Sean I. Peters

Curriculum Vitae
Last Updated March 13th, 2026

Visiting Assistant Professor
Earth and Climate Sciences Department
Middlebury College
seanp@middlebury.edu

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ORCID: 0000-0002-9003-8867
Bluesky: @siprocks
Link to Google Scholar

EDUCATION

08.2020 **Ph.D. – Geological Sciences,** Arizona State University, USA.
Dissertation title: Investigating lava flow emplacement: implications for volcanic hazards and planetary evolution
Advisor: Dr. Philip R. Christensen

08.2015 **M.S. – Geological Sciences,** Arizona State University, USA.
Thesis title: Investigating Late Amazonian Volcanotectonic Activity on Olympus Mons, Mars using Flank Vents and Arcuate Graben
Advisor: Dr. Philip R. Christensen

05.2013 **B.S. – Psychology,** Mississippi State University, USA.
Minor: Geosciences
Magna cum laude

RESEARCH THEMES

I am interested in: 1) the formation, evolution, and composition of the lithosphere of earth and other planets; and 2) the interactions between a planet's interior, surface, atmosphere, hydrosphere, and – on Earth – biosphere.

Volcano formation, evolution, and hazards: I study volcanoes and their erupted products. My focus has been on effusive and mildly explosive eruptions which produce lava flows and proximal vent constructs.
Planetary geology: I study the origin and evolution of planetary interiors and surfaces using orbital-based data, laboratory analog experiments, and modeling.

With more collaborations, my interests will evolve to include other methodologies, geologic processes, planetary bodies, and mission involvement. Additionally, student involvement sits at the heart of my research, and I want to provide ample opportunities for students to participate in impactful science.

ACADEMIC EMPLOYMENT

07.2024 – *present* **Visiting Assistant Professor**, Middlebury College

01.2023 – 06.2024 **Postdoctoral Fellow of Geology**, Middlebury College
Faculty Instructor

08.2021 – 2022 **Postdoctoral Fellow of Geology**, University of Idaho
Supervisor: Dr. Erika L. Rader

01 – 08.2021 **Assistant Language Teacher (ALT)**, Himeji Board of Education via Phoenix Sister Cities Teach Abroad Program
Supervisors: Takayuki Kamata and Shigeo Furuta

08.2020 – 01.2021 **Senior Research Specialist**, Arizona State University
Supervisor: Dr. Philip R. Christensen

PUBLICATIONS

PEER REVIEWED ARTICLES, CHAPTERS, AND THESES

Flynn, I.T.W, and **S.I. Peters** (2025), The Usefulness of Notebook LM's Audio Overview for Planetary Scientists, *Perspectives of Earth and Space Scientists*, *vol. 6, Issue 1*, http://dx.doi.org/10.1029/2025CN000282.

Russo, F.P., I.T.W. Flynn, **S.I. Peters**, and M.S. Ramsey (2025), The Effects of Measured Slope on Martian Lava Flow Modeling. *Icarus, 434*, https://doi.org/10.1016/j.icarus.2025.116544.

Peters, S.I., A.B. Clarke, and E.L. Rader (2024), The impacts of lulls and peaks in effusion rate on lava flow propagation, *Journal of Volcanology and Geothermal Research, 451,* https://doi.org/10.1016/j.jvolgeores.2024.108099.

Rader, E.L., **S. Peters**, L. Vanderkluysen, A.B. Clarke, and H. Sheth (2024), Morphological transitions between resurfacing and distal breakout lava flows in flood basalts: insights from analog experiments, *Bulletin of Volcanology, Volume 86, Article 8*, https://doi.org/10.1007/s00445-023-01693-6.

Peters, S.I., A.B. Clarke, and E.L. Rader (2022), The effects of unsteady effusion rates on lava flow morphology and emplacement: results from laboratory analogue experiments, *Journal of Volcanology and Geothermal Research, 432*, https://doi.org/10.1016/j.volgeores.2022.107674.

Peters, S.I., P.R. Christensen, and A.B. Clarke (2021), Lava flow eruption conditions in the Tharsis Volcanic Province on Mars, *Journal of Geophysical Research – Planets, 126, Issue 7,* https://doi.org/10.1029/2020JE006791.

Peters, S.I. (2020), Investigating lava flow emplacement: implications for volcanic hazards and planetary evolution, *Arizona State University*, PhD dissertation.

