

Marissa M. Tremblay

Purdue University | Department of Earth, Atmospheric, and Planetary Sciences
550 Stadium Mall Drive, West Lafayette, IN, 47907, USA
tremblam@purdue.edu | 765-494-1255
<https://www.eaps.purdue.edu/thermochronology>

EDUCATION

University of California, Berkeley (UC Berkeley) Ph.D., Earth and Planetary Science (EPS) Advisor: David L. Shuster	2012–2017
Barnard College of Columbia University B.A. Environmental Science, <i>summa cum laude</i>	2008–2012

PROFESSIONAL APPOINTMENTS

Assistant Professor, Purdue University Department of Earth, Atmospheric, and Planetary Sciences (EAPS)	2019–present
Honorary Assistant Professor, University of Wisconsin-Madison Department of Geoscience	2022–present
Newton International Fellow of the Royal Society Scottish Universities Environmental Research Centre (SUERC) Mentor: Darren Mark	2018–2019
University of California President's Postdoctoral Fellow University of California, Davis Mentor: Sujoy Mukhopadhyay	2017
Research & Teaching Assistant, UC Berkeley	2012–2017

HONORS AND AWARDS

Antarctica Service Medal	2023
Sloan Research Fellowship, Alfred P. Sloan Foundation	2022
Marion Milligan Mason Award for Women in the Chemical Sciences, American Association for the Advancement of Science	2020
Doris M. Curtis Outstanding Woman in Science Award, Geological Society of America	2020
Citation for Excellence in Refereeing, American Geophysical Union	2018
Charles & Nancy Naeser Prize, Intl. Standing Committee on Thermochronology	2018
Marie Skłodowska-Curie Individual Fellowship (<i>declined</i>)	2018
The Royal Society Newton International Fellowship	2017
University of California President's Postdoctoral Fellowship	2017
Lamont-Doherty Earth Observatory Postdoctoral Fellowship (<i>declined</i>)	2017
Louderback Award, UC Berkeley EPS	2015
National Science Foundation Graduate Research Fellowship	2014
Outstanding Graduate Student Mentor, NERDS program, UC Berkeley	2013
Richards Family Graduate Fellowship, UC Berkeley	2012
Departmental Honors, Barnard College Environmental Science	2012
Distinction, Senior Thesis, Barnard College Environmental Science	2012
Phi Beta Kappa	2011
Barry M. Goldwater Scholarship	2011
National Oceanic and Atmospheric Administration Ernest F. Hollings Scholar	2010

PUBLICATIONS ^G = graduate student supervised; ^U = undergraduate student supervised; P = postdoc supervised

Peer-reviewed

25. Fink, J.^G, **Tremblay, M.M.**, Tobin, T.S., Stockli, L.D., Stockli, D.F., and Ickert, R.B., 2024, Diagenesis of fossil gar fish scales with implications for geochronology and paleoenvironmental applications. *Geochimica et Cosmochimica Acta*. doi: 10.1016/j.gca.2024.03.004

