
Sean I. Peters

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CONTACT INFORMATION:

Mars Space Flight Facility
School of Earth and Space Exploration
Arizona State University
201 E. Orange Mall
Tempe, AZ 85281
speter24@asu.edu

EDUCATION:

Arizona State University

August 2015 – present

Degree: PhD Candidate in Geological Sciences (in progress)

Dissertation (working title): Lava flow emplacement and the construction of large volcanic piles and provinces

GPA: 4.0

Arizona State University

August 2013 – August 2015

Degree: M.S. Geological Sciences

Thesis: Investigating Late Amazonian Volcanotectonic Activity on Olympus Mons, Mars using Flank Vents and Arcuate Graben

GPA: 3.79

Mississippi State University

August 2008 – May 2013

Degree: B.S. Psychology; minor in Geosciences

GPA: 3.74

ORGANIZATIONS:

- American Geophysical Union, 2014 – current
 - Student member
- The National Honor Society of Phi Kappa Phi, 2012 – current
- The International Honor Society in Psychology – Psi Chi, MSU chapter
 - Treasurer 2011 – 2012
- Mississippi State University Shackhous Honors College, 2008 – 2013
- MSU Astronomy Club
 - Secretary 2009 – 2010

RECOGNITIONS & AWARDS:

- Selected for participation in NASA Volcanology Workshop in Hawaii, Summer 2016
- Graduate Education Doctoral Enrichment Fellowship, Fall 2015 – Spring 2016
- Graduated *magna cum laude* from Mississippi State University, May 2013
- Mississippi State University Dean's Scholar, Fall 2012
- Nominated for membership in Golden Key International Honour Society, 2012
- Elected to join The National Honor Society of Phi Kappa Phi, 2012
- Accepted into Human-Environment Regional Observatory fellowship, 2012
- Elected to join The International Honor Society in Psychology – Psi Chi, MSU chapter
- State of Mississippi Higher Educative Legislative Plan, 2009 – 2012
- Mississippi State University President's Scholar, 2009 – 2012
- Dr. H. Colleen Sinclair's Advanced Social Psychology Lab's Chief Confederate, October 2011
- Dr. H. Colleen Sinclair's Advanced Social Psychology Lab's Researcher of the Month, April 2011

RESEARCH:

- Mars Space Flight Facility – Arizona State University, School of Earth and Space Exploration (SESE), January 2014 – present
 - Principal Advisor: Philip R. Christensen
 - Graduate Research Assistant
 - Investigating the Late Amazonian volcanotectonic evolution of Olympus Mons, Mars using flank vents and arcuate graben (MS)
 - Morphologic, morphometric and spatial analyses of small vents and graben on Mars's largest shield volcano
 - Lava flow emplacement and the construction of large volcanic piles and edifices (PhD)
 - Quantitative composition analyses using thermal emission spectroscopy: investigative terrestrial and martian lava flows
 - Determining composition of terrestrial sites analogous to localities on Mars with similar inferred compositions
 - Comparing laboratory observations with remote sensing observations from instruments orbiting Earth and Mars with similar properties
 - Constraining the composition of previously uncharacterized lava flows on Mars based on terrestrial observations
 - OTES TVAC Test Operator, 2015 – 2016
 - Instrument operator for thermal vacuum chamber testing of OSIRIS-REx Thermal Emission Spectrometer
 - Data analyst for radiometric testing during instrument calibration
- Experimental Volcanology Laboratory – Arizona State University, SESE, January 2016 – present

- Advisor: Amanda B. Clarke
 - Composition and emplacement of lava flows and the construction of large volcanic edifices (PhD)
 - Controls on lava flow morphology using remote sensing and analog modelling
 - Effect on eruption temperature and effusion rate on the emplacement of lava flows
 - Effects of slope change and pulsations on lava flow morphology
 - Relating solidified morphology to eruption mechanics
- REU: Human-Environment Regional Observatory (HERO) – Clark University, summer 2012
 - Undergraduate Researcher – Investigating the consequences of the Asian long-horned beetle infestation of central Massachusetts, specifically the socio-economic and ecological impacts on the urban forest of Worcester, MA and surrounding towns.
 - Policy Making Assessment stream – Investigated socio-ecological variability, place making, policy and decision-making
 - Archival research
 - Interviews
 - Transcription
 - Remote sensing
- Dr. H. Colleen Sinclair’s Advanced Social Psychology Lab – Mississippi State University, 2010 – 2012
 - Undergraduate Research Assistant
 - Interpersonal Relationship Study – Investigating the effect of familial and peer influences on relationship decision making
 - Confederate
 - Political Psychology Project – Investigating the role of conformity and attitude change in a political discussion
 - Experimenter
 - Confederate
 - Transcription
 - Media Coding Project
 - Stalking Coding Project
 - Survey Development
 - Change Blindness Project – Investigated the concept of change blindness, specifically attention to race and gender
 - Experimenter
 - Bystander Effect Project – Investigated the diffusion of responsibility, particularly its manifestation in the bystander effect phenomenon
 - Experimenter
 - Online Lecture Course – Presented a chapter on discrimination for online social psychology course