Peters, S.I. and P.R. Christensen (2017), Flank Vents and Graben as Indicators of Late Amazonian Volcanotectonic Activity on Olympus Mons, *Journal of Geophysical Research – Planets, 112*, *Issue 3*, https://doi.org/10.1002/2016JE005108.

Peters, S.I. (2015), Investigating Late Amazonian Volcanotectonic Activity on Olympus Mons, Mars using Flank Vents and Arcuate Graben, *Arizona State University*, MS thesis.

SUBMITTED – UNDER REVIEW

Richardson, J.A., **S.I. Peters**, A. M. Ostwald, P.L. Whelley, J.R. Voigt, and E.L. Rader (under review), Volcanism on Mars, *The Encyclopedia of Volcanoes: Third Edition*.

Peters, S.I., M. Gor, S. W. R. Tsang, and I.T.W. Flynn (in revision), A review of thermomechanical erosion in lava emplacement within the inner solar system. To *Geomechanics and Geophysics for Geo-Energy and Geo-Resources special issue*.

Cooper, E.G.K., I.T.W. Flynn, **S.I. Peters**, E.W. Benson, S.B. Murphy, and E. Sterling (submitted), Volcanism at Piton de la Fournaise as an Analog for Chloris Mons, Venus. To *Journal of Geophysical Research Planets.*

IN PREPARATION

Peters, S.I., A.B. Clarke, and E.L. Rader (antic. 2026 submission), The role of slope on lava flows erupted under variable effusion rates. To *Journal of Volcanology and Geothermal Research.*

SCIENCE ARTICLES

Peters, S.I. (2019) Volcanoes on Other Planets, *Ask an Earth and Space Scientist* (ASU) https://dev-aaess-drup-7.ws.asu.edu/explore/alien-lava.

CREATIVE WRITING

Peters, S., A Museum of Personal Mystery, *Authors of Tomorrow,* 2008.

Peters, S., WE, *Anthology of Poetry by Young Americans*, vol. LXXXVII, 2002 Edition.

FUNDING

PENDING – SUBMITTED/UNDER REVIEW

Quantifying the thermal evolution and mass distribution of lava flows in 4D
Collaborator
2025 – 2028

Initial Degrading Processes of Volcanic Fissure Vents on Mars and Iceland
Co-Investigator
2026 - 2029

AWARDED

Duration	Title	Funder	Role/Personnel	Amount	Status
Spring 2026	UCRF	Middlebury URO	Faculty Advisor	$912	In Progress
2025-2026	Faculty Professional Development Fund (FPDF)	Middlebury College	Recipient	$2400	In Progress
EPSC-DPS Meeting	DPS Travel Grant	American Astronomical Society	Recipient	$1000	Complete
Summer 2025	Summer Research Assistant (SRA)	Middlebury College Undergraduate Research Office (URO)	Faculty Advisor	$6160	Complete
Spring 2025	Undergraduate Collaborative Research Fund (UCRF)	Middlebury URO	Faculty Advisor	$1460	Complete
2024-2025	FPDF	Middlebury College	Recipient	~$3,952	Complete
2024-2027	Evolving volcanic eruption styles as recorded in Valles Marineris	NASA MDAP	Co-Investigator	~$159,000 (subaward) ~$1,000,000 total	In Progress
Summer 2024	SRA	Middlebury URO	Faculty Advisor	$5700	Complete
Summer 2024	SRA	Middlebury URO	Faculty Advisor	$4864	Complete
Spring 2024	Undergraduate Collaborative Research Fund (UCRF)	Middlebury URO	Faculty Advisor	$1000	Complete
2023-2024	FPDF	Middlebury College	Recipient	$3993	Complete
2022-2023	FPDF	Middlebury College	Recipient	$2997	Complete

TEACHING

2023 – *present* **Faculty Instructor**, Middlebury College
Natural Hazards (ECSC 111)
Physical Volcanology (ECSC 375)

Readings & Research (ECSC 500)
Geology of Rocky Planets (ECSC 1005)
Collaborative Capstone Research Seminar (ECSC 705)
First-Year Seminar: Space for Society – one small step or a giant leap?
Data in Earth Science (ECSC 140)
Petrology (ECSC 300) – F 2026

10–11.2022 **Guest Instructor**, University of Idaho
Introduction to Volcanology (Dr. Erika L. Rader)
Exploring the Solar System

