Matthew Salinas

E-mail: mattpsa@umich.edu

EDUCATION

Honors B.S. Earth and Environmental Science, University of Michigan *2021-2025 (Expected)*

Relevant Coursework

Earthquake Hazard and Fault Mechanics (W25), Tectonics and Earth Surface Processes (W25), Linear Algebra (W25), Geology Field Course, Seismology, Differential Equations, Sedimentology, Geophysics, Magmatism Metamorphism and Plate Tectonics, Structural Geology, Physics I and II, Calculus III

RESEARCH EXPERIENCE

Student Researcher *2023-Present*

Geophysics Group, University of Michigan

- Extensive use of Python to analyze spatiotemporal changes in geothermal induced seismicity sequences
- Investigation into the physical properties of induced injections that cause associated earthquake swarms

Summer Intern *2023-2023*

Research Opportunities in Rock Deformation (RORD), University of California Santa Cruz

- Operated a Rapid Heating Apparatus to measure clay deformation at fault scale times and temperatures

Assistant Researcher *2022-2023*

Isotopologue Paleosciences Laboratory (IPL), University of Michigan

- Maintained and utilized high precision mass spectrometers to measure carbonate isotopologues
- Utilized a vacuum glass line to process soil samples, including samples collected during field research

Student Researcher *2021-2022*

Undergraduate Research Opportunities Program, University of Michigan

- GIS-based assessment of Southeast Michigan for the potential of carbonate precipitation

TEACHING EXPERIENCE

Undergraduate Instructional Aid *2024-Present*

Introduction to Earth Sciences, University of Michigan

- Creating and modifying quiz and exam questions to modernize course content for students

PUBLICATIONS

AGU Poster Presentations

Analysis of Spatiotemporal B-Value Evolution Across Different EGS Induced Seismicity Sequences *2024*
Nature's Kiln: How clay gouge evolves from frictional heating during earthquakes *2023*

Manuscripts Accepted

Kelson, J.R., Huth, T.E., Andrews, K., Bartleson, M.N., Cerling, T.E., Lixin, J., **Salinas, M.P.**, Levin, N.E., Pedogenic carbonate as a transient soil component in a humid, temperate forest (Michigan, USA), *submitted to Quaternary Research.*

COMPUTER SKILLS

- Data Visualization (Advanced)
- C++ (Amateur)
- Java (Amateur)
- Python (Intermediate)
- Matlab (Beginner)
- R (Beginner)
- Excel (Advanced)
- QGIS (Beginner)

HONORS AND AWARDS

- NAGT/USGS Cooperative Summer Fellowship Program (CSFP) Nominee
- MGU Outstanding Undergraduate Poster
- SURE Support for Honors Thesis