Gerson Gonzalez-Marin

gg34242@my.utexas.edu | https://orcid.org/0009-0003-0068-983X | JSG Directory - UT Austin
Department of Earth and Planetary Sciences, Jackson School of Geosciences

Education

M.S. in Geological Sciences, University of Austin – Texas — Expected Graduation 2027
Advisor:
Jackson School of Geosciences

B.A. in Environmental Earth Sciences, University of California, Berkeley — Conferred May 2023
General Distinction in Scholarship
College of Letters and Science

B.S. in Conservation and Resource Studies, University of California, Berkeley — Conferred May 2023
Distinction: College of Natural Resources
Rausser College of Natural Resources

Fellowships, Grants, Awards, and Honors

External

- Hispanic Scholarship Fund – $500 (Fall 2021)
- AT&T Hacemos Scholarship Award – $2,500 (Fall 2021)
- AT&T Hacemos Scholarship Award – $2,500 (Fall 2020)
- Lockheed STEM Scholarship Award – $40,000 (Fall 2020)
- Wells Fargo Student Impact Scholarship Award – $1,000 (Summer 2020)
- Southern California Edison STEM Scholarship Award – $2,500 (Summer 2019)

Jackson School

- Jackson School of Geosciences DeFord Field Scholarship – $4600 (Spring 2026)
- Jackson School of Geosciences DeFord Field Scholarship – $615 (Fall 2025)
- Jackson School of Geosciences Bianchi Boone Fellowship – $36,180 (Fall 2025 - Spring 2026)
- Jackson School of Geosciences “Great Start” Scholarship Award – $1,000 (Fall 2025)

Publications

Published

- Schmidt, W. C., Mousavi, A., Li, J., Yang, R., **Gonzalez Marin, G.,** Schreiber, H. L., Hammann, R. E. S., Obernuefemann, C. L. P., Bergeron, K., Klim, A., Wong, D., Du, K., Hultgren, S. J., Chen, Q., Celestian, A., Wong, G. C. L., & Scotland, K. B. (2026). Intercalated bacterial biofilms are intrinsic internal components of calcium-based kidney stones. Proceedings of the National Academy of Sciences, 123(5), e2517066123. https://doi.org/10.1073/pnas.2517066123

- Mousavi, A., Schmidt, W. C., Li, J., Yang, R., **Gonzalez-Marin, G.**, Wong, G. C. L., Celestian, A., Scotland, K. B. (2025). MP21-12 Biofilm-forming bacteria found within calcium-based kidney stones. *Journal of Urology*, 2 1 3 (5S), e709. https://doi.org/10.1097/01.JU.0001109956.38240.97.12

- Kahanamoku-Meyer, S. S., Samuels-Fair, M., Kamel, S. M., Stewart, D., Wu, B., Kahn, L. X., Titcomb, M., Mei, Y. A., Bridge, R. C., Li, Y. S., Sinco, C., Moreno, J., Epino, J. T., **Gonzalez-Marin, G.**, Latt, C., Fergus, H., Duijnstee, I. A. P., & Finnegan, S. (2024). An 800-year record of benthic foraminifer images and 2D morphometrics from the Santa Barbara Basin. *Scientific Data*, 1 1 (1), 144. https://doi.org/10.1038/s41597-024-02934-9

Under Review

- Mousavi, A., **Gonzalez-Marin, G.**, Rowland, D., Gelb., Celestian, A. J., Scotland, K. B. Advanced Imaging Reveals Calcium Oxalate Kidney Stone Substructure. Manuscript in preparation, submitted May 2026, *Science Advances*.

Research Experience

Research Interests: Marine Sciences, Geobiology, Paleoclimate Sciences, Marine Biogeochemistry

Marine Geochemistry Research/ Field Experience

Dr. Rowan Martindale's Lab and Research Group

Graduate Researcher *August 2025 – May 2026*

- In collaboration with the Environmental Chemistry and Analytical laboratory at the University of the West Indies, I studied how submarine groundwater discharge influences coral health and the reef water chemistry at Discovery Bay, Jamaica. This project assesses whether groundwater outlets can serve as a potential "microrefugia" for coral reefs undergoing physiological stress due to global warming and ocean acidification. Funded by the GEOPAths Go!: Jamaica Research Program, I monitored the water properties of the fringing reef systems at Discovery Bay, filtered water samples, and conducted benthic surveys.