2021 **Assistant Language Teacher (ALT)**, Himeji Board of Education, Himeji, Hyogo, Japan
- *Himeji Shiritsu Hanada Junior High*
- *Himeji Shiritsu Masui Junior High*
- *Himeji Shiritsu Masui Elementary School*
- *Himeji Shiritsu Mizukami Elementary School*
- *Himeji Shiritsu Tohori Elementary School*
- *Himeji Shiritsu Hanada Elementary School*

2019 **Prison Teaching Intern,** ASU
Teaching Assistant (Dr. Cornelia Wells)
Introduction to Geology / Astronomy

2013 – 2015 **Graduate Teaching Assistant,** ASU
Introduction to Physical Geology Lab, (J. Johnson), *Spring 2014/2015*
Fundamentals of Planetary Geology, (Dr. M. S. Robinson), *Fall 2014*
Physical Geology, (Dr. D. DeVacchio & T. Perkins), *Fall 2013/2014*
Historical Geology, (Dr. D. Burt), *Fall 2013*

2011 – 2012 **Undergraduate Teaching Assistant**, MSU
Introductory Psychology Statistics (lab section)
Dr. C. Williams, *Fall 2011*
Dr. M. Giesen, *Spring 2012*
Dr. J. Keeley, *Fall 2012*

2011 **Guest Lecturer**, Mississippi State University
Social Psychology (online), Dr. E. Colleen Sinclair

RESEARCH

2023 – present **PRESSURE (Planetary Research, Earth Science, and Space Undergraduate Experience) | Department of Earth and Climate Sciences | Middlebury College**
Faculty Supervisor

2021 – 2022 **Crystallinity effects on lava flow morphology | University of Idaho Department of Earth and Spatial Sciences and Geological Sciences**
Supervisor: Dr. Erika L. Rader

2016 – 2020 **Effects of unsteady effusion rates on lava flow morphology and emplacement | ASU Experimental Volcanology Laboratory**
Project supervisor: Dr. Amanda B. Clarke
Graduate Research Assistant

2014 – 2020 **Lava flow dimensions and eruption conditions on Mars | Mars Space Flight Facility**
Advisor: Dr. Philip R. Christensen
Graduate Assistant

2012 **Undergraduate Research Fellow, Human-Environment Regional Observatory (HERO)**, Clark University
Advisors: Drs. Deborah Martin, John Rogan, and Verna DeLauer

- Policy Making Assessment Group – Investigated the socio-economic and ecological consequences of the Asian long-horned beetle infestation of central Massachusetts on the urban forest of Worcester and surrounding towns. Focus: place making, decision making, archival research, interviews, transcription

2010 – 2011 **Undergraduate Research Assistant, Advanced Social Psychology Lab**, Mississippi State University
Principal Investigator: Dr. H. Colleen Sinclair

- Investigated the effect of familial and peer influences on relationship decision making and the role of conformity on attitude change toward social policy

STUDENT RESEARCH ASSISTANTS AND ADVISEES

Undergraduate research assistants in PRESSURE – Middlebury College. In order of most recent.

Anne Thompson
Springer Moore
Peter Warner
Calder Lange
Nico McGee
Kijani Derenoncourt – thesis advisor (F 2025 / S 2026)
Riley Nebolsine

Aris Xanthoudakis
Noor Bhatti
Will McDonald– thesis advisor (S 2024)
Phi Nguyen
Asa Stone
Henry Ericson
Cal Hobson
Remi Beauharnois
Piper Harring – summer 2024

Served as committee member on senior theses – Middlebury College

2024 – 2025	Piper Harring
2023 – 2024	Eliza Todd Erin Hansbrough Lizzy Vanderkloot
Spring 2023	Abby Santis Max Hanscom

MENTORING

Summer 2023	**Research Mentor (Hybrid)**, University of Texas Austin *Strengthening Traineeships and Research Opportunities for Next Generation (STRONG) Geoscientists*
2022 – 2023	**Mentor (Virtual)** *Geosciences Education & Mentorship Support (GEMS) Mentor Match Program*
2019 – 2020	**Graduate Mentor**, ASU *SESE Graduate Mentoring Program*
2015 – 2016	**Mentor (General and research),** ASU *Sundial Mentoring Program* (Dr. Anna Zaniewski)

AWARDS AND HONORS

2022	Meet A Scientist – American Geophysical Union (AGU) Volcanology, Geochemistry, and Petrology (VGP) Committee
2018 – 2019	ASU College of Liberal Arts and Sciences (CLAS) Student Leader

2012	MSU Dean's Scholar
2012	Nominated for membership in Golden Key International Honour Society
2009 – 2012	Mississippi State University President's Scholar
2008 – 2013	Shackhouls Honor College, MSU

PRESENTATIONS

2026

GSA Northeast Section Meeting, Hartford, CT
*K. L. Derenoncourt and **S.I. Peters** (2026), A Catalog of Sinuous Rilles on the Tharsis Montes Rift Aprons, Mars, *2026 Geological Society of America Section Meeting,* Abstract, accepted.

