Marissa M. Tremblay

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EDUCATION

University of California, Berkeley (UC Berkeley) 2012–2017
Ph.D., Earth and Planetary Science (EPS)
Advisor: David L. Shuster

Barnard College of Columbia University 2008–2012
B.A. Environmental Science, *summa cum laude*

PROFESSIONAL APPOINTMENTS

Assistant Professor, Purdue University 2019–present
Department of Earth, Atmospheric, and Planetary Sciences (EAPS)

Honorary Assistant Professor, University of Wisconsin-Madison 2022–2023
Department of Geoscience

Postdoctoral Researcher & Newton International Fellow of the Royal Society 2017–2019
Scottish Universities Environmental Research Centre (SUERC)
Mentor: Darren Mark

University of California President's Postdoctoral Fellow 2017
University of California, Davis
Mentor: Sujoy Mukhopadhyay

HONORS AND AWARDS

Undergraduate Mentoring Award, Purdue College of Science 2025
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 *(declined)* 2018
The Royal Society Newton International Fellowship 2017
University of California President's Postdoctoral Fellowship 2017
Lamont-Doherty Earth Observatory Postdoctoral Fellowship (*declined*) 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; ^{P} = postdoc)

Peer-reviewed

Colleps, C.L., van der Beek, P., Amalberti, J., Sobel, E., **Tremblay, M.M.**, and Bernard, M., Evaluating the resolving power of apatite $^{4}He/^{3}He$ thermochronology: Insights from the Fish Canyon Tuff. *Geology*. DOI: 10.1130/G53000.1

Blevins, A.M., Minton, D.A., Huang, Y.H., Du, J., **Tremblay, M.M.**, and Fassett, C.I., 2025, Constraining the source craters of Apollo impact melts. *Journal of Geophysical Research: Planets*, v. 130(8), e2025JE009137. DOI: 10.1029/2025JE009137.

Tremblay, M.M., Fayon, A.K., Guo, H.^{P}, Zeitler, P.K., and Idleman, B.D., 2025, Deformation modulates helium diffusion in apatite. *Geochemical Perspective Letters,* v. 35, p. 49-54. DOI: 10.7185/geochemlet.2523

Mijjum, M.^{G}, and **Tremblay, M.M.**, 2025, Helium diffusion kinetics in enstatite, kamacite, and albite, with implications for the cosmic ray exposure ages of enstatite (E) chondrites. *ACS Earth and Space Chemistry*, v. 9(7), p. 1881-1892. DOI: 10.1021/acsearthspacechem.5c00112

Guo, H.^{P}, **Tremblay, M.M.,** Zeitler, P.K., Idleman, B.D., and Fayon, A.K. 2025, Systematics of helium diffusion sinks in apatite demonstrated by $^{4}He/^{3}He$ degassing experiments and modeling. *Geochimica et Cosmochimica Acta*, v. 400, p. 115-128. DOI: 10.1016/j.gca.2025.05.036

Blevins, A.M., Minton, D.A., Huang, Y.H., Du, J., **Tremblay, M.M.**, and Fassett, C.I., 2025, Apollo Impact Melts Record a Rapidly Declining Impact Rate in the Late Imbrian. *Journal of Geophysical Research: Planets*, v. 130, e2024JE008722. DOI: 10.1029/2024JE008722

Mijjum, M.^{G}, Bristol, K.E., Bono, R.K., Sprain, C.J., Lifton, N., and **Tremblay, M.M.**, 2025, A model framework for scaling pre-Quaternary cosmogenic nuclide production rates. *Geochemistry, Geophysics, Geosystems*, v. 26, e2024GC012020. DOI: 10.1029/2024GC012020

Mijjum, M.^{G}, Andrews, B., McCoy, T. Corrigan, C., Caffee, M.W., and **Tremblay, M. M.**, 2025, Using micro-computed tomography (μCT) to determine subsample-specific cosmogenic noble gas production rates of enstatite (E) chondrites. *Meteoritics and Planetary Science*, p. 1-22. DOI: 10.1111/maps.143091