Geobiology Research/ Laboratory Experience

Research and Collections, Natural History Museum of Los Angeles County

Mineral Sciences Researcher *June 2024 – July 2025*

- Supported by the NSF Research and Mentorship Program, and in collaboration with the Department of Urology at the UCLA Medical Health Center, the interdisciplinary project investigated the role of bacteria in the formation of calcium oxalate kidney stones and geological structures in the human urinary tract system. I analyzed the crystalline structure, microbial composition, and elemental makeup of surgically-removed kidney stones through the use of laser and plasma spectroscopy, as well as various techniques in X-ray crystallography. In addition, I conducted a series of *in-vitro* and crystal synthesis experiments on halophillic bacteria to replicate possible growth mechanisms of urolithiasis in the lab.

Paleoclimate Research/ Laboratory Experience

Dr. David Wahl's Quaternary Paleoecology Lab

Research Apprentice *August 2022 – December 2022*

- Aided in reconstructing a stratigraphical paleorecord of high-magnitude flooding and modeling future projections of atmospheric rivers events in northern California through sample prep and particle-size analysis of lake sediment cores from Leonard Lake, California.

Paleoecology Research/ Laboratory Experience

Dr. Seth Finnegan's Marine Paleobiology Lab

Research Apprentice *January 2022 – June 2022*

- Surveyed and recorded changes in the morphology of benthic foraminifera fossils to assess the ecological impacts of anthropogenic climate change in the Santa Barbara Basin during the Holocene Epoch.

Presentations

Conference Presentations

Natural History Museum of Los Angeles County Research Symposium, Los Angeles, CA *June 2025*

- Oral Presentation: Human Stromatolites: Investigating the Role of Bacteria on Calcium Oxalate Kidney Stone Formation
    - Collaborators: **Gonzalez-Marin, G.,** Mousavi, A., Schmidt, W. C., Li, J., Yang, R., Wong, G. C. L., Celestian, A., Scotland, K. B.

SoCal Geobiology and Geomorphology Symposium, Los Angeles, CA *April 2025*

- Oral Presentation: Analyzing the geobiological role of biofilm-forming bacteria in human nephrolithiasis
    - Collaborators: **Gonzalez-Marin, G.,** Mousavi, A., Schmidt, W. C., Li, J., Yang, R., Wong, G. C. L., Celestian, A., Scotland, K. B.

Southern California Academy of Sciences Annual Meeting, Irvine, CA *April 2025*

- Poster Presentation: Analyzing the Mineralology and Geobiological Role of Biofilm-Forming Bacteria in Calcium Oxalate Kidney Stone Formation
    - Collaborators: **Gonzalez-Marin, G.,** Mousavi, A., Schmidt, W. C., Li, J., Yang, R., Wong, G. C. L., Celestian, A., Scotland, K. B.

Work and Service Activities

Work Experience

Undergraduate Reader/ Grader *January 2023 – June 2023*

ENE,RES 102: Quantitative Aspects of Global Environmental Problems
Rausser College of Natural Resources
University of California, Berkeley

Student Advisor *August 2022 – December 2023*

Educational Opportunity Program
University of California, Berkeley

Service Activities

Community Engagement and Outreach Intern *January 2022 – June 2022*

University of California, Berkeley

- Managed and organized the UC Berkeley Basic Needs Center program webpage and social media accounts
- Participated in food pantry events

Transfer Student Mentor *August 2021 – December 2021*
University of California, Berkeley

- Managed and organized the UC Berkeley Basic Needs Center program webpage and social media accounts
- Provided mentoring, resources, and application workshops to four community college students at the Starting Point Mentorship Program

Professional Membership

- Geological Society of America
- Natural History Museum of Los Angeles County

Skills

Laboratory and Analytical Skills

- Confocal Microscopy, Laser-Induced Breakdown Spectroscopy, Polarized Light Microscopy, Scanning Electron Microscopy, RAMAN Spectroscopy, Stereomicroscopy, X-ray Diffraction, X-ray Fluorescence
- Proficiency in general laboratory procedures including sample preparation/processing, sterilization, pipetting, cell staining, centrifugation, thin-section petrography, stone polishing, dilution, media preparation, water filtration

Software Skills and Language

- Proficiency in ArcGIS Pro, G Suite, Jupyter Notebook, MagicPlot Pro, Microsoft Office
- Python
    - Libraries & Frameworks: NumPy

Certifications

- Adult and Pediatric First Aid/CPR/AED
- PADI Open Water Scuba Diving