Relevant skills:

Programming: HTML, Matlab, Davinci
Software: MS Office Suite, JMARS, ESRI ArcGIS
Languages: Japanese (conversational); French (novice)

PUBLICATONS:

Academic

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, 10.1002/2016JE005108.

Abstracts

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.

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.

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

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.

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.

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

Creative

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

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

PROFESSIONAL EXPERIENCE:

Service:

- Phoenix Comicon, 2017
 - Panelist on “How Misinformation Spreads”

- Judge for AZ Science Fair winners
- Volcano Listserv, 2016 – present
 - Editor & moderator for Volcano listserv, a 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).
- Sundial Mentoring Program, 2015 – 2016
 - Mentor
 - Mentored freshmen undergraduates with STEM majors in the School of Earth and Space Exploration
- Mars Student Imaging Program (MSIP), 2014 – 2017
 - Guest scientist
 - Provided feedback on Mars-related research projects by K – 12 students
- SESE Open House, 2013 – 2014
 - Mars Table
 - Assisted in public outreach on the importance of space exploration and planetary science
- Mississippi State University Peer Tutoring and Academic Mentoring Program, 2010 – 2012
 - Available for tutoring upon request
- Volunteer at Mississippi State University Longest Student Health Center for Health and Wellness Service Program, 2010 – 2011
 - Promoted campus health and welfare through presentations and events

Teaching:

- Graduate Teaching Assistant – Arizona State University
 - Introduction to Physical Geology Lab (GLG 103) Spring 2015
 - Instructor for 3 lab sections
 - Julia Johnson
 - Fundamentals of Planetary Geology (GLG 404/598) Fall 2014
 - Formulated exam questions, graded assignments, guest lecturer, and responded to emails
 - Dr. Mark S. Robinson
 - Physical Geology (GLG 101) Fall 2014
 - Graded exams, responded to emails and lectured
 - Dr. Duane DeVecchio
 - Introduction to Physical Geology Lab (GLG 103) Spring 2014
 - Online course
 - Graded assignments, posted to discussion board, and responded to emails
 - Julia Johnson
 - Physical Geology (GLG 101) Fall 2013
 - Graded assignments, responded to emails, and miscellaneous duties
 - Tracy Perkins
 - Historical Geology (GLG 102) Fall 2013
 - Graded exams, responded to emails, and miscellaneous duties

- Dr. Donald Burt
- Undergraduate Teaching Assistant – Mississippi State University
- Introductory Psychology Statistics (PSY 4990) 2011 – 2012
 - Instructor for the course lab
 - Dr. C. Williams, Fall 2011
 - Dr. Giesen, Spring 2012
 - Dr. J. Keeley, Fall 2012

REFERENCES:

Dr. Philip R. Christensen
Arizona State University
School of Earth and Space Exploration
Regents' Professor
phil.christensen@asu.edu
Mars Space Flight Facility
Moeur Building, Room 120
Tempe, AZ 85287

Dr. Amanda Clarke
Arizona State University
School of Earth and Space Exploration
Associate Professor
amanda.clarke@asu.edu
ISTB4 Room 767
781 E. Terrace Road
Tempe, AZ 85287

Dr. Verna DeLauer
Clark University
Marsh Institute
Research Assistant Professor
950 Main Street
Worcester, MA 01610
VDeLauer@clarku.edu

Julia Johnson
Arizona State University
School of Earth and Space Exploration
Lecturer
Bateman Physical Sciences H-wing Room 475

525 E. University Dr.
Tempe, AZ 85281

Dr. John Mylroie
Mississippi State University
Department of Geosciences
Professor of Geology
205 Hilbun Hall
Mississippi State, MS 39762

Dr. H. Colleen Sinclair
Mississippi State University
Department of Psychology
Associate Professor of Psychology
304 Magruder Hall, Box 6161
Mississippi State, MS 39762
colleen.sinclair@ssrc.msstate.edu
madscientists@psychology.msstate.edu
Office: (662) 325-5108 (Psychology)

Dr. Kelin Whipple
Arizona State University
School of Earth and Space Exploration
Professor
kxw@asu.edu
ISTB4 Room 777
781 E. Terrace Road
Tempe, AZ 85287