Tremblay, M.M., Mark, D.F., Barfod, D.N., Cohen, B.E., Ickert, R.B., Lee, M.R., Tomkinson, T., and Smith, C.L., 2024, Dating of recent aqueous activity on Mars. *Geochemical Perspective Letters*, v. 32, p. 58-62. DOI: 10.7185/geochemlet.2443

Singer, B.S., Moreno-Yaeger, P., Townsend, M., Huber, C., Cuzzone, J., Edwards, B.R., Romero, M.^{G}, Orellana-Salazar, Y., Marcott, S., Breunig, R., Ferrier, K., Scholz, K., Coonin, A.N., Alloway, B.V., **Tremblay, M.M.**, Stevens, S., Fustos-Toribio, I., Moreno, P.I., Vera, F., and Amigo, A., 2024, New perspectives on ice forcing in continental arc magma plumbing systems. *Journal of Volcanology and Geothermal Research.* v. 455, 108187. DOI: 10.1016/j/jvolgeores.2024.108187

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*. v. 372, p. 196-213. DOI: 10.1016/j.gca.2024.03.004

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 $^{4}He/^{3}He$ thermochronology. *Geochemistry, Geophysics, Geosystems*, v. 25(2), e2023GC011334. DOI: 10.1029/2023GC011334

Guralnik, B., **Tremblay, M.M.**, Phillips, M., Sellwood, E.L., Gribenski, N., Presl, R., Haberkorn, A., Sohbati, 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

Gribenski, N., **Tremblay, M.M.**, Valla, P.G., Guralnik, B., Balco, G., and Shuster, D.L., 2022, Cosmogenic ^{3}He paleothermometry on post-LGM glacial bedrock within the central European Alps. *Geochronology*, v. 4, p. 641-663. DOI: 10.5194/gchron-4-641-2022.

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

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

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

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

Carter, J.N.**G**, 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

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

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

Carter, J.N.**G**, **Tremblay, M.M.,** and Mark, D.F., 2020, A Bayesian approach to the deconvolution of ^{40}Ar/^{39}Ar data from mineral mixtures. *Chemical Geology,* v. 554, 119784. DOI: 10.1016/j.chemgeo.2020.119784

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

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

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}He/^{22}Ne ratio. *Earth and Planetary Science Letters*, v. 498, p. 309-321. DOI: 10.1016/j.epsl.2018.06.044

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

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

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

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

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

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

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

Tremblay, M.M., Shuster, D.L., and Balco, G., 2014, Diffusion kinetics of ^{3}He 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

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

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

In press

In review or revision

Orellana-Salazar, Y. Marcott, S.A., **Tremblay, M.M.**, Romero, M.[G], Moreno-Yaeger, P., Mixon, E.M., Jones, A.G., and Barth, A.M., A ^{3}He-based glacial chronology from Villarrica volcano, Chile. In review.

Weeks, C., Stanley, J.R., and **Tremblay, M.M.**, Post-Laramide exhumation and topography in the Madison and Gallatin ranges of southwest Montana from apatite (U-Th)/He thermochronometry. In revision.

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: 10.3847/25c2cfeb.1b2670e3

CONFERENCE PROCEEDINGS, LAST 3 CALENDAR YEARS

Tremblay, M.M., Stanley, J.R., Jepson, G., Montejo, C., and Zhan, W.[G], 2025, Evidence that dislocations in apatite trap helium and cause (U-Th)/He date overdispersion. 19th International Conference on Thermochronology, Kanazawa, Japan.

Zhan, W.[G], **Tremblay, M.M.**, Curry, M.E., and McMillan, M., 2025, Reevaluating the Formation and Retreat of the Great Escarpment in Southeast Australia with 4He/3He Thermochronology. 19th International Conference on Thermochronology, Kanazawa, Japan.

