

Jack “JJ” Ruse

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Athens, GA 30602

Education

Master of Science in Geology

University of Georgia

GPA: 4.00/4.00; Specialization: Structural Geology & Tectonics, Planetary Geology

Expected: May 2027

Bachelor of Science in Geology; Bachelor of Arts in Astronomy

University of Florida

GPA: 3.67/4.00; Honors: Cum Laude; Minor: Geography

May 2025

Academic Experience

Graduate Research Assistant

Center for Planetary Tectonics at University of Georgia, Advisor: Dr. Christian Klimczak

- Mapping and characterizing shortening landforms on Mars using ArcGIS Pro

Aug 2025 – Present

Post-Baccalaureate Teaching Assistant

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

May 2025 – Jun 2025

Peer Tutor

Structural Geology & Tectonics Course at University of Florida

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

Jan 2025 – May 2025

Undergraduate Teaching Assistant

Geology of Florida Course at University of Florida

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

Jan 2025 – May 2025

Undergraduate Research Assistant

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

Sep 2023 – May 2025

Undergraduate Research Assistant

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

Jan 2023 – Dec 2023

Workforce Development Experience

Imperial Barrel Award Competition Team Member

University of Georgia/American Association of Petroleum Geologists

- Analyzing various datasets to make recommendations related to operations in carbon sequestration

Sep 2025 - Present

Geovation (Geology + Innovation) Hub Team Member

University of Georgia/The Chemours Company

- Collaborating with engineers to optimize sand/heavy metal mining operations in southern Georgia

Sep 2025 - Present

Project Manager & Secondary Reviewer

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

Sep 2023 – Dec 2023

Project Manager, Scientist, & Mechanical Engineer

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

Jun 2023 – Jul 2023

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**Rock Mechanics Course Field Project****Nov 2025***University of Georgia*

- Determined Rock Quality Designation, Rock Mass Rating, and Geologic Strength Index of the Tallulah Falls Quartzite in Georgia for potential engineering applications

Sedimentary Geology Course Field Trip**Nov 2024***University of Florida*

- Analyzed the stratigraphy of Talbot Island in Jacksonville, FL to determine the lithofacies and depositional environment of the different sedimentary layers

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 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)***Vice President****Aug 2024 – Apr 2025***GeoClub at University of Florida (Member since Fall 2022)***Treasurer****Jan 2024 – Apr 2025***Gator Astrobiology at University of Florida (Member since Spring 2024)***Astronomy & Astrophysics Society Member****Jan 2022 – Apr 2025***University of Florida***Outreach & Community Service****GeoAmbassador****Jan 2026 – Present***Department of Geology at University of Georgia***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, E., 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, E., 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** **Aug 2025 – Present**
Department of Geology at University of Georgia
- Edward D. Danker Award for Outstanding Geology Undergraduate** **May 2025**
Department of Geological Sciences at University of Florida
- Beyond120 Experiential Scholar** **Apr 2025**
College of Liberal Arts & Sciences at University of Florida
- Research Excellence Program for Undergraduates Scholar** **Apr 2025**
Center for Undergraduate Research at University of Florida
- Student Travel Grant Recipient (\$1,600)** **Mar 2025**
Florida Space Grant Consortium
- University Scholar (\$1,750)** **Aug 2024 – Apr 2025**
Center for Undergraduate Research at University of Florida
- Dean's List** **May 2023, May 2024, Dec 2024**
College of Liberal Arts & Sciences at University of Florida
- Emerging Scholar (\$1,000)** **Jan 2023 – Dec 2023**
Center for Undergraduate Research at University of Florida
- Florida Academic Scholar** **Aug 2021 – Dec 2024**
Bright Futures Scholarship Program

Relevant Coursework & Training

- Graduate:** Advanced Topics in Sedimentary Geology, Advanced Topics in Structural Geology, Data Analysis in the Geosciences, Introduction to Rock Mechanics, Petroleum Geology, Plate Tectonics
- Undergraduate:** Artificial Intelligence Fundamentals, Astrobiology, Astronomy & Astrophysics I-II, Calculus I-III, Chemistry I, Computer Aided Graphics & Design, Elementary Differential Equations, Environmental & Engineering Geology, Exoplanets, Field Studies, Geological Field Methods, Geomorphology, Geophysics, Historical

Geology, Igneous & Metamorphic Petrology, Physical Geography, Physics I-II, Principles of Mineralogy, Radar & Satellite Meteorology, Sedimentary Geology, Structural Geology & Tectonics, Topics in Planetary Science

Training: Complete Carbon Capture Usage and Storage Short Course, ExxonMobil Subsurface Fluid Flow Short Course, GEMs-4 Critical Minerals Workshop, NASA Open Sciences Skills Training, Petrel Fundamentals Short Course

Skills

Technical Skills: ArcGIS Pro, Google Earth Pro, Adobe Illustrator, R, Python, MATLAB, Siemens NX, SolidWorks, Vectorworks, LaTeX, Microsoft Office suite, geodynamic modeling

Field/Lab Techniques: GPS, GPR, photogrammetry, geologic mapping, structural/compositional analysis, cross-section construction, optical mineralogy/petrography, core logging, rock mass classification, pyrolysis gas chromatography-mass spectrometry, 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