European Geophysical Union (EGU), Vienna, Austria
S.I. Peters and K. L. Derenoncourt (2026), A Catalog of Sinuous Rilles on the Tharsis Montes Rift Aprons, Mars, *2026 European Geophysical Union,* Abstract, accepted.

A. Xanthoudakis, **Peters, S.I.,** Meyer, H.M., Matiella Novak, M.A., Whelley, P.L., and Richardson, J.A. (2026) Investigation of Ancient Volcanism in Valles Marineris: Evidence for Effusive Activity and Possible Plutonic Intrusions, *2026 European Geophysical Union,* Abstract, accepted.

TALKS AND PANELS

**Denotes an invited talk*

2024 **Middlebury College** – 2024 Fall Faculty Forum
Doing geology in space: exploring volcanoes on Mars

2024 **Middlebury College** Carol Rifelj Faculty Series
The volcanic evolution of Mars: insights from comparative planetology

2023 ***Vermont State University – Johnson** Science Colloquium Series
From the lab to Mars: applying physical volcanology to extraterrestrial surfaces

2023 ***Bates College** Earth and Climate Sciences Seminar Series
From the lab to Mars: volcanic investigations using analog experiments and remote sensing

2023 ***Lamont-Doherty Earth Observatory (Columbia University)** Marine Geology and Geophysics / Seismology, Geology, and Tectonophysics (SGT) Seminar Series
From the lab to Mars: volcanic investigations using analog experiments and remote sensing

2023 **Middlebury College** – 2023 Fall Faculty Forum
Linking Lab Experiments to the Natural World

2023 ***University of Maryland** Department of Geology Colloquium
The effects of unsteady eruption rates on lava flow morphology and propagation

2022 ***AGU Fall Meeting**, Virtual
Early Career-Led DEI Initiatives: Actionable Insights Toward a More Just, Equitable, and Inclusive Scientific Environment Panel

2022 ***Sweet Science Seminar, USGS,** Virtual
Lava flow eruption conditions in the Tharsis Volcanic Province on Mars

2022 ***Planetary and Astrobiology Seminar**, Georgia Tech, Virtual
Lava flow eruption conditions in the Tharsis Volcanic Province on Mars

2022 ***Goddard Space Flight Center**, Virtual
Lava flow eruption conditions in the Tharsis Volcanic Province on Mars

2022 ***Carnegie Institute of Science Planetary Reading Group**, Virtual
Lava flow eruption conditions in the Tharsis Volcanic Province on Mars

2020 ***University of Texas Institute of Geophysics Brown Bag Seminar**, Virtual
The emplacement of lava flows: implications for hazards and planetary evolution.

CONFERENCE ABSTRACTS

Talks

**Denotes an invited talk*

2025 **GSA Connects**, San Antonio, TX
*Matiella Novak, M.A., Whelley, P.L., Richardson, J.A., Meyer, H.M., and **Peters, S.I.** (2025), Searching for Mars' Ancient Tephra: Alteration mineral sequences as a window into pre-Amazonian volcanism, *2025 Geological Society of America Connects,* Abstract.

Peters, S.I., Flynn, I.T.W., Bhatti, N., Goddard, Z.E., Mahmoud, D., and Rodriguez, A.X. (2025), A Catalog of Volcanic Vents in the Elysium Volcanic Province, Mars, *2025 Geological Society of America Connects,* Abstract.

2025 **EPSC-DPS**, Helsinki, Finland
Peters, S.I., W.T. McDonald, and K. Derenoncourt (2025), Assessing the Origin and Evolution of Effusive Volcanic Channels on Mars, *Europlanet Science Congress – Division of Planetary Sciences Joint Meeting 2025*.

