

Ethan Conrad

(772)631-8097

econrad@utexas.edu

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 macroscale expression of structural and surficial processes.*

Primary advisor: Claudio Faccenna

Cumulative GPA: 3.8/4.0

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, Tectonic Geodynamics (UT – T. W. Becker & C. Faccenna), Geodynamics (UF – R. Russo), Advanced Petrology, ArcGIS (array of classes), Multivariable Calculus, Geomorphology

EXPERIENCE:

Teaching Assistant, University of Texas at Austin

2019 – present

- Courses: Field Methods (GEO420K), Sustaining a Planet (UGS303)

Research Assistant, University of Texas at Austin

Summer, 2020

- 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

- Designed a new course to introduce undergraduate students to field geology.
- Planned and organized 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, petrography, major and trace element analysis, 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, sample collection, and field description of outcrops.
- Assisted in backpacking and field day excursions while camping in the backwoods of 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) | Vice-President

May 2020 present

- Graduate Student Executive Committee | Officer

May 2020 – present

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

August 2018 – May 2019

SCIENTIFIC OUTREACH:

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:

- 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.
- Professional Memberships** April 2018
- 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
- GMT
- GIS (certified Spring 2019)
- Field data acquisition and mapping
- AutoCAD, FreeCAD
- Sample preparation for ICP-MS and EMPA.
- Adobe Illustrator and Photoshop

PUBLICATIONS:

Journal Articles:

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

Posters and Presentations:

- **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 to be 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), (2020, in review), Mid-Ocean Ridge Mantle Heterogeneity: Insights from the 8°20' N Near-Axis Seamount Chain, Abstract to be 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.