24. Colleps, C.L., van der Beek, P.A., Amalberti, J., Denker, A., **Tremblay, M.M.**, Hajdas, W., Bernard, M., Dittwald, A.H., and Bundesmann, J., 2024, Improving the accessibility and efficiency of proton irradiations for $^4\text{He}/^3\text{He}$ thermochronology. *Geochemistry, Geophysics, Geosystems*, v. 25(2), e2023GC011334. doi: 10.1029/2023GC011334
23. Guralnik, B., **Tremblay, M.M.**, Phillips, M., Sellwood, E.L., Gribenski, N., Presl, R., Haberkorn, A., Sohbaty, R., Shuster, D.L., Valla, P., Jain, M., Schindler, K., Hippe, K., and Wallinga, J., 2024, Three centuries of snowpack decline at an Alpine pass revealed by cosmogenic paleothermometry and luminescence photochronometry. *Geophysical Research Letters*, v. 51, e2023GL107385. doi: 10.1029/2023GL107385
22. Gribenski, N., **Tremblay, M.M.**, Valla, P.G., Guralnik, B., Balco, G., and Shuster, D.L., 2022, Cosmogenic ^3He paleothermometry on post-LGM glacial bedrock within the central European Alps. *Geochronology*, v. 4, p. 641-663. doi: 10.5194/gchron-4-641-2022.
21. O'Brien, A.C., Hallis, L.J., Regnault, C., Morrison, D., Blackburn, G., Steele, A., Daly, L., Tait, A., **Tremblay, M.M.**, Telenko, D., Gunn, G., McKay, E., Maria, N., Salik, M.A., Ascough, P., Toney, J., Griffin, S., Whitfield, P., and Lee, M., 2022, Using Organic Contaminants to Constrain the Terrestrial Journey of the Martian Meteorite Lafayette. *Astrobiology*, v. 22(11), doi:10.1089/ast.2021.0180
20. van Zalinge, M.E., Mark, D.F., Sparks, R.S.J., **Tremblay, M.M.**, Keller, C.B., Cooper, F.J., and Rust, A., 2022, Timescales for pluton growth, magma chamber formation and super-eruptions. *Nature*, v. 608, p. 87-92. doi:10.1038/s41586-022-04921-9
19. Dai, J., Fox, M., Han, X., **Tremblay, M.M.**, Xu, S., Liu, B., Li, H., Shuster, D.L., and Wang, C., 2021, Two stages of accelerated exhumation in the middle reach of the Yarlung River, southern Tibet since the mid-Miocene. *Tectonics*, v. 40, e2020TC006618. doi:10.1029/2020TC006618
18. Domingos, R., **Tremblay, M.M.**, Militzer, B., and Shuster, D.L., 2020, Simulations and experiments reveal effect of nanopores on helium diffusion in quartz. *ACS Earth and Space Chemistry*, v. 4(11), p. 1906-1912. doi:10.1021/acsearthspacechem.0c00187
17. Carter, J.N.⁶, Ickert, R.B., Mark, D.F., **Tremblay, M.M.**, Cresswell, A., and Sanderson, D.C.W., 2020, Production of ^{40}Ar by an overlooked mode of ^{40}K decay with implications for K-Ar geochronology. *Geochronology*, v. 2, p. 355-365. doi:10.5194/gchron-2-355-2020
16. **Tremblay, M.M.**, and Cassata, W.S., 2020, Noble gas thermochronology of extraterrestrial materials. *Elements*, v. 16(5), p.331-336. doi:10.2138/gselements.16.5.331
15. Zeitler, P.K., and **Tremblay, M.M.**, 2020, Measuring noble gases for thermochronology. *Elements*, v. 16(5), p. 343-344. doi:10.2138/gselements.16.5.343
14. Carter, J.N.⁶, **Tremblay, M.M.**, and Mark, D.F., 2020, A Bayesian approach to the deconvolution of $^{40}\text{Ar}/^{39}\text{Ar}$ data from mineral mixtures. *Chemical Geology*, v. 554, 119784. doi:10.1016/j.chemgeo.2020.119784
13. Park, Y., Swanson-Hysell, N.L., MacLennan, S.A., Maloof, A.C., Gebreslassie, M., **Tremblay, M.M.**, Schoene, B., Alene, M., Antilla, E.S.C., Tesema, T., and Haileab, B., 2020, The lead-up to the Sturtian Snowball Earth: Neoproterozoic chemostratigraphy time-calibrated by the Tambien Group of Ethiopia. *Geological Society of America Bulletin*, v. 132(5-6), p. 1119-1149. doi:10.1130/B35178.1
12. **Tremblay, M.M.**, Shuster, D.L., Spagnolo, M., Renssen, H., and Ribolini, A., 2019, Temperatures recorded by cosmogenic noble gases since the last glacial maximum in the Maritime Alps: Quaternary Research, v. 91(2), p. 829-847. doi:10.1017/qua.2018.109
11. Dygert, N., Jackson, C.R.M., Hesse, M.A., **Tremblay, M.M.**, Shuster, D.L., and Gu, J.T., 2018, Plate tectonic cycling modulates Earth's $^3\text{He}/^{22}\text{Ne}$ ratio. *Earth and Planetary Science Letters*, v. 498, p. 309-321. doi:10.1016/j.epsl.2018.06.044
10. Ingalls, M., Rowley, D., Olack, G., Currie, B., Li, S., Schmidt, J., **Tremblay, M.**, Shuster, D.L., Lin, D., and Colman, A., 2018, Paleocene to Pliocene low-latitude high elevation of southern Tibet: Implications for tectonic models of India-Asia collision, Cenozoic climate, and geochemical weathering. *Geological Society of America Bulletin*, v. 130(1-2), p. 307-330. doi:10.1130/B31723.1
9. **Tremblay, M.M.**, Shuster, D.L., Balco, G., and Cassata, W.S., 2017, Neon diffusion kinetics and implications for cosmogenic neon paleothermometry in feldspars. *Geochimica et Cosmochimica Acta*, v. 205, p. 14-30. doi:10.1016/j.gca.2017.02.013

