

Jack “JJ” Ruse

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Athens, GA 30602

Education

Master of Science in Geology

Expected: May 2027

University of Georgia

Areas of Specialization: Structural Geology & Tectonics, Planetary Geology

Advisor: Dr. Christian Klimczak

Bachelor of Science in Geology; Bachelor of Arts in Astronomy

May 2025

University of Florida

GPA: 3.67/4.00; Honors: Cum Laude

Minor: Geography

Academic Experience

Graduate Research Assistant

Aug 2025 – Present

Center for Planetary Tectonics at University of Georgia

Post-Baccalaureate Teaching Assistant

May 2025 – Jun 2025

GeoSPACE Geoscience Field Program at University of Florida

- Helped out with course logistics, acted as a point of contact for students, and assisted in the field as needed

Peer Tutor

Jan 2025 – May 2025

Structural Geology & Tectonics Course at University of Florida

- Increased student understanding of course topics through reinforcing classroom concepts and lab techniques

Undergraduate Teaching Assistant

Jan 2025 – May 2025

Geology of Florida Course at University of Florida

- Assisted with class logistics and facilitated class field trips to geologically relevant features of Florida

Undergraduate Research Assistant

Sep 2023 – May 2025

Life on the Edge Lab at University of Florida, Advisor: Dr. Amy Williams

- Investigated organic compounds in lava tube samples using spaceflight-like techniques to optimize future Mars mission instrumentation

Project Manager & Secondary Reviewer

Sep 2023 – Dec 2023

NASA Proposal Writing & Evaluation Experience Academy, NASA L'SPACE Program

- Curated important project deliverables, coordinated team meetings, and acted as a reviewer on a NASA new technology review board

Project Manager, Scientist, & Mechanical Engineer

Jun 2023 – Jul 2023

NASA Lucy Mission Internship

- Gained 200+ hours of experience in the life cycle of scientific instrumentation and managed team deliverables by delegating tasks, communicating deadlines, and configuring required documents

Undergraduate Research Assistant

Jan 2023 – Dec 2023

Neil Opdyke Paleomagnetism Lab at University of Florida, Advisor: Dr. Joseph Meert

- Used paleomagnetic data software to calculate virtual geomagnetic poles and created simulations of these poles using Python to analyze their movement over time

Astrogeologist

Jan 2023 – May 2023

Mission Concept Academy, NASA L'SPACE Program

- Found a suitable landing zone for team rover using the JMARS software and worked with the engineering team on developing a CAD model of our instrument that could efficiently traverse the Martian surface

Field Experience

Structural Geology & Tectonics Course Field Trip

Apr 2024

University of Florida

- Investigated macro- and mesoscopic structures/fabrics in context with the tectonic development of the Appalachian mountains through field, lab, and stereonet exercises

Geological Field Methods Course Field Trip**Oct 2023***University of Florida*

- Gained an understanding of the formation and regional stratigraphy of the Blue Ridge province through mapping activities in eastern Tennessee, western Virginia, and northern Georgia

GeoSPACE Geoscience Field Program**May 2023 – Jun 2023***University of Florida*

- Studied various topics in geology (sedimentary, mineralogy/petrology, volcanology, structural, planetary, and hydrology) through field work in northern Arizona as well as developed a proficiency in field and remote sensing techniques through research projects and assignments based on field work

Leadership Roles & Extracurricular Involvement

Geology Club Member**Sep 2025 – Present***University of Georgia***Graduate Student Association Member****Aug 2025 – Present***University of Georgia***Club Coordinator****Sep 2024 – Apr 2025***Astraeus Student Organization at University of Florida (Member since Fall 2024)*

- Acted as a liaison between the Astraeus Student Organization and space-related clubs

Vice President**Aug 2024 – Apr 2025***GeoClub at University of Florida (Member since Fall 2022)*

- Organized and facilitated club meetings, workshops, and other events

Treasurer**Jan 2024 – Apr 2025***Gator Astrobiology at University of Florida (Member since Spring 2024)*

- Assisted in starting up the club, helped write the club's constitution, tracked club funds, and organized monthly club meetings

Astronomy & Astrophysics Society Member**Jan 2022 – Apr 2025***University of Florida***Outreach & Community Service**

Going Gator Video Participant**Jul 2025***College of Liberal Arts & Sciences at University of Florida*

- Volunteered in the making of a geology major video for the Going Gator transfer student program

