women in geoscience.
- Creator of materials aimed at inspiring girls to consider a career in volcanology for a science program developed for late elementary and middle school-aged girls from low-income immigrant families
- Featured in the "Mighty Women of Science Alphabet Book"
- Developed outreach activities such as the "What controls a volcano's eruptive style?" exhibit showcased at multiple events in the Bay Area in 2014-2016
- Co-founder, webmaster, and outreach coordinator for The Volcanofiles, an educational outreach group run by volcanologists.
- Public outreach through radio appearances on National Public Radio's Science Friday program, Radio New Zealand and professional writing for NPR Science Friday (2010-2012) and GEEK Magazine (2012-2014)