

Ethan Conrad

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EDUCATION:

PhD, Geological Sciences

May 2024 (Expected)

The University of Texas at Austin, Jackson School of Geosciences

Research Focus: *Tectonics and exhumation during transpression from fault mechanics to the macroscale expression of structural and surficial processes*

Primary advisor: Claudio Faccenna

Cumulative GPA: 3.9/4.0

Bachelor of Science, Geology | Summa Cum Laude

May 2019

University of Florida

Undergraduate honors thesis: *"Geochemistry and Mineralogy of Lavas from the 8°20'N Seamount Chain"*.

Thesis advisor: Michael Perfit

Cumulative GPA: 3.7/4.0

Pertinent Course Work: Numerical Methods, Continuum Mechanics, Tectonic/Climate interactions in Foreland Basins, Thermochronology, Structural Geology, Sedimentary Geology, Tectonic Geodynamics, Intro to Geophysics, Advanced Petrology, ArcGIS (array of classes), Instrumental Methods, Calculus I, Calculus I & III (accelerated), Geomorphology, Earthquakes

EXPERIENCE:

Teaching Assistant, University of Texas at Austin

2019 – present

- Courses: Earth Materials(GEO416K); Field Methods (GEO420K), Sustaining a Planet (UGS303)

Research Assistant, University of Texas at Austin

Summer 2020 & 2021

- Designed and performed experiments on analog landscape evolution model that simulates coupled tectonic and climatic processes.
- Performed rotary shear experiments testing the deformational behavior of a variety of granular and solid materials.
- Designed new parts for the laboratory shear apparatus and implemented new monitoring devices and code.

Undergraduate Teaching Assistant, University of Florida

Spring 2019

- Co-designed a new course to introduce undergraduate students to field geology.
- Co-planned, co-organized and co-instructed semester field trip to Big Bend Texas.

Undergraduate Research Assistant, University of Florida

2017- 2019

- Analyzed and modeled petrologic and geochemical data from the East Pacific Rise and 8°20'N seamounts using olivine thermometry and thermochemical modeling.
- Prepared samples for ICP-MS and EMP analysis.
- Evaluated and catalogued thousands of samples for the Petrology Laboratory.

Undergraduate Field assistant, Pioneer Mountains, ID

Summer 2018

- Gained experience in field mapping, structural geology, and sample collection.
- Assisted in backpacking and field day excursions while camping in the Pioneer Range.

Recreation Manager, Lake Wauburg, Fl.

2016-2018

- Managed a staff of 5-6 other employees.
- Distributed outdoor equipment and supervised thousands of Lake patrons.
- Handled opening and closing procedures for each day.

LEADERSHIP POSITIONS:

- Texas Geological Society (SEG Chapter) | President (Vice-President 2020)

May 2021 – present

- Graduate Student Executive Committee | Officer

May 2020 – May 2021

- Undergraduate Geology Club (University of Florida) | Vice-President

August 2018 – May 2019

SCIENTIFIC OUTREACH:

Mentor, Jackson School of Geosciences RTX program

Summer 2021

- Designed and lead a research project with an undergraduate student investigating the geomorphology and structure of the Colombian Andes.

Volunteer, Thinkery, Austin, TX.

December 2019

- Communicated geoscientific topics to the Austin community through hands on learning exercises.
- Engaged in discussions with the community about the societal impacts of geoscience.

Volunteer, GeoGators, Alachua County School District 2016-2019

- Traveled to schools in the community to teach students about the geological sciences.
- Spoke at school career day events to increase interest in the geological sciences.

Volunteer, Can You Dig It, Florida Museum of Natural History March 2017, 2018

- Assisted in the set-up of a volcano booth that showed children the basics of volcanic eruptions.
- Instructed visitors about basic magma properties, and the rock cycle.

AWARDS AND HONORS:

Grant Recipient, Graduate Student Research Grant, Geological Society of America (GSA) June 2021

- Received recognition as one of the top 10% of applicants
- Selected for the additional Structural Geology and Tectonics travel award

Recipient, Outstanding Student Presentation Award, American Geophysical Union (AGU) February 2021

- Award given to the top 3-5% of student presenters at the AGU fall meeting.