Earth Day Open House**Apr 2025***Department of Geological Sciences at University of Florida*

- Volunteered at planetary science tables and helped direct activities related to Mars exploration and meteorites

Majors and Minors Fair**Oct 2024***University of Florida*

- Talked to undergraduates about geology at UF, including opportunities, degree tracks, and coursework

Fall Undergraduate Research Expo**Oct 2024***University of Florida*

- Informed students about space research conducted at UF and opportunities that are available through the Astraeus Space Institute

Can You Dig It Geology K-12 Outreach Event**Feb 2024***Florida Museum of Natural History*

- Volunteered for annual geology outreach event, which included assisting the event coordinator and teaching K-12 students about groundwater geology, sedimentology, and petrography

Conference Presentations & Abstract Acceptances

Ruse, J., Williams, A., Gant, P., Siew, J., 2025. Lipid Biosignatures in Lava Tubes: Implications for Life Detection on Mars. UF Spring Undergraduate Research Symposium, Gainesville, FL.

- Ruse, J., Williams, A., Gant, P., Siew, J., 2025.** *Lipid Biosignatures in Lava Tubes: Implications for Life Detection on Mars.* Lunar and Planetary Science Conference, The Woodlands, TX.
- Ruse, J., Meert, J., 2024.** *Using the Bayesian Statistical Framework for Testing Paleomagnetic Reconstructions.* Florida Undergraduate Research Conference, Jacksonville, FL.
- Ruse, J., Meert, J., 2023.** *Using the Bayesian Statistical Framework for Testing Paleomagnetic Reconstructions.* UF Fall Undergraduate Research Symposium, Gainesville, FL.

Grants, Awards, & Recognitions

Chevron Graduate Research Assistantship Recipient <i>Department of Geology at University of Georgia</i>	Aug 2025 – Present
Edward D. Danker Award for Outstanding Geology Undergraduate <i>Department of Geological Sciences at University of Florida</i>	May 2025
Beyond120 Experiential Scholar <i>College of Liberal Arts & Sciences at University of Florida</i>	Apr 2025
Research Excellence Program for Undergraduates Scholar <i>Center for Undergraduate Research at University of Florida</i>	Apr 2025
Student Travel Grant Recipient (\$1,600) <i>Florida Space Grant Consortium</i>	Mar 2025
University Scholar (\$1,750) <i>Center for Undergraduate Research at University of Florida</i>	Aug 2024 – Apr 2025
Dean's List <i>College of Liberal Arts & Sciences at University of Florida</i>	May 2023, May 2024, Dec 2024
Emerging Scholar (\$1,000) <i>Center for Undergraduate Research at University of Florida</i>	Jan 2023 – Dec 2023
Florida Academic Scholar <i>Bright Futures Scholarship Program</i>	Aug 2021 – Dec 2024

Relevant Coursework

Graduate: Advanced Topics in Structural Geology, Data Analysis in the Geosciences, Introduction to Rock Mechanics

Undergraduate: Analytical Geometry & Calculus I-III, Artificial Intelligence Fundamentals, Astrobiology, Astronomy & Astrophysics I-II, Computer Aided Graphics & Design, Elementary Differential Equations, Environmental & Engineering Geology, Exoplanets, Field Studies, Geological Field Methods, General Chemistry I, Geomorphology, Geophysics, Historical Geology, Igneous & Metamorphic Petrology, Physical Geography, Physics with Calculus I-II, Principles of Mineralogy, Radar & Satellite Meteorology, Sedimentary Geology, Structural Geology & Tectonics, Topics in Planetary Science

Skills

Technical Skills: Coding (R, Python, MATLAB), geodynamic modeling (ASPECT/Paraview), GIS (ArcGIS, JMARS), design/graphics (Adobe Illustrator, Siemens NX, SolidWorks, Vectorworks), Google Earth Pro, LaTeX, Microsoft Office suite

Field/Lab Techniques: Global Positioning System, Ground Penetrating Radar, photogrammetry, geologic mapping, structural/compositional analysis, cross-section construction, optical mineralogy/petrography, core logging, rock mass classification, pyrolysis gas chromatography-mass spectrometry (py-GC-MS), TMAH thermochemolysis, soldering, cleanroom procedures

Other Skills: Project management, proposal writing, systems engineering topics, heat transfer, risk management, teaming, communication, leadership, conflict management, time management, adaptability, collaboration