8. Garrick-Bethell, I., Weiss, B.P., Shuster, D.L., Tikoo, S.M., and **Tremblay, M.M.**, 2017, Further evidence for early lunar magnetism from troctolite 76535. *Journal of Geophysical Research: Planets*, v. 122(1), p. 76-93. doi:10.1002/2016JE005154
7. Schmidt, J.L., Zeitler, P.K., Pazzaglia, F.J., **Tremblay, M.M.**, Shuster, D.L., and Fox, M., 2015, Knickpoint evolution on the Yarlung Tsangpo, southern Tibet: Evidence for a regional late Cenozoic base level adjustment. *Earth and Planetary Science Letters*, v. 430, p. 448-457. doi:10.1016/j.epsl.2015.08.041
6. **Tremblay, M.M.**, Fox, M., Schmidt, J.L., Tripathy-Lang, A., Wielicki, M.M., Harrison, T.M., Zeitler, P.K., and Shuster, D.L., 2015, Erosion in southern Tibet shut down at 10 Ma due to enhanced rock uplift within the Himalaya. *Proceedings of the National Academy of Sciences*, v. 112(39), p. 12030-12035. doi:10.1073/pnas.1515652112
5. Swanson-Hysell, N.L., Maloof, A.C., Condon, D.J., Jenkin, G.R.T., Alene, M., **Tremblay, M.M.**, Tesema, T., Rooney, A.D., and Haileab, B., 2015, Stratigraphy and geochronology of the Tambien Group, Ethiopia: Evidence for globally synchronous carbon isotope change in the Neoproterozoic. *Geology*, v. 43(4), p. 323-326. doi:10.1130/G36347.1
4. Breecker, D.O., Bergel, S., Nadel, M., **Tremblay, M.M.**, Osuna-Orozco, R., Larson, T.E., and Sharp, Z.D., 2015, Minor stable carbon isotope fractionation between respired carbon dioxide and bulk soil organic matter during laboratory incubation of topsoil. *Biogeochemistry*, v. 123, p. 83-98. doi:10.1007/s10533-014-0054-3
3. **Tremblay, M.M.**, Shuster, D.L., and Balco, G., 2014, Diffusion kinetics of ^3He and ^{21}Ne in quartz and implications for cosmogenic noble gas paleothermometry. *Geochimica et Cosmochimica Acta*, v. 142, p. 186-204. doi:10.1016/j.gca.2014.08.010
2. **Tremblay, M.M.**, Shuster, D.L., and Balco, G., 2014, Cosmogenic noble gas paleothermometry. *Earth and Planetary Science Letters*, v. 400, p. 195-205. doi:10.1016/j.epsl.2014.05.040
1. Straub, M., **Tremblay, M.M.**, Sigman, D.M., Studer, A.S., Ren, H., Toggweiler, J.R., and Haug, G.H., 2013, Nutrient conditions in the subpolar North Atlantic during the last glacial period reconstructed from foraminifera-bound nitrogen isotopes. *Paleoceanography*, v. 28, p. 79-90. doi:10.1002/palo.20013

Other publications

- Ketcham, R.A., **Tremblay, M.M.**, Abbey, A.L., Baughman, J.S., Cooperdock, E.H.G., Jepson, G., Murray, K.E., Odlum, M.L., Stanley, J.R., and Thurston, O.G., 2022, Report from the 17th International Conference on Thermochronology. *Earth and Space Sciences Open Archive*. doi: 10.1002/essoar.10511082.1
- Cohen, B.A., Zellner, N., Wadhwa, M., Turrin, B., **Tremblay, M.M.**, and 26 others, 2020, Geochronology as a Framework for Inner Solar System History. *Bulletin of the American Astronomical Society*, v. 53, no. 4, p. 020. doi: 10.3847/25c2cf.1b2670e3