2025 **IAVCEI**, Geneva, Switzerland
Peters, S.I., A.B. Clarke, and E.L. Rader (2025), The effects of lull and peaks in effusion rate on lava flows propagated on slopes: insights from analog experiments, *The International Association of Volcanology and Chemistry of the Earth's Interior Scientific Assembly 2025*, Abstract.

2024 ***AGU24 Fall Meeting**, Washington, DC
Peters, S.I., (2024) Engaging Students in Space Science at Predominantly Undergraduate Institutions, Abstract #ED34B-01.

2023 **Geological Society of America (GSA) Connects 2023,** Pittsburgh, PA
Peters, S., Clarke, A.B., and E.L. Rader (2023) The impact of lulls and peaks in eruption rate on lava flow propagation, Abstract #392740.

***Peters, S.,** (2023) Balancing research and teaching at a liberal arts college, Abstract #392687.

Moore, S., Atkins, C. A., **Peters, S.,** Velazquez Santana, L., Ulrich, R., and E., Wilson (2023) What we learned from intentional mentoring of STEM majors from minority serving institutions, Abstract #396120.

Posters

†*Denotes student presenter*
°*presenting on behalf of student(s)*

2025 **GSA Connects**, San Antonio, TX
†Cooper, E.G.K., Flynn, I.T.W., **Peters, S.I.**, Benson, E.W., Murphy, S.B., and Sterling, E.D. (2025), Piton de la Fournaise as a Terrestrial Analog to Chloris Mons, Venus, *2025 Geological Society of America Connects,* Abstract #8077.

†Nebolsine, R.N., and **S.I. Peters** (2025), Constraining eruption parameters for terrestrial and Martian lava flows, *2025 Geological Society of America Connects,* Abstract #9283.

2025 **IAVCEI**, Geneva, Switzerland

†K. L. Derenoncourt and **S. I. Peters**, (2025), Sinuous volcanic channels on Tharsis Montes (Mars) Rift Aprons, *International Association of Volcanology and Chemistry of the Earth's Interior Scientific Congress 2025*, abstract.

2025 **LPSC,** Houston, TX
†McDonald, W.T. and **S.I. Peters** (2025), Lava channel formation on Martian central volcanoes, *Lunar and Planetary Science Conference 2025*, abstract, 2247.

2024 **AGU24 Fall Meeting**, Washington, DC
†P. Harring, †R. Beauharnois, **S. I. Peters**, and I.T.W. Flynn (2024), Observed Differences in Martian Channelized Lava Flow Rheologies and Emplacement, *American Geophysical Union 2024*.

2024 **Goldschmidt,** Chicago, IL
†McDonald, W.T., †K. Derenoncourt, and °**S. I. Peters** (2024), Lengths and Distribution of Lava Channels on Martian Central Volcanoes, *Goldschmidt 2024*, Abstract, 22973. https://doi.org/10.46427/gold2024.22973

2024 **Earth and Climate Sciences Dept. Seminar,** Middlebury College
†McDonald, W.T., †K. Derenoncourt, and **S.I. Peters** (2024), Lengths and Distribution of Lava Channels on Martian Central Volcanoes

2024 **COV12**, Antigua, Guatemala
Peters, S.I., A.B. Clarke, and E.L. Rader (2024) The impacts of lulls and peaks in eruption rate on lava flow propagation: insights from analog experiments, *Cities on Volcanoes 12*, Abstract, 17.

2023 **LPSC**, The Woodlands, TX
Peters, S.I. (2023) A survey of volcanically emplaced rilles, *2023 Lunar and Planetary Science Conference*, Abstract, 1713.

2023 **IAVCEI,** Rotorua, Aotearoa (NZ)
Peters, S.I., A.B. Clarke, and E.L. Rader (2023) The effects of unsteady vent conditions on lava flow propagation, morphology, and surface texture, *The International Association of Volcanology and Chemistry of the Earth's Interior Scientific Assembly 2023*, Abstract, 589.

2022 **LPSC**, Virtual
Peters, S.I., and E. L. Rader (2022) Potential contributions of VNIR imaging and laboratory analogue experiments to inform modeling efforts, *2022 Lunar Planetary Science Conference*, Abstract, 1150.

2020 **LPSC,** The Woodlands, TX

Peters, S.I., and P.R. Christensen (2020) Constraining Martian lava flow eruption rates in the Tharsis Volcanic Province, *2020 Lunar Planetary Science Conference,* Abstract, accepted. Conference cancelled due to Covid-19.

