

2025 Southern California Geobiology Symposium

University of Southern California

April 5, 2025

8 – 9 am Registration, check-in, and breakfast
Mudd Hall Courtyard

9 – 10:30 am **Session 1: Geobiology and Geomorphology Interdisciplinary Session** HAR 101

9 – 9:10 am Opening Remarks

9:10 – 9:25 am **Chan-Mao Chen**, *University of Southern California*
Climate Gradients and Sediment Sourcing in a Rapidly Eroding Himalayan Catchment

9:25 – 9:40 am **Christopher K. Jones**, *University of California, Riverside*
The interplay of evolving volcano-tectonic and biogeochemical processes in hydrothermal iron deposits of the Cristiana-Santorini-Kolumbo Volcanic Field

9:40 – 10:25 am Keynote speaker: **Regan Dunn**, *La Brea Tar Pits*
Evolving Landscapes: The Power of Vegetation in the Rise and Fall of Terrestrial Mammals

10:30 – 10:50 am Coffee Break

10:40 – 10:45 am Optional 5 min talk from Echo Microscopes (MH 203)

10:50 – 11:50 am **Session 2: Science on a Salinity Gradient** HAR 101

10:50 – 11:05 am **Emily Klonicki-Ference**, *University of California, Los Angeles*
The Potential Role of Marine Biogenic Methane Cycling on the Early Earth Biosphere: Insights from Green Lake in Fayetteville, New York

11:05 – 11:20 am **James Mullahoo**, *California Institute of Technology*
Selective Localization of Methanogens on Eelgrass Roots and Their Impact on Methane Fluxes During Seasonal Changes and Environmental Stress

11:20 – 11:35 am **Natalya Evans**, *University of California, Santa Barbara*
Preservation of Terrestrial Biomass in Anoxic Seawater vs Hypersaline Brine: Implications for Marine CO₂ Removal

11:35 – 11:50 am **Gerson Gonzalez-Marin**, *Natural History Museum of LA County*
Analyzing the Geobiological Role of Biofilm-Forming Bacteria in Halite Crystals and its Implications for Kidney Stone Formation in Human Nephrolithiasis

12 – 1:15 pm Lunch

1:15 – 2:15 pm **Session 3: Marine Ecosystems Science Scaling in Size**
HAR 101

- 1:15 – 1:30 pm **Shannon K. Brophy**, *University of Southern California*
Spatio-Temporal Evolution of a Long-Lived Hydrocarbon Seep Field and Associated Macroinvertebrate Community Shifts During Oceanic Anoxic Event 2 in the Western Interior Seaway
- 1:30 – 1:45 pm **Daniel R. Utter**, *California Institute of Technology*
Coupling Spatial Morphology with Genomic Variability in a Methanotrophic Archaeal/Bacterial Symbiosis via Laser Microdissection and Sequencing
- 1:45 – 2 pm **Molly Crotteau**, *University of California, Santa Barbara*
Fluff Matters: High Resolution Insights into the Organic Sulfur Transformations in Santa Barbara Basin, CA
- 2 – 2:15 pm Buffer time/questions

2:15 – 2:35 pm Coffee Break

2:25 – 2:30 pm Optional 5 min talk from Thermofisher LCMS Division (MH 203)

2:35 – 3:40 pm **Session 4: Science at Various Timescales**
HAR 101

- 2:35 – 2:50 pm **Magdalene MacLean**, *University of Southern California*
Time-dependent Raman Microscopy Observations of Cable Bacteria in Enrichment Cultures
- 2:50 – 3:05 pm **Neo Darel Raquinio**, *California State University, Fullerton*
Surveying Potential DDT Degradation by a Mn Oxidizing Bacterium
- 3:05 – 3:20 pm **Phillip C. Boan**, *University of California, Riverside*
Follow the Leader: Commensalism Among Ediacara Motile Taxa from Nilpena Ediacara National Park, South Australia
- 3:20 – 3:35 pm **Fumnanya Y. Abuah**, *University of Southern California*
Microbial Degradation of Thawed Organic Matter in Permafrost
- 3:35 – 3:40 pm Concluding Remarks

3:40 – 4 pm Coffee Break

4 – 6 pm **Poster Session**

6 – 8 pm Dinner