

# KARA BRUGMAN

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## RESEARCH INTERESTS

Magma genesis and volatile solubility on exoplanets, Earth, and solar system bodies, diffusion chronometry, geothermometry, volcano science and hazards, high-silica magmatic systems

## PROFESSIONAL PREPARATION

- 2020      **Ph.D., Arizona State University (ASU)**  
Geological Sciences, School of Earth and Space Exploration (SESE)
- Dissertation: *Timescales and Characteristics of Magma Generation in Earth and Exoplanets* // Advisor: Christy Till
- 2014      **B.A., University of Colorado, Boulder (CU) – *summa cum laude* and *with distinction***  
Geological Sciences, minor: Astrophysical and Planetary Sciences
- Honors thesis: *Understanding the History of Arabia Terra, Mars Through Crater-Based Tests* // Advisor: Brian Hynek

## PROFESSIONAL APPOINTMENTS

- 2026–curr.    Assistant Professor, Department of Earth & Planetary Sciences, Institute of Meteoritics, University of New Mexico (UNM)
- 2023–2025    Associate Research Scientist, FORCE, Eyring Materials Center, ASU
- 2020–2022    Postdoctoral Fellow, Carnegie Institution for Science Earth & Planets Laboratory (EPL)
- 2014–2018    National Science Foundation Graduate Research Fellow, ASU
- 2014–2020    Research Assistant, SESE, ASU
- 2016, 2019    Teaching Assistant, SESE, ASU
- 2011–2014    Research Assistant, Laboratory for Atmospheric and Space Physics, Boulder, CO

## PUBLICATIONS

### // PEER-REVIEWED

- Brugman, K., Dunning, S.G., Cody, G.D., Wang, J., Bullock, E., Steele, A., Badro, J., Shahar, A. (in prep) Hydrogen solubility and speciation in primitive silicate melt.
- Kim, J., Cave, S., Arrowsmith, J.R., Clarke, A.B., Roggensack, K., Semken, S., and Brugman, K. (accepted) Low shield eruptive behavior: A case study of Sentinel-Arlington Volcanic Field (USA). *USGS Special Volume: Distributed Volcanism*.
- Edmund, E., Chuvashova, I., Konopkova, Z., Husband, R., Strohm, C., Appel, K., Bähz, C., Ball, O., Bouffetier, V., Brugman, K., et al. (2024) The thermal conductivity of bridgmanite at lower

mantle conditions using a multi-technique approach. *Journal of Geophysical Research: Solid Earth*, 129(6), 10.1029/2024JB028823.

Kueter, N., **Brugman, K.**, Miozzi, F., Cody, G.D., Yang, J., Strobel, T.A., Walter, M.J. (2023) Water speciation and hydrogen isotopes in hydrous stishovite: implications for the deep Earth water cycle. *Contributions to Mineralogy and Petrology*, 178(48), 10.1007/s00410-023-02028-6.

Piette, A.A.A., Gao, P., **Brugman, K.**, Shahar, A., Lichtenberg, T., Miozzi, F., Driscoll, P. (2023) Rocky planet or water world? Observability of low-density lava world atmospheres. *The Astrophysical Journal*, 954(29), 110.3847/1538-4357/acdef2.

**Brugman, K.**, Bose, M., Till, C.B. (2022) Common Assumptions and Methods Yield Overestimated Diffusive Timescales, as Exemplified in a Yellowstone Post-Caldera Lava. *Contributions to Mineralogy and Petrology*, 177(63), 19, 10.1007/s00410-022-01926-5.

**Brugman, K.**, Phillips, M.G., Till, C.B. (2021). Experimental Determination of Mantle Solidi and Melt Compositions for Two Likely Rocky Exoplanet Compositions. *Journal of Geophysical Research: Planets*, special issue *Exoplanets: The Nexus of Astronomy and Geoscience*, 126(7), 19, 10.1029/2020JE006731.

**Brugman, K.K.** and Till, C.B. (2019). A low-aluminum clinopyroxene-liquid geothermometer for high-silica magmatic systems. *American Mineralogist*, 104(7), 996–1004, 10.2138/am-2019-6842.