Ickert, R.B., **Tremblay, M.M.**, Guenthner, W.R., and Cooperdock. E.H.G., 2025, Developing community U-Th-Sm-Ca-Zr isotopic spikes and reference solutions for the thermochronology community. 19th International Conference on Thermochronology, Kanazawa, Japan.

Colleps, C., van der Beek, P., Amalberti, J., Sobel, E.R., **Tremblay, M.M.**, and Bernard, M., 2025, Assessing apatite ^{4}He/^{3}He systematics with the Fish Canyon Tuff. 19th International Conference on Thermochronology, Kanazawa, Japan.

Orellana-Salazar, Y., Marcott, S.A., **Tremblay, M. M.**, Moreno-Yaeger, P., Romero, M.[G], and Mixon, E.E., 2025, A ^{3}He-based Holocene glacial chronology from Villarica volcano, Chile. European Geophysical Union, Vienna, Austria.

Romero, M.[G], Marcott, S.A., Cuzzone, J., **Tremblay, M.M.**, and Jones, A.G., 2025, A Data-Model Comparison of Ice Sheet Demise in Northern Patagonia During the Last Deglaciation. European Geophysical Union, Vienna, Austria.

Montejo, C., Stanley, J.R., **Tremblay, M.M.**, Weeks, C., and Zhan, W.[G], 2025, ^{4}He/^{3}He thermochronometry reveals the late Cenozoic exhumation history of the Gallatin River catchment, SW Montana. Geological Society of America Rocky Mountain Section Meeting, Provo, UT.

Curtis, A.C.[G], **Tremblay, M.M.**, Eddy, M.P., and Woolery, C.[U], 2025, The exhumation response to Siletzia collision and associated tectonic reorganization recorded in the thermal histories of Eocene plutons in the North Cascades, WA. Geological Society of America Cordilleran Section Meeting, Sacramento, CA.

Montejo, C., Stanley, J.R., **Tremblay, M.M.**, Weeks, C., and Zhan, W.[G], 2025, ^{4}He/^{3}He thermochronometry reveals the late Cenozoic exhumation history of the Gallatin River catchment, SW Montana. Geological Society of America Rocky Mountain Section Meeting, Provo, UT.

Mijjum, M.[G], and **Tremblay, M.M.**, 2025, Helium diffusion kinetics in enstatite, kamacite, and albite, with implications for the cosmic ray exposure ages of enstatite (E) chondrites. Lunar and Planetary Science Conference, The Woodlands, TX.

Blevins, A.M., Minton, D.A., Huang, Y.H., Du, J., **Tremblay, M.M.**, and Fassett, C.I., 2025, Using numerical modeling and Bayesian inference to constrain the source craters of Apollo impact melts. Lunar and Planetary Science Conference, The Woodlands, TX.

Romero, M.[G], Marcott, S.A., Cuzzone, J., **Tremblay, M.M.**, and Jones, A.G., 2025, A Data-Model Comparison of Ice Sheet Demise in Northern Patagonia During the Last Deglaciation. European Geophysical Union, Vienna, Austria.

Orellana-Salazar, Y., Marcott, S.A., **Tremblay, M. M.**, Moreno-Yaeger, P., Romero, M.[G], and Mixon, E.E., 2025, A ^{3}He-based Holocene glacial chronology from Villarica volcano, Chile. European Geophysical Union, Vienna, Austria.

Tremblay, M.M., Mark, D.F., Barfod, D.N., Cohen, B.E., Ickert, R.B., Lee, M.R., Tomkinson, T., and Smith, C.L., 2024, Dating of recent aqueous activity on Mars. American Geophysical Union Fall Meeting, Washington, D.C.

Bristol, K.E., Sprain, C.J., Mittal, T., Monteiro, A., Duraiswami, R., **Tremblay, M.M.,** and Mijjum, M.[G], 2024, Mantle Plumes and Geomagnetic Intensity Variations: Insights from the Deccan Traps. American Geophysical Union Fall Meeting, Washington, D.C.

