

ANTHONY FELDMAN

755 East Flamingo Rd. Las Vegas, NV 89119 | 757-871-7376 | anthony.feldman@dri.edu

EDUCATION

University of Nevada, Las Vegas Doctor of Philosophy in Geosciences Dissertation: <i>Climatic Influences on Incipient Alteration of Mars-Like Ultramafic Soils</i>	2018-2023
New Mexico Institute of Mining and Technology Master of Science in Geology Thesis: <i>Soil Chronosequence Study of Long Valley, New Mexico: Insights into the Development of Soils on Pleistocene and Holocene Moraine Catenas</i>	2016-2018
University of Miami Bachelor of Science in Geological Sciences	2011-2015

PROFESSIONAL APPOINTMENTS

Desert Research Institute – Post-Doctoral Researcher Post-doctoral researcher focusing soil science and geomorphology. Contract work with the Department of Defense focused on drone mapping of landscapes, soil variability effects on propagation of electromagnetic waves, and dust generation and visibility issues in varying landscapes. Personal research projects encompass the formation of X-ray amorphous material in terrestrial soils and paleoclimatology, dust influx, and soil development in mountain ecosystems and glaciated landscapes.	09/2023 – Present
Desert Research Institute – Staff Scientist in Soil Science Staff scientist in soil science for the Integrated Terrain and Analysis Program focusing on predicting soil physical properties based on geomorphology, climate, and lithology.	12/2022 – 08/2023
SIG-GIS – Fire Fuel Sampling Contractor Sampled living and dead fire fuel sources in the Spring Mountains to examine moisture content of potential fire fuel sources during the southern Nevada fire season	04/2022 – 11/2022
AH Environmental Consultants – Project Scientist Field mapping and GIS analysis of stormwater infrastructure and watersheds for municipalities and military bases.	06/2015 – 05/2016
University of Miami – Research Assistant Compiled a grain size database for mud cores from Bahamian hypersaline lakes.	03/2015 – 08/2015
University of Maine – Research Intern Mapped orientation of Grenville Tectonic Front Zone melt features in Ontario and analyzed dust and salt inclusions within ice grains using SEM	05/2014 – 08/2014

CONFERENCE PROCEEDINGS

- Feldman, A. D., Hausrath, E. M., Rampe, E. B., Sharp, T., Tschauner, O., Newville, M., & Lanzirrotti, A. (2023). Cold Conditions Promote Mg and Si Incorporation in Fe/Si-Rich and Al-Poor X-Ray Amorphous Material in Mars-Relevant Field Environments. *LPI Contributions*, 2806, 2456.
- Feldman A. D., Hausrath E. M., Sharp T. G., Rampe E. B., Lanzirrotti A., Newville M., Warm and Wet Conditions Promote Nanocrystallinity in Fe-rich X-ray Amorphous Material While Cool and Wet Conditions Promote Formation of Purely Amorphous Si/Fe-Rich Material in Terrestrial Ultramafic Soils Chemically Relevant to Mars. (2022, October). Abstract 83-7. *Geological Society of America Abstracts with Programs*. Vol 54. No 5.
- Feldman, A. D., Hausrath, E. M., Rampe, E.B., Peretyazhko, T., Burnley, P., Tschauner, O., Morris, R.V., Tu, V., Lanzirrotti, T., Newville, M. (2022, March). Olivine Dissolution and Formation of Secondary Phases in Ultramafic Soils. 53rd Lunar and Planetary Science Conference (No. 2278).
- Feldman A. D., Hausrath E. M., Rampe E. B., Tschauner O., Peretyazhko T. S. (2022, March). Ultramafic Soils: Analogues for Incipient Weathering on Mars. (Abstract 42-9). *Geological Society of America Abstracts with Programs*. Vol 54. No 2.
- Feldman, A. D., Hausrath, E. M., Tschauner, O., & Rampe, E. B. (2021, March). Persistence of Fe-Containing X-Ray Amorphous Material Favored in Cooler Climates. 52nd Lunar and Planetary Science Conference (No. 2548, p. 1782).
- Feldman A.D., Hausrath E.M., Tschauner O., Rampe E.B., Peretyahzko T. (2020). Phyllosilicate Transitions in Ferromagnesian Soils: Short-Range Order Materials and Smectites Dominate Secondary Phases. 51st Lunar and Planetary Science Conference. Abstract #1693

Feldman A.D., Hausrath E.M., Tschauner O., Rampe E.B., Peretyahzko T. (2019). Examining Fe-Rich Soils Formed Under Varying Climates and Ages: Smectites Dominate Secondary Phases in Older Soils in Temperate Climates. 2019 ASA-CSSA-SSSA International Annual Meeting in San Antonio, Texas. Abstract #304-1.