CONFERENCE PROCEEDINGS, LAST 3 CALENDAR YEARS

16. Blevins, A.M., Minton, D.A., Huang, Y.H., Du, J., and **Tremblay, M.M.**, Modeling the source of impact melt at the Apollo 14-17 sites. Lunar and Planetary Science Conference, The Woodlands, TX.
15. Mijjum, M.^G, Andrews, B.A., McCoy, T.J., Corrigan, C.M., Caffee, M.W., and **Tremblay, M.M.**, 2024, Using micro-computed tomography to determine subsample-specific cosmogenic noble gas production rates of E chondrites. Lunar and Planetary Science Conference, The Woodlands, TX.
14. Remian, B.^U, Guo, H.^P, and **Tremblay, M.M.**, 2023, Using detrital thermochronology to investigate the erosional response to glaciation and tectonics in the midlatitude Patagonian Andes. American Geophysical Union Fall Meeting, San Francisco, CA.
13. Bristol, K.E., Sprain, C.J., Griffis, A., Mittal, T., Fendley, I.M., Durraiswami, R.A., Monteiro, A., Mijjum, M.^G, and **Tremblay, M.M.**, 2023, Assessing Eruptive Hiatus Durations of the Deccan Traps Large Igneous Province Using Quantitative Paleosecular Variation Analysis. American Geophysical Union Fall Meeting, San Francisco, CA.
12. Colleps, C. van der Beek, P., Amalberti, J., **Tremblay, M.M.**, and Bernard, M., 2023, Establishing new proton-irradiation protocols for $^4\text{He}/^3\text{He}$ thermochronology. 18th International Conference on Thermochronology, Riva del Garda, Italy.

11. Mijjum, M.^G, Bristol, K.E., Bono, R.K., Sprain, C.J., and **Tremblay, M.M.**, 2023, A model framework for scaling pre-Quaternary cosmogenic nuclide production rates. Geochronology Gordon Research Conference, West Dover, VT.
10. Guo, H.^P, Zeitler, P.K., and **Tremblay, M.M.**, 2023, Continuous ramped heating analysis of KTB apatites reveals diffusion sinks in apatite. Geochronology Gordon Research Conference, West Dover, VT.
9. Fink, J.^G, **Tremblay, M.M.**, Tobin, T. Stockli, L.D., Stockli, D.F., and Ickert, R.B., 2023, Diagenesis of fossil gar fish scales with implications for geochronological and paleoenvironmental applications. 33rd Annual V.M. Goldschmidt Conference, Lyon, France.
8. Blevins, A. M., Minton, D.A., Huang, Y.-H., Du, J., and **Tremblay, M.M.**, 2023, Modelling the effects of post-Imbrium craters on the Apollo sampling record. 54th Lunar and Planetary Science Conference, The Woodlands, USA.
14. Salazar, Y.O., Mixon, E., Moreno-Yaeger, P., Romero, M.^G, **Tremblay, M.M.**, and Marcott, S.A., 2023, A ³He based Holocene glacial chronology from Villarrica volcano, Chile. 21st Congress of the International Union for Quaternary Research, Rome, Italy.
7. Sprain, C.J., Mittal, T., Bristol, K., Duraiswami, R., **Tremblay, M.M.**, Mijjum, M.^G, and Monteiro, A., 2022, Quantitative paleosecular variation analysis: A new tool for assessing time using paleomagnetism. American Geophysical Union Fall Meeting, Chicago, USA.
6. Fink, J.T.^G, **Tremblay, M.M.**, Tobin, T.S., Stockli, L.D., and Stockli, D.F., 2022, Chemistry and structure of fossil gar scales with implications for bioapatite (U-Th)/He thermochronology. Geological Society of America Annual Meeting, Denver, USA.
5. Pederson, J.L., Stanley, J.R., and **Tremblay, M.M.**, 2022, Exploring Ken Pierce's conceptual model of transient landscape evolution around the Yellowstone geodynamic system – research along fluvial transects off the Yellowstone plateau. Geological Society of America Annual Meeting, Denver, USA.
4. Weeks, C., Stanley, J.R., and **Tremblay, M.M.**, 2022, Post-Laramide exhumation and topography in the Madison and Gallatin Ranges of southwest Montana from apatite (U-Th)/He thermochronometry. Geological Society of America Annual Meeting, Denver, USA.
3. Mijjum, M.^G, Blair, D.^U, and **Tremblay, M.M.**, 2022, Estimating the compositional dependence of cosmogenic noble gas production rates in E-chondrite subsamples using high-resolution X-ray computed tomography. 85th Annual Meeting of The Meteoritical Society, Glasgow, United Kingdom.
2. **Tremblay, M.M.**, Gu, T., Herring, J.^U, and Tay, S.X.^U, 2022, Understanding the effect of defects on ³He diffusion in quartz with paired simulations and experiments. 32nd Annual V.M. Goldschmidt Conference, Honolulu, USA.
1. Singer, B.S., Marcott, S.A., Moreno-Yaeger, P., Romero, M.^G, **Tremblay, M.M.**, Alloway, B., Moreno, P.I., and Jicha, B.R., 2022, The role of radioisotopic and cosmogenic geochronology in understanding ice forcing in arc magmatic plumbing systems. 12th South American Symposium on Isotope Geology, Santiago, Chile.