Montejo, C. Stanley, J., **Marissa, M.M.**, Weeks, C., and Zhan, W., Unravelling the Role of the Yellowstone Hotspot in the Late Cenozoic Exhumation History of the Gallatin River Catchment, Gallatin County, Southwest Montana. American Geophysical Union Fall Meeting, Washington, D.C.

Romero, M.[G], Marcott, S.A., Cuzzone, J., **Tremblay, M.M.**, Jones, A.G.,, Hietpas, E., and Orellana Salazar, Y., 2024, A Record of Northern Patagonian Ice Sheet Thinning During the Last Deglaciation. American Geophysical Union Fall Meeting, Washington, D.C.

Tremblay, M.M., Lifton, N.A., Cherkauer, K.A., Apel, E.V.[G], Goss, G.A., and Tiwari, A., 2024, Timing of deglaciation from multiple cosmogenic nuclides in bedrock at McCullough Gulch, Southern Rocky Mountains, USA. Geological Society of America Annual Meeting, Anaheim, CA.

Guo, H.[P], **Tremblay, M.M.**, Zeitler, P.K., Idleman, B.D., and Fayon, A.K., 2024, Temperature-sensitive trapping of helium in apatite: insights from ^{4}He/^{3}He diffusion experiments. 34th Annual V.M. Goldschmidt Conference, Chicago, IL.

Guo, H.[P], Fayon, A.K., **Tremblay, M.M.**, Zeitler, P.K., and Idleman, B.D., 2024, Investigating how deformation and pressure influence the behavior of helium in apatite. 34th Annual V.M. Goldschmidt Conference, Chicago, IL.

Mijjum, M.[G], **Tremblay, M.M.**, Andrews, B.J., McCoy, T.J., Corrigan, C.M., Caffee, M.W., Balco, G., and Shollenberger, Q.R., 2024, Effects of subsample heterogeneity and diffusion kinetics on the

exposure ages of enstatite (E) chondrites. 87th Annual Meeting of The Meteoritical Society, Brussels, Belgium.

Tremblay, M.M., 2024, Opportunities and challenges for reconstructing past Earth and planetary surface temperatures with cosmogenic noble gases. 6th Workshop on Cosmogenic Nuclides (Cosmo2024), Cologne, Germany.

Mijjum, M.[G], Bristol, K.E., Bono, R.K., Sprain, C.J., Lifton, N., and **Tremblay, M.M.**, 2024, A model framework for scaling pre-Quaternary cosmogenic nuclide production rates. 6th Workshop on Cosmogenic Nuclides (Cosmo2024), Cologne, Germany.

Montejo, C, Stanley, J.R., **Tremblay, M.M.**, and Weeks, C., 2024, Examining the Late Cenozoic exhumation history of the Gallatin River catchment and its relationship to the Yellowstone hotspot, Gallatin County, southwest Montana. Geological Society of America Joint Cordilleran and Rocky Mountain Section Meeting, Spokane, WA.

Guo, H.[P], Remian, B.[U], and **Tremblay, M.M.**, 2024, Mid-Pleistocene changes in glacial erosion rates in the mid-latitude Patagonian Andes revealed by detrital thermochronology of ocean sediments. Geological Society of America Joint North Central and South Central Section Meeting, Springfield, MO.

Tremblay, M.M., Bourikas, T.[U], Bergelin, M., and Balco, G., 2024, A proxy system model framework for reconstructing past environmental conditions with cosmogenic noble gases. European Geophysical Union, Vienna, Austria.

Guo, H.[P], Zeitler, P.K., Idleman, B., and **Tremblay, M.M.**, 2024, Helium diffusion systematics in apatites: lessons from Continuous Ramped Heating analysis. European Geophysical Union, Vienna, Austria.

Bourikas, T.[U], **Tremblay, M.M.**, Lamp, J.L., Balco, G., and Granger, D.E., 2024, Relationships between temperature, elevation, and surface exposure age in the McMurdo Dry Valleys, Antarctica. European Geophysical Union, Vienna, Austria.