Feldman A. D., Hausrath E. M., Tschauner O., Burnley P., Lanzirrotti, A., Rampe E. B., Peretyahzko T., Calvin W., Azua B., Adcock, C. T. (2019). X-ray Amorphous and Poorly Crystalline Fe-Containing Phases in Terrestrial Field Environments and Implications for Materials Detected on Mars. 50th Lunar and Planetary Science Conference. Abstract #2111

Hausrath, E., Baumeister, J.L., Feldman, A., Ralston, S.J., Luu, N., Sanchez, A., Gainey, S. and Azua, B., (2019). January. Porosity Formation and Weathering Products in Young Serpentine Soils. In SSSA International Soils Meeting (2019). ASA-CSSA-SSSA.

Feldman A.D. (2018), Soil Chronosequence Study of Long Valley, New Mexico: Insights into the Development of Soils on Pleistocene and Holocene Moraine Catenas, New Mexico Institute of Mining and Technology. Masters Thesis

Feldman A. D. (2018). Soil Chronosequence Study of Long Valley, New Mexico: Insights into the Development of Soils on Pleistocene and Holocene Moraine Catenas. Abstract 26-3 presented at the Geological Society of America Annual Fall Meeting in Indianapolis, Indiana. 2018

Feldman A. D. (2017) Glacial Age Correlations and Pedogenesis Rates at Long Valley, Costilla Masif, Northern New Mexico. Abstract [EP53B-1769] presented at 2017 Fall Meeting, AGU, New Orleans, LA, 11-15 Dec

TEACHING EXPERIENCE

College of Southern Nevada – Introduction to Geology – Lecturer	Spring 2022
Designed syllabi, course materials, lectures, and examinations, taught full lecture section	
University of Nevada, Las Vegas – Introduction to Geology – Teaching Assistant	Fall 2020/Spring 2021
Lead laboratory sessions, graded lab assignments	
University of Nevada, Las Vegas – Mineralogy – Teaching Assistant	Spring 2020
Lead laboratory sessions, graded class and lab assignments and exams	
New Mexico Tech – Introduction to Soils – Teaching Assistant	Spring 2018
Prepared and graded laboratory and in field exercises	
New Mexico Tech – Field Methods – Teaching Assistant	Summer 2017
Assisted with guiding field mapping exercises and graded assignments	
New Mexico Tech – Introduction to Mineralogy – Teaching Assistant	Spring 2017
Prepared and oversaw laboratory sessions and graded assignments	

FELLOWSHIPS AND FUNDING AWARDS

UNLV Grad Rebel Advanced Doctoral Graduate Assistantship Completion Program	2022
UNLV Summer Doctoral Research Fellowship (\$7,000)	2022
UNLV GPSA Student Researcher Award (\$4,000)	2021
Clay Minerals Society Grant (\$3,000)	2021
Nevada Space Grant Fellowship (\$17,000)	2020
Geological Society of America (\$1,250)	2020
UNLV Graduate and Professional Student Association Awards (\$2,192)	2019-2022
Jack and Fay Ross Family Fellowship (\$78,000)	2018-2020
New Mexico Geological Society (\$2,500)	2016-2017

CONTRIBUTIONS TO THE COMMUNITY

- Reviewed articles for the journals *Environmental Earth Sciences* and *Geophysical Research Letters*
- Member of the Geological Society of America, Soil Science Society of America, Clay Minerals Society, and the Association of Environmental and Engineering Geoscientists

RESEARCH INTERESTS

Soil Weathering, X-ray Amorphous Material, Bedrock-Soil Connections, Critical Zone Processes, Water-Rock Interactions, Dust Inputs to Soil Systems, Glacial Soils, Cosmogenic Dating, Glacial Geomorphology, Paleoclimatology