Hynek, B.M., T.M. McCollum, E.C. Marcucci, **K. Brugman**, K.L. Rogers (2013). Assessment of environmental controls on acid-sulfate alteration at active volcanoes in Nicaragua: Applications to relic hydrothermal systems on Mars, *Journal of Geophysical Research—Planets*, Special Issue: *Early Mars*, 118, 2083–2104, 10.1002/jgre.20140.

## // OTHER PUBLICATIONS

Brugman, K., & Till, C. B. (2025) Geochemical Habitability. Habitable Worlds Observatory Community Working Group Science Case Development Document.

Meadows, V., Stapelfeldt, K., Crisp, D., Robinson, T.D., Mayorga, L., Quick, L.C., Kane, S.R., Azevedo Silva, T., **Brugman, K.**, Head, J.W., Mamajek, E., Dong, C. (2025) Identifying Solar System Investigations Most Impactful to Exoplanet Science. Community White Paper for NASA Decadal Astrobiology Research and Exploration Strategy.

Community Consensus Report (2022) A Consensus Report on Recommendations from the 2022 Advancing IDEA in Planetary Science Conference, submitted to NASA, 10.5281/zenodo.6656887.

Izenberg N., R.T. Daly, K.E. Mandt, C.R. Richey, L.R. Ostrach, J.T. Keane, S.J. Robbins, R.N. Watkins, J.A. Cordova, L. Riesbeck, J.H. Roberts, I. Daubar, J. Scully, S. Howell, S. Hosseini, R. Pappalardo, M. Vidaurri, N. Zellner, S. Vance, M. Bose, M.W. Busch, L. Feaga, P.A. Yanamandra-Fisher, **K.K. Brugman**, G. Arney, E. Kohler, A.M. Tárano, J. Noviello, C. Ernst, M.M. Daswani, H. Hartnett (2021) Planetary and Astrobiology Blank Papers: Science White Papers Cancelled or Downscaled Due to Direct Impact of COVID-19 and National-scale Civil Action, *Planetary*

*Science and Astrobiology Decadal Survey 2023–2032 and Bulletin of the AAS* 53(4), 10.3847/25c2cfcb.d2881794.

Kohler, E., C. He, S.H. Shim, **K.K. Brugman**, A.C. Johnson, P.C. Vergeli, M.A. Thomson, H. Graham, M.S. Gudipati, B. Fleury, B.L. Henderson (2020) The Importance of Prioritizing Exoplanet Experimental Facilities, *Planetary Science and Astrobiology Decadal Survey 2023–2032*, arXiv:2007.13924.

Marley, M.S., S. Harman, H.B. Hammel, P.K. Byrne, J. Fortney, A. Accomazzi, S.E. Moran, M.J. Way, J.L. Christiansen, N.R., Izenberg, T. Holt, S. Vahidinia, E. Kohler, **K.K. Brugman** (2020) Enabling Effective Exoplanet/Planetary Collaborative Science, *Planetary Science and Astrobiology Decadal Survey 2023–2032*, arXiv:2007.10549.

Till, C.B., M.E. Pritchard, C.A. Miller, **K.K. Brugman**, J. Ryan-Davis (2018). Super-volcanic Investigations. *Nature Geoscience*, 11(4), 10.1038/s41561-018-0100-1.

## GRANTS & FUNDING

2026–2029 NSF GLOW Exploring effects of rocky exoplanet composition on habitability and target selection, Principal Investigator  
2024–2029 NASA ICAR Tracing Rocky Exoplanet Compositions, Co-Investigator  
2020–2022 Carnegie Institution for Science Postdoctoral Fellowship  
2020 NASA Exoplanets Science Institute Travel Grant  
2019–2020 ASU Graduate College Completion Fellowship  
2019 Geochemical Society Planetary Science Grant  
2019 ASU Graduate & Professional Student Association Individual Travel Grant  
2016, '18, '19 ASU Graduate Education Travel Grant  
2014–2018 NSF Graduate Research Fellowship

