

Sean I. Peters

Curriculum Vitae
Last Updated October 2026

Visiting Assistant Professor

Earth and Climate Sciences Department

Middlebury College

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[Link to Google Scholar](#)

EDUCATION

08.2020

Ph.D. – Geological Sciences, Arizona State University, USA.

Dissertation: 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: 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 an experimental and physical volcanologist and planetary geologist 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. I utilize orbital data, analog experiments, and numerical modeling.

Volcano formation, evolution, and hazards: I study volcanoes and their erupted products. My focus has been on lava flow emplacement and mildly explosive eruptions.

Planetary geology: I study the origin and evolution of planetary interiors and surfaces through a volcanology and geomorphology lens.

With more collaborations, my interests will evolve to include other methodologies, geologic processes, planetary bodies, and mission involvement. Intentional mentorship sits at the heart of my research, and I 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

- Cooper, E.G.K., I.T.W. Flynn, **S.I. Peters**, E.W. Benson, S.B. Murphy, and E. Sterling (2026), Volcanism at Piton de la Fournaise as an Analog for Chloris Mons, Venus. *Journal of Geophysical Research Planets*, 131, Issue 5, <https://doi.org/10.1029/2026JE009756>.
- 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. 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>.

SUBMITTED – UNDER REVIEW

Richardson, J.A., **S.I. Peters**, A. M. Ostwald, P.L. Whelley, J.R. Voigt, and E.L. Rader (resubmitted – 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 (resubmitted – under review), 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*.

Peters, S.I., A.B. Clarke, E.L. Rader, and A.E. Thompson (submitted), The role of slope and variable extrusion rates on wax flows: implications for lava flow emplacement. To *Journal of Volcanology and Geothermal Research*.

K. L. Derenoncourt and **S.I. Peters** (submitted), Sinuous rilles on the Tharsis Montes Rift Aprons, Mars: distribution, characteristics, and implications for large shield volcano evolution. To *Journal of Geophysical Research Planets*.

IN PREPARATION

Peters, S.I., I.T.W. Flynn, N. McGee, Z. Goddard, N. Bhatti, D. Mahmud, and A.X. Rodriguez (antic. winter 2026) A catalog of volcanic vents in the Elysium Volcanic Province, Mars.

SCIENCE ARTICLES

Peters, S.I. (2019) Volcanoes on Other Planets, *Ask an Earth and Space Scientist* (ASU) <https://askanexpert.asu.edu/earthspace/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

AWARDED

Duration	Title	Funder	Role/Personnel	Amount	Status
<i>Summer 2026</i>	Summer Research Assistant (SRA)	Middlebury College Undergraduate Research Office (URO)	Faculty Advisor	\$4800	Complete
<i>Spring 2026</i>	UCRF	Middlebury URO	Faculty Advisor	\$912	Complete
<i>2025-2026</i>	Faculty Professional Development Fund (FPDF)	Middlebury College	Recipient	\$2400	Complete
<i>EPSC-DPS Meeting</i>	DPS Travel Grant	American Astronomical Society	Recipient	\$1000	Complete
<i>Summer 2025</i>	SRA	Middlebury URO	Faculty Advisor	\$6160	Complete
<i>Spring 2025</i>	Undergraduate Collaborative Research Fund (UCRF)	Middlebury URO	Faculty Advisor	\$1460	Complete
<i>2024-2025</i>	FPDF	Middlebury College	Recipient	~\$3,952	Complete
<i>2024-2027</i>	Evolving volcanic eruption styles as recorded in Valles Marineris	NASA MDAP	Co-Investigator	~\$159,000 (subaward) ~\$1,000,000 total	In Progress
<i>Summer 2024</i>	SRA	Middlebury URO	Faculty Advisor	\$5700	Complete
<i>Summer 2024</i>	SRA	Middlebury URO	Faculty Advisor	\$4864	Complete
<i>Spring 2024</i>	Undergraduate Collaborative Research Fund (UCRF)	Middlebury URO	Faculty Advisor	\$1000	Complete
<i>2023-2024</i>	FPDF	Middlebury College	Recipient	\$3993	Complete
<i>2022-2023</i>	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? (FYS 1106)**Data in Earth Science (ECSC 140)*