Blevins, A.M., Minton, D.A., Huang, Y.H., Du, J., and **Tremblay, M.M.**, 2024, Modeling the source of impact melt at the Apollo 14-17 sites. Lunar and Planetary Science Conference, The Woodlands, TX.

Mijjum, M.[G], Andrews, B.A., McCoy, T.J., Corrigan, C.M., Caffee, M.W., an **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.

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.

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.

Colleps, C. van der Beek, P., Amalberti, J., **Tremblay, M.M.**, and Bernard, M., 2023, Establishing new proton-irradiation protocols for $^{4}He/^{3}He$ thermochronology. 18th International Conference on Thermochronology, Riva del Garda, Italy.

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.

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.

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.

Blevins, A. M., Minton, D.A., Huang, Y.-H., Du, J., and **Tremblay, M.M.**, 2023, Modelling the effects of post-Imbrium carters on the Apollo sampling record. 54th Lunar and Planetary Science Conference, The Woodlands, USA.

Salazar, Y.O., Mixon, E., Moreno-Yaeger, P., Romero, M.[G], **Tremblay, M.M.**, and Marcott, S.A., 2023, A ^{3}He based Holocene glacial chronology from Villarrica volcano, Chile. 21st Congress of the International Union for Quaternary Research, Rome, Italy.

CURRENT EXTERNAL FUNDING

Purdue Resources Empowering Coordinated Investigations for Sample Exploration (PRECISE) 2025–2028
Co-PI, National Aeronautics and Space Administration, Planetary Science Enabling Facilities Program

Collaborative Research: RUI: Resolving the effects of lithospheric foundering on orogenesis: An example from the southern Puna plateau, Argentina 2024–2027
Co-PI, National Science Foundation, Tectonics Program

Collaborative research: Reevaluating the timing and driver of escarpment retreat in southeast Australia 2024–2027
PI, National Science Foundation, Geomorphology & Land Use Dynamics

Testing the role of oceanic plateau cooling history and rheology on accretion 2022–2026
Co-PI, National Science Foundation, Tectonics program

Collaborative research: Using the tempo of exhumation and relief development to investigate mantle-to-surface connections around the Yellowstone hotspot 2022–2025
Co-PI, National Science Foundation, Tectonics program

Collaborative Research: Ice Forcing in Arc Magma Plumbing Systems (IF-AMPS) 2021–2026
Co-PI, National Science Foundation, Frontier Research in Earth Sciences

Collaborative research: Using hiatus durations to quantify the tempo of Deccan volcanism 2020–2025
PI, National Science Foundation, Petrology and Geochemistry program

INVITED LECTURES

Department of Environmental Science and Geology, Wayne State University	October 2025
Department of Earth and Spatial Sciences, University of Idaho	April 2025
Department of Geological Sciences, University of Florida	February 2025
Department of Earth and Environmental Science, Lehigh University	November 2024
Dept. of Earth, Environmental, and Planetary Sciences, Brown University	October 2024
Department of Earth Sciences, Dartmouth College	October 2024
6th Workshop on Cosmogenic Nuclides (COSMO24)	May 2024
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	February 2023
Dept. of Earth and Environmental Sciences, Syracuse University	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	2023–2024
Current position: Assistant Professor, Northern Kentucky University	

PhD students

Wenbo Zhang, Purdue University, EAPS	2023–present
Matias Romero, UW-Madison, Geoscience (co-advised with Shaun Marcott)	2022–present
Moshammat Mijjum, Purdue University, EAPS	2020–2025
Current Position: Peter Buck Postdoctoral Fellow, Smithsonian Museum of Natural History	
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	2023–2025
Current Position: PhD Student, University of Maryland	
John Fink, Purdue University, EAPS	2020–2023
Current Position: PhD student, Boise State University	

Undergraduate & postbaccalaureate research assistants

Hannah Tharrington, Purdue Chemistry	2025
Zachary Rynder, Purdue EAPS	2024–2025
Cayden Woolery, Purdue EAPS (REAL Scholar)	2024