## INVITED TALKS & COLLOQUIA

2026 New Mexico State University Dept. of Geological Sciences Colloquium  
2026 UNM Center for Astrophysics Research and Technology  
2026 CASAMOON Planetary Sample Science Seminar  
2024 Corning Materials at High Pressure Seminar  
2023 Arizona State University, School of Earth & Space Exploration Colloquium  
2023 Lunar and Planetary Institute Seminar  
2022 Carnegie EPL Seminar  
2022 University of Maryland, Planetary Astronomy Lunch Seminar  
2021 American Geophysical Union Fall Meeting, New Orleans  
2021 European Geophysical Union, Geochemistry, Mineralogy, Petrology & Volcanology Division Campfires  
2021 University of California Los Angeles, Geocheminar  
2021 Goldschmidt Conference, Lyon  
2021 Ruhr-University of Bochum, Institute of Geology, Mineralogy and Geophysics Colloquium  
2021 Smithsonian National Museum of Natural History, Dept. of Mineral Sciences Seminar  
2021 International Volcanology Seminar

2021 Stanford University, Geological Sciences Seminar  
 2021 The University of Chicago, Geophysical Sciences Seminar  
 2020 California Institute of Technology, Geoclub  
 2020 NASA Goddard, Exoplanet Seminar  
 2020 Harvard & Smithsonian Center for Astrophysics, Exoplanet Presentation Lounge  
 2019 Arizona State University, School of Earth & Space Exploration Colloquium  
 2019 Goldschmidt Conference, Barcelona  
 2018 Hot Life in the Desert Meeting, Arizona  
 2017 American Geophysical Union Fall Meeting, San Francisco

## CONFERENCE PRESENTATIONS

*\*invited †talk*

†**Brugman, K.**, Iacovino, K., Marshall, L.X., Till, C.B. (2026). Geochemical habitability: Petrological experiments are needed to further exoplanet research. Goldschmidt, Montréal, Québec, Canada.

\*†Iacovino, K., Wolf, A.S., Till, C.B., Sahu, C., Marshall, L.X., Foley, B., **Brugman, K.** (2026). From Star to Surface: Tracing rocky exoplanet compositions. Goldschmidt, Montréal, Québec, Canada.

†Iacovino, K., **Brugman, K.**, Till, C.B., Marshall, L.X. (2026). Completing the Chemical pipeline: From star to planet, and planet to mantle, crust, atmosphere. Inner Solar System Workshop, Houston, TX.

†**Brugman, K.**, Iacovino, K., Till, C.B., Wolf, A. (2026). Geochemistry's Role in the Search for Habitable Exoplanets. 247<sup>th</sup> Meeting of the American Astronomical Society, Phoenix, AZ.

†Till, C.B., **Brugman, K.**, Iacovino, K. (2025). A Change Will Do You Good: Geological Perspectives on Interdisciplinary Terrestrial and Exoplanet Science. AGU Fall Meeting, New Orleans, LA.

†**Brugman, K.**, Till, C.B. (2025). Geochemical Habitability: Experiments to Improve HWO ROI. Towards the Habitable Worlds Observatory Symposium, Washington, D.C.

†**Brugman, K.**, Thompson, M.A., Miozzi, F., Dunning, S.G., Bower, D.J., Cody, G.D., Wang, J., Steele, A.S., Badro, J., Sossi, P.A., Shahar, A. (2025). Experimental Determination of Hydrogen Solubility in Silicate Magma Oceans. Goldschmidt, Prague, Czech Republic.

**Brugman, K.**, Leinenweber, K., Navrotsky, A., Sharp, T., Smith, D., Shim, S.H., Tsuno, K., Leinbach, L. (2025). FORCE: The United States' Newest IHPV Laboratory. IAVCEI Scientific Assembly, Geneva, Switzerland.

†**Brugman, K.**, Dunning, S.G., Cody, G.D., Wang, J., Bullock, E.S., Steele, A., Badro, J., Shahar, A. (2025). Hydrogen Solubility in Terrestrial Magma Oceans. Lunar and Planetary Science Conference, The Woodlands, TX.

