

JACK “JJ” RUSE

Department of Geology, University of Georgia, Athens, GA 30602

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RESEARCH INTERESTS

Planetary geology, habitability, surface processes, analog studies | Structural geology, tectonics, metamorphic petrology, rock mechanics, geochronology | Renewable energy, sustainability

EDUCATION

M.S. in Geology

Aug 2025 – May 2027

University of Georgia (UGA)

- GPA: 4.00/4.00

B.S. in Geology;

B.A. in Astronomy

Aug 2021 – May 2025

University of Florida (UF)

- GPA: 3.67/4.00 (Cum Laude)
 - Minor: Geography
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RESEARCH EXPERIENCE

Graduate Research Assistant

Aug 2025 – Present

University of Georgia, Center for Planetary Tectonics

- Thesis tentatively titled “*The Global Distribution of Shortening Deformation on Mars*”
- Advisor: Dr. Christian Klimczak

Engineering Capstone Research Mentor

Sep 2025 – May 2026

University of Georgia, The Chemours Company

- Advisor: Dr. Adam Milewski

Undergraduate Research Assistant

Sep 2023 – May 2025

University of Florida, Life on the Edge Lab

- Project titled “*Lipid Biosignatures in Lava Tubes: Implications for Life Detection on Mars*”
- Advisor: Dr. Amy Williams

Student Researcher/Participant

May 2023 – Jun 2023

GeoSPACE Geoscience Field Program (UF)

- Projects titled “*Volcanism in Iceland as an Analog for Cryovolcanism on Ceres,*” “*Mineralogy of Vent-235 in the San Francisco Volcanic Field,*” and “*Reverse Stratigraphy of Barringer Meteor Crater*”
- Advisor: Dr. Anita Marshall

Undergraduate Research Assistant

Jan 2023 – Dec 2023

University of Florida, Paleomagnetism Lab

- Project titled “*Using the Bayesian Statistical Framework for Testing Paleomagnetic Reconstructions*”
 - Advisor: Dr. Joseph Meert
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PROFESSIONAL & WORKFORCE DEVELOPMENT EXPERIENCE

**Leadership Experience
Accelerator Program
(LEAP) Intern**
May 2026 – Present

L'SPACE Program, Mission Concept Academy
• Roles: Planetary Geology Mentor, Team Mentor

Mining Engineer Intern
May 2026 – Aug 2026

KaMin Solutions LLC
• Supervisor: Eric Parrish

**Imperial Barrel Award (IBA)
Competition Team Member**
Sep 2025 – Apr 2026

**University of Georgia, American Association of
Petroleum Geologists (AAPG)**
• Project titled “*Development and Applications for Walrus
Geologic Storage (DAWGS)*”
• Advisor: Dr. Kimberly Howell

**NASA Proposal Writing &
Evaluation Experience
(NPWEE) Participant**
Sep 2023 – Dec 2023

L'SPACE Program
• Roles: Project Manager, Secondary Reviewer
• Project titled “*Radiation Resistant Boron Nitride
Nanotube Composite Fibers for Space Crew Clothing*”

Lucy Mission Intern
Jun 2023 – Jul 2023

National Aeronautics and Space Administration (NASA)
• Roles: Project Manager, Scientist, Mechanical Engineer
• Project titled “*Astronomical and Cosmic Heat/Infrared
Light in Lucy Exploration Systems (ACHILLES)*”

**Mission Concept Academy
(MCA) Participant**
Jan 2023 – May 2023

L'SPACE Program
• Roles: Astrogeologist, Chief Scientist
• Project titled “*Planetary Reconnaissance of Ice and
Carbon in the Environment (PRICE)*”

TEACHING EXPERIENCE

University of Florida

Summer 2025	GLY 4930 - GeoSPACE Field Program	Teaching Assistant
Spring 2025	GLY 4155C - Geology of Florida	Teaching Assistant
Spring 2025	GLY 4400C - Structural Geology & Tectonics	Tutor

INVITED TALKS

2026	GeoSPACE Geoscience Field Program , University of Florida (virtual)
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AWARDS AND HONORS