Introduction to 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

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

Anne Thompson – *thesis advisor (F26)*
Springer Moore
Peter Warner
Calder Lange
Nicolai McGee
Kijani Derenoncourt – *thesis advisor (AY 25 – 26)*
Riley Nebolsine – *thesis advisor (expected S27)*
Aris Xanthoudakis
Noor Bhatti
Will McDonald – *thesis advisor (S 2024)*
Phi Nguyen
Asa Stone

Henry Ericson
Cal Hobson
Remi Beauharnois
Piper Harring – summer 2024
Yannick Waltemode

Served as committee member on senior theses – Middlebury College

2025 – 2026	Kristyn Carroll Lucinda Pollitt Lake Willett
2024 – 2025	Piper Harring
2023 – 2024	Eliza Todd Erin Hansbrough Lizzy Vanderkloot
Spring 2023	Abby Santis Max Hanscom

MENTORING | ADVISING

Fall 2025 – 2026	First Year Advisor <i>Advisor to 16 first-year students @ Middlebury</i>
Summer 2023	Research Mentor (Hybrid) , University of Texas Austin <i>Strengthening Traineeships and Research Opportunities for Next Generation (STRONG) Geoscientists</i>
2022 – 2023	Mentor (Virtual) <i>Geosciences Education & Mentorship Support (GEMS) Mentor Match Program</i>
2019 – 2020	Graduate Mentor , ASU <i>SESE Graduate Mentoring Program</i>
2015 – 2016	Mentor (General and research) , ASU <i>Sundial Mentoring Program (Dr. Anna Zaniewski)</i>

AWARDS AND HONORS

2022	Meet A Scientist – American Geophysical Union (AGU) Volcanology, Geochemistry, and Petrology (VGP) Committee
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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	Shackhous Honor College, MSU

PRESENTATIONS

COLLOQUIA, SEMINARS, AND PANELS

**Denotes an invited talk*

2026	*University of New Mexico – Earth and Planetary Science Colloquium <i>Wax on, wax off: simulating lava flow emplacement in the lab</i>
2026	Middlebury College – Preview Days <i>Exploring (extraterrestrial) volcanoes (2026)</i>
2023 – 2026	Middlebury College – Fall Faculty Forum <i>Whodunit? Lava or water? (2025)</i> <i>Doing geology in space: exploring volcanoes on Mars (2024)</i> <i>Linking Lab Experiments to the Natural World (2023)</i>
2024	Middlebury College Carol Rifelj Faculty Series <i>The volcanic evolution of Mars: insights from comparative planetology</i>
2023	*Vermont State University – Johnson Science Colloquium Series <i>From the lab to Mars: applying physical volcanology to extraterrestrial surfaces</i>
2023	*Bates College Earth and Climate Sciences Seminar Series <i>From the lab to Mars: volcanic investigations using analog experiments and remote sensing</i>
2023	*Lamont-Doherty Earth Observatory (Columbia University) Marine Geology and Geophysics / Seismology, Geology, and Tectonophysics (SGT) Seminar Series <i>From the lab to Mars: volcanic investigations using analog experiments and remote sensing</i>

- 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*

Students highlighted yellow

- 2026 **GSA Connects**, Denver, CO
Matiella Novak, A., Whelley, P.L., **Peters, S.I.** Xanthoudakis, A., Meyer, H.M., Richardson, J.A., and Buczkowski, D. (2026), Evolution of Volcanic Eruption Styles recorded in Valles Marineris, Mars: Observations of Effusive vs Explosive Deposits, *2026 Geological Society of America Connects*, accepted #15657.
- 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 #13228.
- 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*, volume 57, number 6. <https://doi.org/10.1130/abs/2025AM-7253>

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*, volume 57, number 6. <https://doi.org/10.1130/abs/2025AM-7616>