Sharp, T., Shim, S.H., Leinenweber, K., Smith, D., Navrotsky, A., **Brugman, K.**, Chen, S., Tsuno, K., Leinbach, L., (2024). FORCE (Facility for Open Research in a Compressed Environment) Progress, instrumentation and Initial Experiments. AGU Fall Meeting Abstract MR31B-2986, Washington, D.C.

**Brugman, K.** (2024). FORCE: A hub for exoplanet experiments from crust to mantle. Exoplanets in Our Backyard III, Louisville, TN.

†**Brugman, K.**, Dunning, S.G., Badro, J., Cody, G.D., Wang, J., Shahar, A. (2024). Experimental Determination of Hydrogen Solubility in Silicate Magma Oceans. Goldschmidt, Chicago, IL.

Unterborn, C.T., Desch, S.J., Hartnett, H.E., **Brugman, K.**, Simon, M., and Young, P. (2024) The TREC team: To Boldly Know the Impact of Elemental Abundances on Planetary Evolution and Biosignature Detection. Astrobiology Science Conference, Providence, RI.

**Brugman, K.**, Dunning, S.G., Badro, J., Cody, G.D., Wang, J., Shahar, A. (2024). Hydrogen Solubility in Rocky Silicate Magma Oceans. Earth and Planets Origin and Evolution, Paris, France.

Piette, A.A.A., Gao, P., **Brugman, K.**, Shahar, A., Lichtenberg, T., Miozzi, F., Driscoll, P. (2024). Rocky planet or water world? The observability of low-density lava world atmospheres. Exoplanets 5, Leiden, Netherlands.

†Piette, A.A.A., Gao, P., **Brugman, K.**, Shahar, A., Lichtenberg, T., Miozzi, F., Driscoll, P. (2024). Rocky planet or water world? Observability of low-density lava world atmospheres. Rocky Worlds III, Zurich, Switzerland.

†Goncharov, A.F., Edmund, E., McWilliams, R.S., Sanchez-Valle, C., **Brugman, K.**, Badro, J. (2023). X-ray Free Electron Laser flash measurements of thermal conductivity of bridgmanite in Earth's lower mantle. AGU Fall meeting Abstract MR24A-02, San Francisco, CA.

Leinbach, L., **Brugman, K.**, Leinenweber, K., Navrotsky, A., Sharp, T., Shim, S.H., Smith, D., Tsuno, K. (2023). FORCE (Facility for Open Research in a Compressed Environment) Progress and Future Advances. AGU Fall Meeting Abstract MR21B-0049, San Francisco, CA.

†**Brugman, K.**, Shahar, A., Badro, J., Cody, G.D., Wang, J. (2023). Solubility of H<sub>2</sub> in primitive melts as determined by experiments. XVIII International Symposium on Experimental Mineralogy, Petrology and Geochemistry, Milan, Italy.

†Kueter, N., **Brugman, K.**, Miozzi, F., Cody, G.D., Yang, J., Strobel, T.A., Walter, M.J. (2023). Water speciation and hydrogen isotopes in hydrous stishovite. XVIII International Symposium on Experimental Mineralogy, Petrology and Geochemistry, Milan, Italy.

†Edmund, E., McWilliams, R.S., **Brugman, K.**, Badro, J., Sanchez-Valle, C., Goncharov, A.F. on behalf of EuXFEL Proposal 3160 (2023). Thermal Conductivity of Bridgmanite at Lower Mantle Conditions. Joint 28<sup>th</sup> AIRAPT and 60<sup>th</sup> EHPRG International Conference on High Pressure Science and Technology, Edinburgh, Scotland.

†Leinenweber, K., Navrotsky, A., Smith, D., Sharp, T., Shim, S.H., Tsuno, K., **Brugman, K.** (2022). FORCE – A Newly Created “Facility for Open Research in a Compressed Environment”. AGU Fall Meeting Abstract MR45A-03, Chicago, IL.

†Kueter, N., **Brugman, K.**, Miozzi, F., Cody, G.D., Walter, M.J., Yang, J., Strobel, T.A. (2022). Water speciation in partially deuterated hydrous stishovite at 450 °C and 9 GPa. GeoMinKöln Abstract 264, University of Cologne, Germany.