CURRENT EXTERNAL FUNDING

<i>Collaborative research: Reevaluating the timing and driver of escarpment retreat in southeast Australia</i>	2024–2027
PI, National Science Foundation	
<i>Using detrital thermochronology to gain new insights into the erosional response to glaciation and tectonics in the midlatitude Patagonian Andes</i>	2023–2024
PI, U.S. Science Support Program, International Ocean Discovery Program	
<i>Sloan Research Fellowship, Alfred P. Sloan Foundation</i>	2022–2024
<i>Testing the role of oceanic plateau cooling history and rheology on accretion</i>	2022–2025
Co-PI, National Science Foundation	
<i>Collaborative research: Using the tempo of exhumation and relief development to investigate mantle-to-surface connections around the Yellowstone hotspot</i>	2022–2025
Co-PI, National Science Foundation	
<i>Collaborative Research: Ice Forcing in Arc Magma Plumbing Systems (IF-AMPS)</i>	2021–2026
Co-PI, National Science Foundation	

- Collaborative research: Reconstructing temperatures during the mid-Pliocene Warm Period in the McMurdo Dry Valleys with cosmogenic noble gases* 2020–2023
 PI, National Science Foundation
- Collaborative research: Using hiatus durations to quantify the tempo of Deccan volcanism* 2020–2023
 PI, National Science Foundation

INVITED LECTURES

Department of Earth and Environmental Sciences, Columbia University	February 2024
Department of Geology, Carleton College	January 2024
Institute of Geosciences, University of Potsdam	November 2023
Department of Geology, University of Kansas	February 2023
School of Earth and Space Exploration, Arizona State University, Tempe, AZ	February 2023
Department of Earth and Environmental Sciences, Syracuse University, Syracuse, NY	September 2022
Department of Geosciences, Missouri University of Science and Technology	February 2022
Department of Earth Sciences, University of Geneva	December 2021
Jackson School of Geosciences, University of Texas at Austin	November 2021
Department of Earth and Environmental Sciences, UT Arlington	October 2021
Department of Earth and Planetary Sciences, University of New Mexico	September 2021
Department of Geological Sciences and Engineering, Queen's University	March 2021
Department of Earth Sciences, University of Geneva	December 2020
Purdue Climate Change Research Center	December 2020
Department of Geophysical Sciences, University of Chicago	November 2020
Department of Geology, Carleton College	October 2020
Department of Earth and Atmospheric Sciences, Indiana University	October 2020
Department of Geology and Geophysics, Louisiana State University	October 2020
Department of Earth and Environmental Sciences, Vanderbilt University	February 2020
Department of Geosciences, Princeton University	November 2019
Department of Geology, University of Illinois Urbana-Champaign	October 2019
The Hutton Club, University of Edinburgh	November 2018
School of Geographical & Earth Sciences, University of Glasgow	March 2018
School of Earth and Environmental Sciences, University of Manchester	February 2018
Department of Geoscience, University of Wisconsin–Madison	February 2018
Department of Earth, Atmospheric, and Planetary Sciences, Purdue University	February 2018
Department of Geology and Geophysics, Yale University	February 2018
School of School of Earth and Ocean Sciences, University of Victoria	January 2018
Department of Earth, Ocean and Ecological Sciences, University of Liverpool	November 2017
School of Earth and Environmental Sciences, University of St Andrews	November 2017
Department of Earth and Planetary Science, UC Berkeley	May 2017
Department of Earth and Planetary Sciences, UC Davis	March 2017
Department of Geological Sciences, Stanford University	February 2017
Department of Earth Science, University of California, Santa Barbara	January 2017
Department of Geography and Environment, University of Aberdeen	October 2015
Scottish Universities Environmental Research Centre	October 2015