2019 **AGU Fall Meeting**, San Francisco, CA
Peters, S.I., and A.B. Clarke (2019), The role of unsteady effusion rates on lava flow emplacement: results from laboratory analogue experiments, *2019 American Geophysical Union,* Abstract, V23F-0270.

2019 **GSA Fall Meeting**, Phoenix, AZ
Peters, S.I., and A.B. Clarke (2019), The effects of unsteady effusion rates on lava flow morphology and emplacement: results from laboratory analogue wax experiments, *2019 Geological Society of America fall meeting,* Abstract, 337812.

2018 **LPSC,** The Woodlands, TX
Peters, S.I., P.R. Christensen, and A.B. Clarke (2018) Constraining lava flow eruption rates on Mars using laboratory analogue wax experiments, *2018 Lunar Planetary Science Conference,* Abstract, 3002.

2017 **AGU Fall Meeting,** New Orleans, LA
Peters, S.I. and A.B. Clarke (2017), Controls on lava flow morphology and propagation: Using laboratory analogue experiments, *2017 American Geophysical Union*, Abstract, V43F-0586.

2017 **LPSC,** The Woodlands, TX
Schaefer, E.I., C.W. Hamilton, C.D. Neish, M.M. Sori, A.M. Bramson, S.P. Beard, **S.I. Peters**, T.A. Miller, and E.L. Rader (2017), Seeing Pahoehoe from Orbit (Without Squinting), *2017 Lunar Planetary Science Conference,* Abstract, 2343.

2016 **LPSC,** The Woodlands, TX
Peters, S.I. and P.R. Christensen (2016), Investigating the Volcanotectonic Evolution of Olympus Mons using Flank Vents and Arcuate Graben, *2016 Lunar Planetary Science Conference,* Abstract, 209-1634.

2015 **AGU Fall Meeting,** San Francisco, CA
Peters, S.I. and P.R. Christensen (2015), Investigating Late Amazonian Volcanotectonic Activity on Olympus Mons, Mars using Flank Vents and Arcuate Graben, *2015 American Geophysical Union*, Abstract, P33C-2139.

2015 **LPSC,** The Woodlands, TX
Peters, S.I. and P.R. Christensen (2015), The Characterization and Implications of Flank Vents on Olympus Mons, *2015 Lunar Planetary Science Conference,* Abstract, 141-2008.

2014 **AGU Fall Meeting,** San Francisco, CA
Peters, S.I. and P.R. Christensen (2014), The Implications of Flank Vents on Olympus Mons, *2014 American Geophysical Union*, Abstract, P41B-3898.

PLANETARY MISSION EXPERIENCE

2020 Lucy Thermal Emission Spectrometer (LTES) thermal vacuum chamber (TVAC) Test Operator
Instrument operator and analyst for the EMIRS instrument during TVAC testing

2019 Emirates Mars Infrared Spectrometer (EMIRS) TVAC Test Operator
Instrument operator and analyst for the EMIRS instrument during TVAC testing

2015 – 2016 OSIRIS-Rex Thermal Emission Spectrometer TVAC Test Operator
Instrument operator and analyst for OTES instrument during TVAC testing

LEADERSHIP & PROFESSIONAL SERVICE

2026 NASA Exploration Science Forum Science Organizing Committee
Member

2025 – present AGU Volcanology, Geochemistry, and Petrology (VGP) Communications Committee
Member

2025 GSA Connects
Petrology, Volcanology, and Mantle Plumes across the Solar System (T163)
Session Convener

2024 GeoFutures 2024: Planetary Geoscience
Program Committee, GSA representative

2020 SESE Justice, Equity, Diversity, and Inclusion Task Force
Member

2018 – 2019 SESE Graduate Council
President

2018 49th Lunar Planetary Science Conference

Session chair

2016 – 2019 Volcano Listserv, collaborative venture among Arizona State University (ASU), Portland State University (PSU), the Global Volcanism Program (GVP) of the Smithsonian Institution's National Museum of Natural History, and the International Association for Volcanology and Chemistry of the Earth's Interior (IAVCEI).
Editor & Moderator

2011 – 2012 The International Honor Society in Psychology, MSU
Treasurer

2010 – 2012 Mississippi State University Peer Tutoring and Academic Mentoring Program
Tutor

2010 – 2011 Health & Wellness Service Program, Mississippi State University
Volunteer

2009 – 2010 MSU Astronomy Club
Secretary

Reviewer

*Reviewer assignments listed in alphabetical order, not chronologically, and may constitute multiple assignments.