- †**Brugman, K., Shahar, A., Badro, J., Cody, G. (2022).** Experimental Determination of H<sub>2</sub> Solubility in Primitive Melts. Goldschmidt Abstract 10267, Honolulu, Hawai'i.
- \*†**Brugman, K. (2021).** Exoplanet Research at the Intersection of Geosciences and Astronomy. AGU Fall Meeting Abstract 907377, New Orleans, LA.
- \*†**Brugman, K. K., Phillips, M. G., Till, C. B. (2021).** Using Experimental Petrology to Explore Exoplanet Melts and Solidi: Preliminary Implications for Habitability. Goldschmidt, Lyon, France.
- †**Brugman, K.K., Phillips, M.G., Till, C.B. (2021).** Petrological Experiments on Rocky Exoplanet Compositions Reveal Clues to Habitability. Lunar and Planetary Sciences Conference Abstract 1967, The Woodlands, TX.
- †**Brugman, K.K., Phillips, M.G., Till, C.B. (2020).** Exoplanet Crust Compositions as Determined by Petrological Experiments. Exoplanets in Our Backyard, Houston, TX.
- Brugman, K.K., Phillips, M.G., Till, C.B. (2019).** Experimental Determination of Rocky Exoplanet Crust Compositions. AGU Fall Meeting Abstract P51G-3437, San Francisco, CA.
- †**Brugman, K.K., Till, C.B. (2019).** New clinopyroxene-liquid geothermometer indicates a broad crystallization interval for low-Al clinopyroxene in high-silica magmatic systems. GSA Annual Meeting Abstract 337075, Phoenix, AZ.
- \*†**Brugman, K.K., Phillips, M.G., Till, C.B. (2019).** Stars to Planets: Experimental Determination of Exoplanet Mantle Solidi and Crust Compositions. Goldschmidt, Barcelona, Spain.
- Brugman, K.K., Till, C.B. (2018).** Clinopyroxene-Liquid Thermometry Hints at Cold Storage for High-Silica Systems. IAVCEI Commission on Collapse Calderas: VII International Workshop on Collapse Calderas, Toba Caldera, Sumatra, Indonesia.
- Brugman, K.K., Till, C.B. (2018).** A Revised Low-Al Clinopyroxene-Liquid Geothermometer for High-Silica Igneous Systems. EOS AGU Chapman: Merging Geophysical, Petrochronologic, and Modeling Perspectives of Large Silicic Magma Systems Abstract P-28, Quinamávida, Maule Region, Chile.
- \*†**Brugman, K.K., Till, C.B. (2017).** Taking Yellowstone's Temperature: A New Clinopyroxene Geothermometer to Improve Timescales of Pre-Eruptive Events. AGU Fall Meeting Abstract U13B-03, New Orleans, LA.
- Brugman, K.K., Till, C.B. (2017).** A Revised Clinopyroxene-Liquid Geothermometer for Silicic Igneous Systems with Applications to Diffusion Chronometry of the Scaup Lake Rhyolite, Yellowstone Caldera, WY. AGU Fall Meeting Abstract V11C-0365, New Orleans, LA.
- Brugman, K.K., Till, C.B. (2017).** Investigation of the Applicability of Clinopyroxene Geothermometers to Silicic Igneous Systems. IAVCEI Scientific Assembly Abstract ME43C-044, Portland, OR.
- †**Brugman, K.K., Till, C.B., Bose, M. (2016).** Clinopyroxene Diffusion Chronometry of the Scaup Lake Rhyolite, Yellowstone Caldera, WY. AGU Fall Meeting Abstract V13F-02, San Francisco, CA.

Brugman, K.K., Till, C.B., Bose, M., Hervig, R. (2015). Development of Clinopyroxene as an Igneous Geospeedometer Using NanoSIMS. AGU Fall Meeting Abstract V31B-3030, San Francisco, CA.

Brugman, K.K., Hynek, B.M., Robbins, S.J. (2015). Crater-based tests unlock the mystery of the origin and evolution of Arabia Terra, Mars. Lunar and Planetary Science Conference, The Woodlands, TX.