Abbigail Mackey, Purdue EAPS	2024
Ain Sofea Zulkarnain, Purdue EAPS	2024
Taylor Bourikas, Purdue EAPS	2023–2024
Kamden Maddox, Purdue EAPS	2023–2024
Bethany Remian, Purdue EAPS	2023–2024
Kevin Rivera-Monserrate, Purdue EAPS	2022–2024
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

Austin Blevins, Purdue University, EAPS (committee chair)	2019–present
Gryphen Goss, Yale University, Earth and Planetary Sciences	2021–present
Xianmei Huang, Purdue University, EAPS (committee chair)	2023–present
Carlos Montejo, University of Idaho, Geological Sciences	2023–present
Yasmeen Orellano-Salazar, University of Wisconsin-Madison, Geoscience	2024–present
Emily Apel, Purdue University, EAPS	2021–2023
Dr. Laura Chaves, Purdue University, EAPS (committee chair)	2019–2023
Dr. Erin Donaghy, Purdue University, EAPS (committee chair)	2020–2024
Dr. Alexandria Koester, Purdue University, EAPS	2019–2023
Dr. Riley McGlasson, Purdue University, EAPS	2021–2024
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, Spring 2025
EAPS 446 Geochemistry	Fall 2025
EAPS 591 Geo/cosmochemistry	Fall 2020

EAPS 504 Geologic Dating Methods — Fall 2019, Fall 2021, Fall 2024

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

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

DEPARTMENT & UNIVERSITY SERVICE

University Service

EAPS representative, College of Science Faculty Council — 2024–2025
Search Committee, Frederick L. Hovde Dean of the College of Science — 2023
Fellowship Review Committee, Purdue Graduate School — 2023–2025
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
Professional Participant, Widening the WISP Network event, Women in Science Program — 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, 2024
Panelist, "Ask a Scholar: Goldwater Scholars' Advice for Current Applicants," National and International Scholarships Office — 2020, 2021

Department Service

Safety Committee, Purdue EAPS — 2020–present
Seminar Committee, Purdue EAPS — 2024–present
Strategic Planning Committee, Purdue EAPS — 2024–present
Organizer, EAPS Geology & Geophysics 'Gaggle' talk series — 2020–2024
Executive Committee, Purdue EAPS — 2021–2024
EAPS Advisor, Advanced Materials cluster search — 2023
Award Presenter, EAPS Awards Banquet — 2022, 2023
Ad hoc search committee in aqueous geochemistry — 2022
Organizer, EAPS recruitment booth, Meteoritical Society meeting, Glasgow — 2022
Graduate Committee, Purdue EAPS — 2019–2021
Outreach Committee, Purdue EAPS — 2019–2021
Rapporteur, EAPS Strategic Planning Initiative, "From the Bottom Up: Interconnections between earth's interior and surface" — 2022
Featured presenter, EAPS on the Rocks alumni event — 2021

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, *Geochronology (GChron)* 2019–present
Associate Editor, *The Journal of Geology* 2023–present
Guest Editor, *Elements* magazine, Noble Gas Thermochronology thematic issue 2019–2020
Journal Referee: *American Journal of Science; Applied Geochemistry; Boreas; Chemical Geology; Chemical Physics; Earth and Planetary Science Letters; Earth Surface Dynamics; Geochemical Perspective Letters; Geochemistry, Geophysics, Geosystems; Geochimica et Cosmochimica Acta; Geochronology; Geological Society of America Bulletin; Geology; Geophysical Research Letters; Geosphere; Journal of Analytical Atomic Spectrometry; Journal of Geology; Journal of the Geological Society; Journal of Geophysical Research: Earth Surface; Journal of Geophysical Research: Planets; Meteoritics & Planetary Science; Nature; Nature Geoscience; Nature Communications; Palaeogeography, Palaeoclimatology, Palaeoecology; Quaternary Geochronology; Quaternary Science Reviews; Science Advances; Tectonics.*