ACADEMIC ADVISING

Postdoctoral researchers

Dr. Hongcheng Guo, Purdue University, EAPS	2023–present
Dr. Nicholas Meszaros, Purdue University, EAPS	2023–present

PhD students

Moshammat Mijjum, Purdue University, EAPS	2020–present
Matias Romero, UW-Madison, Geoscience (co-advised with Shaun Marcott)	2022–present
Wenbo Zhang, Purdue University, EAPS	2023–present

Dr. John Carter, SUERC (co-advised with Darren Mark) 2018–2021
Current position: Postdoctoral Scholar, Berkeley Geochronology Center

MS students

Addison Curtis, Purdue University, EAPS 2023–present
John Fink, Purdue University, EAPS 2020–2023
Current Position: PhD student, Boise State University

Undergraduate & postbaccalaureate research assistants

Taylor Bourikas, Purdue EAPS 2023–present
Kamden Maddox, Purdue EAPS 2023–present
Bethany Remian, Purdue EAPS 2023–present
Kevin Rivera, Purdue EAPS 2022–present
Cayden Woolery, Purdue EAPS 2024–present
Gabrielle Wagner, Purdue EAPS 2023
Justin Daisey, Purdue EAPS Summer 2022
Sui Xiong Tay, Purdue Materials Science Engineering 2022–2023
Devin Blair, Purdue EAPS 2021–2022
Brittany Linn, Purdue Chemistry 2021
Juliana Peckenpaugh, Purdue EAPS 2020–2021
John Herring, Purdue EAPS (URSA Scholar) 2020–2023
Simon Mason, Purdue Computer Science (Summer Stay Scholar) 2020
Isabella Zuffoletti, Purdue EAPS (URSA Scholar) 2020
Samantha Golding, Purdue EAPS 2019–2020
Abigail Robinson, SUERC (Paneth Meteorite Trust Intern) Summer 2018
Matthew Kirk, UC Berkeley EPS 2017–2018
Tristan Bench, UC Berkeley EPS 2016–2017
Maura Uebner, UC Berkeley EPS (Honors thesis) 2015–2017
Sylvia Woodmansee, UC Berkeley EPS Summer 2015
Sarah Beroff, UC Berkeley EPS (NERDS program) Summer 2013

PhD student advisory committees

Emily Apel, Purdue University, EAPS 2021–2023
Austin Blevins, Purdue University, EAPS (committee chair) 2019–present
Erin Donaghy, Purdue University, EAPS (committee chair) 2020–present
Gryphen Goss, Yale University, Earth and Planetary Sciences 2021–present
Xianmei Huang, Purdue University, EAPS 2023–present
Riley McGlasson, Purdue University, EAPS 2021–present
Carlos Montejo, University of Idaho, Geological Sciences 2023–present
Dr. Laura Chaves, Purdue University, EAPS (committee chair) 2019–2023
Dr. Alexandria Koester, Purdue University, EAPS 2019–2023
Dr. Angus Moore, Purdue University, EAPS 2020–2023
Dr. Sean Wiggins, Purdue University, EAPS 2020–2022

MS student advisory committees

Chloë Weeks, University of Idaho, Geological Sciences 2021–2022

PhD student examining committees

Joanne Elkadi, University of Lausanne, Institute of Earth Surface Dynamics 2022

TEACHING

Purdue University (as Instructor)

EAPS 100 Planet Earth	Spring 2021, Spring 2022, Spring 2023, Spring 2024
EAPS 591 Geo/cosmochemistry	Fall 2020
EAPS 591 Geologic Dating Methods	Fall 2019, Fall 2021

UC Berkeley (as Graduate Student Reader or Graduate Student Instructor)

EPS 124/224 Isotope Geochemistry	Spring 2017
EPS 116 Structural Geology and Tectonics	Spring 2016
EPS 124/224 Isotope Geochemistry	Spring 2015
EPS 117 Geomorphology	Fall 2014
EPS 131 General Geochemistry	Spring 2013