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)

2026 **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, 14066.
- †**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, 14022.
- 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*, volume 57, number 6. <https://doi.org/10.1130/abs/2025AM-8077>
- †**Nebolsine, R.N.**, and **S.I. Peters** (2025), Constraining eruption parameters for terrestrial and Martian lava flows, *2025 Geological Society of America Connects*, volume 57, number 6. <https://doi.org/10.1130/abs/2025AM-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 – present Health Professions Committee | Middlebury College

2026	NASA Exploration Science Forum Science Organizing Committee <i>Member</i>
2026	DataFest @ Middlebury <i>Mentor Judge</i>
2025	GSA Connects Petrology, Volcanology, and Mantle Plumes across the Solar System (T163) <i>Session Convener</i>
2024	GeoFutures 2024: Planetary Geoscience <i>Program Committee, GSA representative</i>
2020	SESE Justice, Equity, Diversity, and Inclusion Task Force <i>Member</i>
2018 – 2019	SESE Graduate Council <i>President</i>
2018	49 th Lunar Planetary Science Conference <i>Session chair</i>
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). <i>Editor & Moderator</i>
2011 – 2012	The International Honor Society in Psychology, MSU <i>Treasurer</i>
2010 – 2012	Mississippi State University Peer Tutoring and Academic Mentoring Program <i>Tutor</i>
2010 – 2011	Health & Wellness Service Program, Mississippi State University <i>Volunteer</i>
2009 – 2010	MSU Astronomy Club <i>Secretary</i>

Reviewer

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

American Academy of Science Planetary Science Journal
Case Studies in Construction Materials
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

Fall 2026	Teaching with AI Middlebury College
Fall 2026	Engaged Listening Project Middlebury College <i>Fellow</i>
2025	Bridging the gap between mathematical modelling of lava flows and field observations Edinburgh Futures Institute <i>Organizers: Hannah Dietterich, Edward Hinton, Herbert Huppert, and Christopher Kilburn</i>
2024	Middlebury Language School <i>Japanese Immersion Program (2 of 8 weeks completed)</i> <i>Withdrew</i>
2023	Planetary Data Training Workshop , Arizona State University <i>Led by David Williams and David Nelson</i>
2023	National Association of Geoscience Teachers (NAGT) Virtual Mentoring Workshop <i>Led by Anne Eggers and Stefany Sit</i>
2022	Krafla lava flow, Myvatn, Iceland <i>Led by Dr. Erika L. Rader</i>
2016	El Pinacate y Gran Desierto de Altar Biosphere Reserve, Mexico <i>Led by Dr. Amanda B. Clarke</i>
2016	SP Crater Lava Flow, San Francisco Volcanic Field, Flagstaff, AZ <i>Independent field excursion</i>

- 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

- 2027 Elderly Services Incorporated (ESI) College, Middlebury, VT
Instructor
- 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 <i>“Walk on Mars” exhibit</i>
2017	Mountain Pointe High School <i>Guest speaker for Marilyn Raming’s Earth Science course</i>
2014 – 2017	Mars Student Imaging Project (MSIP), Arizona State University <i>Guest scientist</i>
2013 – 2014	SESE Open House, Arizona State University <i>Mars Exhibit</i>

MEMBERSHIPS

2014 – <i>present</i>	American Geophysical Union
2024 – <i>present</i>	AAS Division of Planetary Sciences
2023 – <i>present</i>	Geological Society of America
2022 – <i>present</i>	International Association of Volcanology and Chemistry of the Earth’s Interior
2025 – <i>present</i>	The Planetary Society
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 experiments using polyethylene glycol 600 wax to simulate lava flow emplacement; infrared spectrometer; scanning electron microscope

AI /Program Languages/Software:

Proficient – *Image J, JMARS, MS Office Suite, Notebook LM, Overleaf (LaTeX), Tracker.*

Some experience – *Claude, Davinci, ESRI ArcGIS, HTML, ISIS3, Matlab, Rstudio*

Other Languages:

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