

Matthew Salinas

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EDUCATION

- 2025- Ph.D. Geological Sciences, University of Southern California
- 2025 B.S. Earth and Environmental Sciences, Highest Honors, University of Michigan

RESEARCH EXPERIENCE

- 2023-2025 Student Researcher
Geophysics Group, University of Michigan
Advisor: Yihe Huang
- Extensive use of Python to visualize and analyze spatiotemporal changes in geothermal induced seismicity sequences
 - Evaluation of seismic hazard with the b-value to explore potential real-time monitoring strategies
 - Compiling research into an **Honors Thesis in W25**
- 2023 Summer Intern
Research Opportunities in Rock Deformation (RORD)
Advisor: Heather Savage
- Helped run a newly installed rapid heating apparatus
 - Spent 10 days participating in field work in Eastern California
 - Presented results of research at AGU23
- 2022-2023 Assistant Researcher
Isotopologue Paleosciences Laboratory (IPL), University of Michigan
Advisor: Naomi Levin
- Maintained high precision mass spectrometers to measure carbonate isotopologues
 - Utilized a vacuum glass line to process soil samples, including samples collected during field research
- 2021-2022 Student Researcher
Undergraduate Research Opportunities Program, University of Michigan
Advisor: Julia Kelson
- GIS-based assessment of Southeast Michigan for the potential occurrence of pedogenic carbonate precipitation

PUBLICATIONS

Poster Presentations

- 2025 *Linking Spatiotemporal b-Value Evolution to Physical Mechanisms Influencing EGS Induced Seismicity*

- 2024 SSA Annual Meeting
Analysis of Spatiotemporal B-Value Evolution Across Different EGS Induced Seismicity Sequences
 AGU Fall Meeting
- 2024 *Spatiotemporal b-value Evolution in Geothermal Induced Earthquake Sequences*
 Michigan Geophysical Union (MGU)
- 2023 *Nature's Kiln: How clay gouge evolves from frictional heating during earthquakes*
 AGU Fall Meeting
- 2022 *Mapping Soil Inorganic Carbon in Southern Michigan*
 UROP Spring Symposium

Manuscripts

- 2024 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), *Quaternary Research*.

TEACHING EXPERIENCE

- 2024 Undergraduate Instructional Aid
 Introduction to Earth Science, University of Michigan
 Lecturer: Jefferson Yarce
- Working with the Center for Research on Learning & Teaching (CRLT) to develop equity focused teaching practices
 - Creating and modifying quiz and exam questions to better test student knowledge and halt use of GPT technology

DEPARTMENTAL SERVICE

- 2024- Undergraduate Representative
 Geo-club, University of Michigan
- Acting as liaison between the undergraduate body and Geo-club executive board within the department of Earth and Environmental Sciences
 - Planning and leading yearly Undergraduate camping trip
- 2022 Camp Counsellor
 Earth Camp, University of Michigan
- Assisted with outreach to highschoolers in the Detroit area, working with two different cohorts of Earth Camp

PROFESSIONAL TRAINING

- 2024 Foundational Course Initiative Run by CRLT, University of Michigan
- Course Design Institute Cohort 7
- 2023 Unlearning Racism in Geosciences (URGE), University of Michigan
- Part of Year 3 pod in Geoscience DEI initiative