## HONORS

2025 ASU Supervisor of the Year (nominee)  
2016, '17, '20 ASU College of Liberal Arts and Sciences Graduate Excellence Award  
2016 AGU Outstanding Student Paper Award  
2014 Rocky Mountain Association of Geologists Outstanding Student  
2014 CU Boulder Bruce F. Curtis Scholarship  
2013, 2014 CU Arts and Sciences Dean's Scholars' Award  
2013 CU Boulder T. Keith Marks Award for Outstanding Geological Sciences Majors

## GRADUATE COMMITTEE MEMBERSHIP

2025-curr.	Ashley Bear	UNM	M.S.
2025-curr.	Zayed Abdur Rezzak	UNM	Ph.D.
2023-2024	Jisoo Kim	ASU	Ph.D.

## TEACHING EXPERIENCE

Ongoing	Igneous and Metamorphic Petrology	UNM
2019	Geochemistry, Invited lecturer "Crystal Chemistry"	ASU
2019	Geochemistry, Teaching Assistant	ASU
2016	Introduction to Geology, Laboratory Instructor	ASU
2013-2014	Introduction to Geology, Learning Assistant	CU

## RESEARCH EXPERIENCE

2023-2025 Research scientist, FORCE, ASU: end-loaded piston-cylinder (PC), multi-anvil (MA; Kawai-type and DIA), high-pressure torsion apparatus (HPT), internally heated pressure vessel (IHPV), XRD, EPMA, Raman, FTIR, Python  
2020-2022 Postdoctoral researcher, EPL, Carnegie: PC, MA, NMR, FTIR, EPMA, Raman, Python  
2014-2020 Graduate researcher, ASU Experimental Petrology and Igneous Processes Center (EPIC): PC, 1 atm vertical furnace, SIMS, NanoSIMS, EPMA, Python, C  
2018 Visiting researcher, Earth Observatory of Singapore  
2017 Visiting researcher, MIT Experimental Petrology lab: cold-seal pressure vessel  
2011-2014 Undergraduate researcher, Laboratory for Atmospheric and Space Physics/CU Boulder: XRD/XRF, ArcGIS

## FIELD EXPERIENCE

2017 Sample collection, Medicine Lake Volcano and Mt. Shasta, CA  
2015 Sample collection, Yellowstone National Park, WY  
2014 Tephra stratigraphy and mapping, Iceland

2012 Mapping, Front Range, CO

## **SERVICE & CONTRIBUTIONS TO DIVERSITY**

### **// INCLUSION, DIVERSITY, EQUITY, & ACCESSIBILITY**

2024 Participant, Advancing IDEA in Planetary Science Conference  
2022 Participant, The Second National Conference: Justice in Geoscience  
2022 Participant, Advancing IDEA in Planetary Science Conference  
2021–curr. Member, PetroNET Petrology and High-T Geochemistry Community  
2021–2022. Member, Carnegie Institution Unlearning Racism in Geoscience (URGE) Pod  
2021–curr. Member, Asian Americans and Pacific Islanders in Geosciences (AAPliG)  
2021–2022. Member, Carnegie EPL Anti-Racist Reading Group  
2019–curr. Pen pal, Letters to a Pre-Scientist  
2015–2018 Co-chair, ASU SESE Women in Science Program  
2014–2017 Peer mentor, ASU SESE Women in Science Program  
2015 Peer mentor, AGU Fall Meeting

### **// SESSION & CONFERENCE CONVENER**

2026 “From Protoplanetary Disks to Exoplanet Atmospheres and Climate”, Goldschmidt  
2025 “Chemistry and Climate of Exoplanets”, Goldschmidt  
2024–curr. Co-convener, Exoplanets in Our Backyard IV  
2022 “Experimental petrology in planetary science: Insights into the diversity of both planets and the scientists who study them”, Goldschmidt  
2019 “Volatile Elements in Magmatic and Planetary Processes: Budgets, Fluxes, and Behavior”, AGU Fall Meeting  
2017 “Crystals: Microscale archives of macroscale igneous processes”, AGU Fall Meeting