DEPARTMENT & UNIVERSITY SERVICE

University Service

Search Committee, Frederick L. Hovde Dean of the College of Science	2023
Fellowship Review Committee, Purdue Graduate School	2023–2024
Faculty Mentor, Emerging Leaders Science Scholars Program, Purdue University College of Science	2023–present
Research Mentor, Research Excellence, Access and Learning (REAL) Scholars Program, Purdue University Office of Diversity, Inclusion & Belonging	2024
Career Mentor, Focus Forward Fellowship, Military Family Research Institute	2023
Interviewee, Purdue Women’s Network Cocktails and Conversation series	2023
Snack and Chat faculty participant, Purdue College of Science Student Council	2021
Judge, Purdue Undergraduate Research Conference	2020
Panelist, “Ask a Scholar: Goldwater Scholars’ Advice for Current Applicants,” National and International Scholarships Office	2020, 2021

Department Service

Organizer, EAPS Geology & Geophysics ‘Gaggle’ talk series	2020–present
Ad hoc search committee in aqueous geochemistry	2022
Executive Committee, Purdue EAPS	2021–present
Safety Committee, Purdue EAPS	2020–present
Graduate Committee, Purdue EAPS	2019–2021
Outreach Committee, Purdue EAPS	2019–2021
Organizer, EAPS recruitment booth, Meteoritical Society meeting, Glasgow	2022
Award Presenter, EAPS Awards Banquet	2022
Featured presenter, EAPS on the Rocks alumni event	2021
Rapporteur, EAPS Strategic Planning Initiative, “From the Bottom Up: Interconnections between earth’s interior and surface”	2022
EAPS Alumni Receptions, Geological Society of America Annual Meeting (Phoenix, AZ) and American Geophysical Union Fall Meeting (San Francisco, CA)	

Service in Former Departments

Coordinator, SUERC seminar series	2018–2019
Member, SUERC self-assessment team, Athena-SWAN Charter application	2018
Co-coordinator, Center for Isotope Geochemistry seminar series, UC Berkeley	2017
Graduate Student Representative, Earth and Planetary Science, UC Berkeley	2015
Co-coordinator, EPS graduate student brown bag seminar, UC Berkeley	2013–2014

PROFESSIONAL SERVICE

Peer-reviewed Journals

Associate Editor, <i>Geochronology (GChron)</i>	2019–present
Associate Editor, <i>The Journal of Geology</i>	2023–present
Guest Editor, <i>Elements</i> magazine, Noble Gas Thermochronology thematic issue	2019–2020
Journal Referee: <i>American Journal of Science; Applied Geochemistry; Boreas; Chemical Geology; Chemical Physics; Earth and Planetary Science Letters; Earth Surface Dynamics; Geochemica Perspectiva Letters; Geochemistry, Geophysics, Geosystems; Geochimica et Cosmochimica Acta; Geochronology; Geology; Geophysical Research Letters; Journal of Geology; Journal of the Geological Society; Journal of Geophysical Research: Earth Surface; Meteoritics & Planetary Science; Nature; Nature Geoscience; Palaeogeography, Palaeoclimatology, Palaeoecology; Quaternary Geochronology; Science Advances; Tectonics</i>	

Funding Agencies

Proposal Review Panelist: <i>American Association for the Advancement of Science Research Competitiveness Program; National Aeronautics and Space Administration; National Science Foundation; Advancing Geochronology Science, Spaces, and Systems (AGeS³)</i>	
Ad Hoc Proposal Referee: <i>American Chemical Society Petroleum Research Fund; National Aeronautics and Space Administration; National Geographic; National Science Foundation; UK Science and Technology Facilities Council</i>	

