

SOPHIE MARTINE SILVER

University of Pennsylvania Department of Earth and Environmental Science
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EDUCATION

University of Pennsylvania

Ph.D. Earth Science

- GPA: 3.98

Philadelphia, PA
Sept 2020 – Present

Temple University

B.S. Geology

- GPA: 3.31

Philadelphia, PA
Aug 2015 – May 2019

RESEARCH EXPERIENCE

University of Pennsylvania

Primary advisor: Douglas Jerolmack

Current Research: Fracture network topology, particle shape evolution, Titan surface processes

Temple University

Primary advisor: Dr. Alexandra Krull Davatzes

A Comparison of Spherule Diameter Measurement Methods Summer 2019 – Spring 2020

- Analysis of Paraburdoo Spherule Layer (PSL) spherule diameter using micro Computed Tomography (microCT)
- Developing stereological estimates of diameter using thin section point count data
- Comparing microCT measurements to thin section point count and CAMSIZER data

PRESENTATIONS

AGU Annual Conference

Silver, S., Regos, K., Domokos, G., Jerolmack, D. (2022) Evolution & Memory of Fractured Planetary Shells: Insights from Mud Crack Analog Experiments. Presented at AGU 2022 Annual Meeting, Chicago, IL

Silver, S., Regos, K., Domokos, G & Jerolmack, D.J. (2021) *Counting cracking across the solar system: how fracture network topology informs process*. Presented at AGU 2021 Annual Meeting, New Orleans, LA

Silver, S., Souders, K., & Davatzes, A. (2019) *A Comparison of Spherule Diameter Measurement Techniques*. Presented at AGU 2019 Annual Meeting, San Francisco, CA

Penrose Progressive Failure of Brittle Rocks Conference

Silver, S., Regos, K., Domokos, G & Jerolmack, D.J. (2022) *Counting cracking across the solar system: how fracture network topology informs process*. Presented at Penrose PRF Conference June 2022, Flat Rock, NC

FIELD COURSES

Indiana University Bloomington G429 Field Course Summer 2018
Cardwell, MT; 6 Weeks

- Geologic mapping of sedimentary and metamorphic units
- Stratigraphic correlation utilizing field observation and subsurface data
- Use of Terrestrial Scanning LiDAR to analyze fault offset and sedimentation rate

Temple University Field Methods Course Summer 2017
Ambler, PA; 2 Weeks

- Soil coring and analysis, stream profile creation, Jacob's staff topography measurements

SKILLS

Field Skills

- Geologic mapping of sedimentary and metamorphic deposits
- Stratigraphic correlation
- Soil coring and analysis
- Generating topographic slope profiles
- Stereonets

Lab Skills

- Thin section preparation and analysis
- X-Ray Diffraction (XRD)
- X-Ray Fluorescence (XRF)
- Scanning Electron Microscopy (SEM)
- Laser Raman
- JMARS
- Python
- Crater counting
- Terrestrial Scanning LiDAR
- Inkscape
- Adobe Illustrator

TEACHING & SERVICE

EESC 2600 – Stratigraphy & Sedimentology, *Co-Instructor* Fall 2022

Geology 100 – Introduction to Geology, *Teaching Assistant* Fall 2021

Geology 125 – Earth and Life Through Time, *Teaching Assistant* Spring 2021

HONORS & AWARDS

Penrose Conference Assist Fund Spring 2022

Ahuja Family Graduate Fellowship Spring 2022

EES Benjamin Franklin Fellowship Fall 2020 – Present

Indiana University Bloomington Anadarko Scholarship Summer 2018

PROFESSIONAL AFFILIATIONS & HONOR SOCIETIES

Penn SAS Graduate Student Government, <i>VP of Finance</i>	Fall 2022 – Present
Unlearning Racism in Geosciences (URGE), <i>PennEES Pod Secretary</i>	Fall 2021 – Spring 2022
Graduate Women in Science (GWIS), <i>Member</i>	Fall 2020 – Present
American Geophysical Union, <i>Member</i>	Fall 2019 – Present
Sigma Gamma Epsilon Theta Rho Chapter, <i>President</i>	Summer 2018 – Spring 2019