American Academy of Science Planetary Science Journal
Communications Earth & Environment
Icarus
Journal of Geophysical Research: Planets
Journal of Volcanology and Geothermal Research
NASA
NSF
Oxford University Press
Volcanica

PROFESSIONAL DEVELOPMENT, WORKSHOPS, AND FIELD EXPERIENCE

2025 **Bridging the gap between mathematical modelling of lava flows and field observations |** Edinburgh Futures Institute
Organizers: Hannah Dietterich, Edward Hinton, Herbert Huppert, and Christopher Kilburn

2024 Middlebury Language School

Japanese Immersion Program (2 of 8 weeks completed)
Withdrew

2023 **Planetary Data Training Workshop**, Arizona State University
Led by David Williams and David Nelson

2023 **National Association of Geoscience Teachers (NAGT) Virtual Mentoring Workshop**
Led by Anne Eggers and Stefany Sit

2022 Krafla lava flow, Myvatn, Iceland
Led by Dr. Erika L. Rader

2016 El Pinacate y Gran Desierto de Altar Biosphere Reserve, Mexico
Led by Dr. Amanda B. Clarke

2016 SP Crater Lava Flow, San Francisco Volcanic Field, Flagstaff, AZ
Independent field excursion

2016 **NASA Field Investigations to Enable Solar System Science and Exploration (FINESSE) team**, NASA Solar System Exploration Research Virtual Institute (SSERVI)
Organized by Dr. Scott Hughes; on behalf of Ethan Schaefer

2016 **NASA Volcanology Workshop**, NASA/Univ. of Hawai'I Manoa
Led by Drs. S. K. Rowland, S. Fagents, & P. Mouginis-Mark

OUTREACH

2025 Weybridge Elementary, Weybridge, VT
Guest speaker

2024 International Observe the Moon Night, Montpelier, VT
Ask a NASA Scientist

2024 Solar Eclipse Event, Rumney Memorial, Middlesex, VT
Drs. Patrick and Nikki Whelley

2017/2018/2022 Phoenix Fan Fusion – Panelist or Judge
"Everything I Learned I Learned from Anime"
"Vulcan's Wrath"

"Black Panther and the Culture of the Unconquered"
"This Just in from Deep Space"
"Political Science for Teens"

Panelist for "How Misinformation Spreads"
AZ Science Fair Judge

2019 — Graduate Professional Student Association (GPSA), ASU
Awards Reviewer

2019 — Intel International Science and Engineering Fair (ISEF)
Grand Awards Judge

2018 — Intel STEM Fair, South Mountain Community College
"Walk on Mars" exhibit

2018 — Earth and Space Exploration Day, Arizona State University
"Walk on Mars" exhibit

2018 — Arizona State University Open Door Event
"Walk on Mars" exhibit

2017 — Mountain Pointe High School
Guest speaker for Marilyn Raming's Earth Science course

2014 – 2017 — Mars Student Imaging Project (MSIP), Arizona State University
Guest scientist

2013 – 2014 — SESE Open House, Arizona State University
Mars Exhibit

PROFESSIONAL MEMBERSHIPS

2014 – *present* — American Geophysical Union
2024 – *present* — AAS Division of Planetary Sciences
2023 – *present* — Geological Society of America
2022 – *present* — International Association of Volcanology and Chemistry of the Earth's Interior
2012 — The National Honor Society of Phi Kappa Phi
2011 – 2012 — The International Honor Society of Psychology

RELEVANT / TECHNICAL SKILLS

Fieldwork: Lava flow margin characterization (2016 – Idaho, USA); in situ sampling of lava flows (Arizona, USA and Iceland); characterization of tephra deposits by digging pits (Mexico); in situ characterization of lava flows using LIBS (2022 – Iceland)

Laboratory: analog experimentation using polyethylene glycol wax to simulate lava flow emplacement; infrared spectrometer; scanning electron microscope

Software/Programming: **Proficient** – *Image J, JMARS, MS Office Suite, Overleaf (LaTeX), Tracker.* **Some experience** – *Davinci, ESRI ArcGIS, HTML, ISIS3, Matlab, Rstudio*

Other Languages:
Japanese, Spoken – Conversational level | Written – Hiragana & Katakana, some Kanji | Reading – Hiragana & Katakana, some Kanji