### **// LEADERSHIP**

2023–curr. Advisory Board member, STEAM Superheroes  
2022–2023 Advisory Board member, Nichelle Nichols Foundation  
2021–2022 Representative, Carnegie Institution Postdoctoral Association (*elected*)  
2016–2020 Student representative, AGU Volcanology, Geochemistry, and Petrology section  
2016–2018 Graduate student representative, ASU Technology Advisory Board  
2015–2018 Co-chair, ASU SESE Women in Science Program  
2017 AGU Student & Early Career Scientist Conference Planning Committee  
2014–2017 ASU SESE Graduate Council delegate (*elected*)  
2012–2013 GSA 125<sup>th</sup> Annual Meeting Student Planning Committee

### **// ADDITIONAL MENTORING**

2024–curr. Mentor, Geoscience Education and Mentorship Support (GEMS)  
2023–2025 Mentor and supervisor, FORCE undergraduate workers  
2019–curr. Pen pal, Letters to a Pre-Scientist  
2014–2017 Peer mentor, ASU SESE Women in Science Program  
2015 Peer mentor, AGU Fall Meeting

## // OUTREACH

2023–2025 ASU Open Door (annual campus-wide public lab visit and outreach event)  
2023–2025 ASU SESE Earth and Space Exploration Day (annual department outreach event)  
2022 Carnegie EPL Summer Undergraduate Research Internship program  
2014–2020 ASU Open Door  
2014–2019 ASU SESE Earth and Space Exploration Day  
2019–curr. Judge for Future Engineers  
2015 Article for the Space Exploration Network (SEN.com) about the ASU-NExSS project, “The next steps in our search for life”  
2014–2018 ASU SESE Open House (monthly department outreach event)

## // WORKSHOP PARTICIPATION

2026 UNM Student Experience Project Faculty Fellow  
2026 Designing for Depth and Engagement Community of Practice (UNM Center for Teaching & Learning)  
2025 Course Design Workshop (National Association of Geoscience Teachers)  
2024 Exoplanets in Our Backyard III (Louisville, KY)  
2024 Reviews in Mineralogy and Geochemistry: Vol. 90 Exoplanets Workshop (Goldschmidt)  
2024 ERC Earth and Planets Origin and Evolution Workshop (IPGP)  
2023 FORCE Winter Workshop on High Pressure Research  
2023 Modelling volatile behaviour in magmas (IAVCEI Scientific Assembly)  
2021 NExSS/AAS Habitable Worlds Workshop  
2021 URGE Curriculum  
2020 NExSS Quantitative Habitability Workshop (NASA Earths in Other Solar Systems)  
2020 Melts, Glasses, Magmas (LMU Munich)  
2020 Exoplanets in Our Backyard (LPI)  
2019 SZ4D CONVERSE Volcanic Sampling and Eruption Dynamics Workshop (AGU Fall Meeting)  
2019 SZ4D CONVERSE Petrology, Geochemistry, Experimental, Communication and Sampling Communities Workshop (GSA Annual Meeting)  
2015, '16, '19 Workshop on Secondary Ion Mass Spectrometry (ASU)  
2018 IAVCEI VII International Workshop on Collapse Calderas (Toba Caldera, Indonesia)  
2017 ENKI Datathon (ASU)  
2016 How to Have a Successful Congressional District Visit (AGU)  
2016 Working with Diverse Students on Societally Relevant Geoscience Issues (InTeGrate)  
2014 alphaMELTS Workshop (Caltech)  
2014 Global Seminar: Quaternary Geology and Volcanology (Iceland)

## // PEER REVIEWER

NSF Division of Earth Sciences (EAR)	Geology
NASA	Journal of Petrology
Contributions to Mineralogy and Petrology	Nature Communications
Geochimica et Cosmochimica Acta	Volcanica

## PROFESSIONAL AFFILIATIONS

American Astronomical Society – since 2025

Geochemical Society – since 2019

International Association of Volcanology and Chemistry of the Earth's Interior – since 2018

Association for Women in Science – since 2016

American Geophysical Union – since 2013

Association for Women Geoscientists – since 2012

The Geological Society of America – since 2012