Conferences and Workshops

Vice Chair, Geochronology Gordon Research Conference	2023–2025
Scientific Committee, 18 th International Conference on Thermochronology (Thermo2023)	2022–2023
Organizing Committee, 17 th International Conference on Thermochronology (Thermo2021)	2019–2021
Discussion Moderator, National Academies of Sciences, Engineering, and Medicine Workshop, <i>Identifying New Community-Driven Science Themes for NSF's Support of Paleoclimate Research</i>	2021
Discussion Leader, <i>Evolution of the Lithosphere</i> , Gordon Research Conference on Geochronology	2020–2023
EarthRates All Hands Meeting invitee and participant	2021
Invitee and participant, Strategic Planning Summit, American Association for the Advancement of Science	2021
Session Convener, “ <i>Novel advances in understanding the behavior of noble gases in geologic materials</i> ” 34 th Annual V.M. Goldschmidt Conference	2024
Session Convener, “ <i>Developments and Challenges in (U-Th-Sm)/He Thermochronology</i> ” Thermo2023 Conference	2023
Session Convener, “ <i>Investigating Earth surface processes using cosmogenic nuclides, non-traditional isotope systems, and other novel proxies</i> ” 32 nd Annual V.M. Goldschmidt Conference	2022
Session Convener, “ <i>Charles and Nancy Naeser Early Career Session</i> ” Thermo2021 Conference	2021
Session Convener, “ <i>Additional Noble Gas and Solid State Thermochronometers</i> ” Thermo2021 Conference	2021
Session Convener, “ <i>Advances and applications in Quaternary geochronology</i> ” 100 th Annual American Geophysical Union Fall Meeting	2019
Session Convener, “ <i>Innovations and Advances in Thermochronology</i> ” 27 th Annual V.M. Goldschmidt Conference	2017
Session Convener, “ <i>Novel Geochemical Approaches for Quantifying Rates of Surface Processes</i> ” 26 th Annual V.M. Goldschmidt Conference	2016

Society Leadership & Volunteering

Proposal Review Committee Member, Diversity in Geochronology (DiG), Advancing Geochronology Science, Spaces, and Systems (AGeS ³) Program	2023
Member, Mineralogical Society of America Award Nomination Committee	2023–2026
Member-at-Large: Early Career Professional, Penrose Conferences & Thompson Field Forum Committee, Geological Society of America	2022–2025
Volunteer Mentor, Geochronology Gordon Research Conference	2023
Drop-in Mentor, Geological Society of America Annual Meeting, Portland, USA	2021
Outstanding Student Paper Award Coordinator & Student Travel Grant Reviewer, VGP Section, American Geophysical Union	2017–2018

DIVERSITY, EQUITY, AND INCLUSION INVOLVEMENT

Research Mentor, Research Excellence, Access and Learning (REAL) Scholars Program, Purdue University Office of Diversity, Inclusion & Belonging	2024
Faculty Mentor, Emerging Leaders Science Scholars Program, Purdue University College of Science	2023–present
Unlearning Racism in Geosciences (URGE), Purdue pod faculty member	2021
Member, ADVANCE Resource and Coordination (ARC) Network STEM Equity Brain Trust	2020–present
NASA Workshop Preventing Harassment in Science: Building a Community of Practice Toward Meaningful Change	2020
Hollaback! Bystander Intervention Training to stop anti-Asian/American and xenophobic harassment	2020
Purdue FIDIA Be a Better Ally: What We Say at Purdue and Why it Matters Workshop	2020
Purdue LGBTQ Center Safe Zone training	2019
Purdue ADVANCE/OVPEC Faculty Search Committee training	2019
Maximizing Student Potential Conference, Purdue Division of Diversity and Inclusion	2019

OUTREACH AND VOLUNTEERING

Classroom visits on Antarctica, Indianapolis Public Schools	2023
SciLine Expert Source, American Association for the Advancement of Science	2020–present
<i>Science-A-Thon</i> , Earth Science Women's Network	2018–2021
Speaker, Indiana Astronomical Society 2020 program series	2020
Guest, Purdue College of Science <i>Superheroes of Science</i> podcast	2019
Volunteer, Skype a Scientist	2019–2021
Pen pal, Letters to a Pre-Scientist	2018–2021
Mentor, Society of Women in the Physical Sciences, UC Berkeley	2013–2015
EPS graduate student outreach, Bay Area Scientists in Schools	2013–2016
Research Mentor, UC Berkeley NERDS program	2013
Alumni Admissions Representative, Barnard College	2014–present

PROFESSIONAL MEMBERSHIPS

American Association for the Advancement of Science (2020–present); American Chemical Society (2021–present); American Geophysical Union (2009–present); European Association of Geochemistry (2018–present); European Geosciences Union (2016–present); Geochemical Society (2012–present); Geological Society of America (2009–present); Mineralogical Society of America (2020–present); Meteoritical Society (2017–present); National Association of Geoscience Teachers (2020–present).