Funding Agencies

Proposal Review Panelist: *American Association for the Advancement of Science Research Competitiveness Program; National Aeronautics and Space Administration; National Science Foundation; Advancing Geochronology Science, Spaces, and Systems (AGeS^3)*
Ad Hoc Proposal Referee: *American Chemical Society Petroleum Research Fund; European Commission; National Aeronautics and Space Administration; National Geographic; National Science Foundation; UK Science and Technology Facilities Council*

Conferences and Workshops

Chair, Gordon Research Conference on Geochronology 2025–2027
Vice Chair, Gordon Research Conference on Geochronology 2023–2025
Invitee and participant, Workshop on the future of the Cooperative Institute for Dynamic Earth Research (CIDER) 2024
Session Convener, "*What's the cosmognosis? Recent Advances in Understanding Earth and Planetary Processes with Cosmogenic Nuclides" Geological Society of America Annual Meeting* 2024
Session Convener, "*Novel advances in understanding the behavior of noble gases in geologic materials"* 34th Annual V.M. Goldschmidt Conference 2024
Scientific Committee, 18th International Conference on Thermochronology (Thermo2023) 2022–2023
Discussion Leader, *Evolution of the Lithosphere,* Gordon Research Conference on Geochronology 2020–2023
Session Convener, "*Developments and Challenges in (U-Th-Sm)/He Thermochronology"* Thermo2023 Conference 2023
Session Convener, "*Investigating Earth surface processes using cosmogenic nuclides, non-traditional isotope systems, and other novel proxies*" 32nd Annual V.M. Goldschmidt Conference 2022
Organizing Committee, 17th International Conference on Thermochronology (Thermo2021) 2019–2021
Invitee and participant, Strategic Planning Summit, American Association for the Advancement of Science 2021
Discussion Moderator, National Academies of Sciences, Engineering, and Medicine Workshop, *Identifying New Community-Driven Science Themes for NSF's Support of Paleoclimate Research* 2021

EarthRates All Hands Meeting invitee and participant 2021
Session Convener, "*Charles and Nancy Naeser Early Career Session*" Thermo2021 Conference 2021
Session Convener, "*Additional Noble Gas and Solid State Thermochronometers"* Thermo2021 Conference 2021
Session Convener, *"Advances and applications in Quaternary geochronology"* 100th Annual American Geophysical Union Fall Meeting 2019
Session Convener, *"Innovations and Advances and in Thermochronology"* 27th Annual V.M. Goldschmidt Conference 2017
Session Convener, *"Novel Geochemical Approaches for Quantifying Rates of Surface Processes"* 26th Annual V.M. Goldschmidt Conference 2016

Society Leadership & Volunteering

Member, International Standing Committee on Thermochronology 2023–2031
Member, Mineralogical Society of America Award Nomination Committee 2023–2024
Member-at-Large: Early Career Professional, Penrose Conferences & Thompson Field Forum Committee, Geological Society of America 2022–2025
Volunteer Mentor, Geochronology Division, Geological Society of America Annual Meeting, Anaheim, CA 2024
Volunteer Mentor, Geochronology Gordon Research Conference 2023
Drop-in Mentor, Geological Society of America Annual Meeting, Portland, OR 2021
Outstanding Student Paper Award Coordinator & Student Travel Grant Reviewer, VGP Section, American Geophysical Union 2017–2018

OUTREACH AND VOLUNTEERING

Classroom visits on Antarctica, Indianapolis Public Schools 2023
SciLine Expert Source, American Association for the Advancement of Science 2020–present
Science-A-Thon, Earth Science Women's Network 2018–2021
Speaker, Indiana Astronomical Society 2020 program series 2020
Guest, Purdue College of Science *Superheroes of Science* podcast 2019, 2023
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 2014–2020

PROFESSIONAL MEMBERSHIPS

American Association for the Advancement of Science (2020–present); American Geophysical Union (2009–present); European Association of Geochemistry (2018–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).