KARA BRUGMAN

Northrop Hall, 221 Yale Blvd NE
Albuquerque, NM 87131
United States

brugman@unm.edu
@karabrug
karabrugman.com

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 PREPARTION

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., Bähtz, 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), 10.3847/25c2cfeb.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	NASA SSERVI/UNM CASA Moon 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	Rühr-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. 247th 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_2 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 28th AIRAPT and 60th 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_2 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; Kawaii-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 (AAPIiG)
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/CHAIR

2026 "The Exoplanetary Web", AAS Division of Planetary Sciences
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 125th 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	Early Career Geosciences Faculty Workshop (National Association of Geoscience Teachers)
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)
NASA
Contributions to Mineralogy and Petrology
Geochimica et Cosmochimica Acta
Geology
Journal of Petrology
Nature Communications
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