Recipient, Bianchi Boone Endowed Presidential Fellowship, University of Texas Spring 2021

- Merit based fellowship for graduate students in geoscience.

Recipient, Estwing Award, University of Florida May 2019

- Award given to the best field camp student.

Recipient, Lead Major, University of Florida May 2019

- Title awarded to the student who embodies academic excellence and represents the collective achievements of their major.

Recipient, Chair's Best Thesis Award, University of Florida May 2019

- Award given to the student with the best Undergraduate Thesis, as evaluated by the chair of the Department of Geological Sciences.

Recipient, University Scholars Program, University of Florida 2018-2019

- Competitive program that provides research funding to a limited number of undergraduate students.

Recipient, Lifeguard of the Year, University of Florida April 2018

- Award given to the Lifeguard at Lake Wauburg that demonstrates leadership, hard work and excellence.

Professional Memberships/Groups

- Unlearning Racism in Geoscience (URGE) | JSG pod Spring 2021
- American Geophysical Union December 2018 – present
- Geological Society of America January 2020 – present
- Society of Exploration Geophysicists April 2020 – present
- GeoEmpowerment Network July 2020 – present

SKILLS AND CERTIFICATIONS:

- MATLAB
- NI programming (MATLAB)
- GMT
- Shell (bash, zsh) scripting
- GIS (certified Spring 2019)
- Rotary shear experimentation
- Field data acquisition, orienteering and mapping
- Python
- AutoCAD, FreeCAD
- Sample preparation for ICP-MS and EMP.
- Adobe Illustrator

PUBLICATIONS:

Journal Articles:

- Anderson, M., Perfit, M., Wanless, V.D., **Conrad, E.**, Fornari, D., Ridley, W. I., Cosca, M., Gregg, P. (2020), Extreme mantle heterogeneity in mid-ocean ridge mantle revealed in lavas from the 8 degrees 20' N near-axis seamount chain: G-cubed.

Posters and Presentations:

- **Conrad, E.**, Tisato, N., Carpenter, B., (2021 - **invited**), "Experimental Insights into Melt Influenced Fault Behavior", Abstract to be presented at the 2021 AGU Fall Meeting Dec. 13 – 17.

- **Conrad, E.**, Faccenna, C., Reitano, R., (2021)AGU 2021, “The structural and morphological evolution of transpressive systems: insights from analog modeling”, Abstract to be presented at the 2021 AGU Fall Meeting Dec. 13 – 17.
- **Conrad, E.**, Faccenna, C., Stockli, D. F., Becker, T. (2020) Cenozoic Evolution of the Northern Caribbean Plate Boundary: Insights from Thermochronometric, Kinematic and Geomorphic data, Abstract (223-8) to be presented at 2020 GSA Fall Meeting, 25-28 Oct. doi: 10.1130/abs/2020AM-353996.
- **Conrad, E.**, Tisato, N., Di Toro, G., Carpenter, B. M., Faccenna, D. (2020, in review) New data on the stick-slip mechanics of seismogenic faults from rotary shear experiments, Abstract presented at the 2020 AGU Fall Meeting, 7-11 Dec.
- Anderson, M., Perfit, M., Wanless, V.D., **Conrad, E.**, Fornari, D., Ridley, W. I., Cosca, M., Gregg, P., (2020), Mantle Heterogeneity Near the East Pacific Rise: Pb, Sr, and Nd Isotopic Data from the 8°20' N Seamount Chain, Abstract (140-11) to be presented at 2020 GSA Fall Meeting, 25-28 Oct. doi: 10.1130/abs/2020AM-359645
- Anderson, M., Perfit, M., Wanless, V.D., **Conrad, E.**, Fornari, D., Ridley, W. I., Cosca, M., Gregg, P., (2020), Mid-Ocean Ridge Mantle Heterogeneity: Insights from the 8°20' N Near-Axis Seamount Chain, Abstract presented at the 2020 AGU Fall Meeting, 7-11 Dec.
- **Conrad, E.**, Perfit, M., Anderson, M., Wanless, V.D., Fornari, D., Gregg, P. (2018) Geochemical Diversity of Lavas from the 8°20'N Seamount Chain Provides Insights into Seamount Evolution from a Heterogeneous Mantle, Abstract (V43G-0199) presented at 2018 AGU Fall meeting, 10-14 Dec.