2026	• Judge's Choice Award for outstanding presentation and strong technical work at the IBA North America Semi-Finals competition
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2025	• Chevron Graduate Research Assistantship to support graduate studies at UGA • Edward D. Danker Award for excellence in scholarship, enthusiasm, motivation, leadership, and involvement in the department during total undergraduate career as a geology major at UF • Beyond120 Experiential Scholar in recognition of professional growth/development beyond what is required of a degree in the College of Liberal Arts and Sciences (CLAS) at UF • Research Excellence Program for Undergraduates Scholar in recognition of significant research experience during undergraduate studies at UF
2023 – 2024	• CLAS Dean’s List for 3.75+ semester GPA
2021	• Bright Futures Florida Academic Scholarship to support undergraduate studies at UF

GRANTS

2026	• Miriam Watts-Wheeler Scholarship, UGA Department of Geology, \$700
2025	• Student Travel Grant, Florida Space Grant Consortium, \$1,600
2024	• University Scholars Grant, UF Center for Undergraduate Research, \$1,750 • Emerging Scholars Grant, UF Center for Undergraduate Research, \$1,000

SKILLS

Technical	R, MATLAB, Python, ArcGIS Pro, JMARS, Google Earth Pro, Adobe Illustrator, ISIS3, Petrel, geodynamic modeling (ASPECT/ParaView), Siemens NX, SolidWorks, AutoCAD Map 3D, Carlson Mining, seismic/well log interpretation, statistical data analysis
Field/Lab	Geologic mapping, rock mechanical assessment, structural/stratigraphic analysis, core logging, Global Positioning System, Ground Penetrating Radar, photogrammetry, optical mineralogy/petrography, pyrolysis gas chromatography-mass spectrometry, TMAH thermochemolysis
Other	Project management, risk management, human capital management, proposal writing/evaluation, systems engineering topics, teaming, mentoring, communication, leadership, conflict management, time management, adaptability, collaboration

COURSEWORK (* = FIELD COMPONENT)

Graduate (UGA)	Data Analysis in the Geosciences, Rock Mechanics*, Plate Tectonics, Petroleum Geology, Special Projects in Hydrogeology & Environmental Geology (in progress), Economic Geology (upcoming)
Undergraduate (UF)	Structural Geology & Tectonics*, Geophysics, Igneous & Metamorphic Petrology, Sedimentary Geology*, Geological Field Methods*, Field Studies*, Mineralogy, Environmental & Engineering Geology, Historical Geology, Topics in Planetary Science, Astronomy & Astrophysics, Astrobiology, Exoplanets, Techniques of Observational Astronomy, Climatology, Radar & Satellite Meteorology, Weather & Forecasting
Short Courses & Certifications	NASA Open Science 101, Media Relations (GeoMedia), Complete Carbon Capture, Usage, and Storage (CCUS), ExxonMobil Subsurface Fluid Flow, Petrel Fundamentals, Growing Partnerships for Essential Minerals (GEMS-IV)

LEADERSHIP, EXTRACURRICULARS, & OUTREACH

Geology Student Representative Aug 2026 – Present	Graduate Student Association, UGA
GeoAmbassador Jan 2026 – Present	Department of Geology, UGA
Vice President Aug 2024 – May 2025	GeoClub, UF
Club Coordinator Aug 2024 – May 2025	Astraeus Student Organization, UF
Treasurer Jan 2024 – May 2025	Gator Astrobiology, UF

CONFERENCE ABSTRACTS (* = PRESENTER)

Abstracts accepted

1. **Ruse, J.A.***, Buckley, O.A., Cheng, H.C.J., Klimczak, C., “The Global Distribution of Shortening Deformation on Mars.” *American Geophysical Union Annual Meeting*. 2026. Abstract #2063438. San Francisco, CA. Poster presentation.
2. Buckley, O.A.*, **Ruse, J.A.**, Cheng, H.C.J., Klimczak, C., “The Global Distribution of Extensional Deformation on Mars.” *American Geophysical Union Annual Meeting*. 2026. Abstract #2072083. San Francisco, CA. Poster presentation.

3. **Ruse, J.A.***, Williams, A.J., Gant, P.G., Siew, E., “Lipid Biosignatures on Mars: Implications for Life Detection on Mars.” *UF Spring Undergraduate Research Symposium*. Vol. 26. 2025. Gainesville, FL. Poster presentation.
4. **Ruse, J.A.***, Williams, A.J., Gant, P.G., Siew, E., “Lipid Biosignatures on Mars: Implications for Life Detection on Mars.” *Lunar and Planetary Science Conference*. Vol. 56. 2025. Abstract #2854. The Woodlands, TX. Poster presentation.
5. **Ruse, J.A.***, Meert, J.G., “Using the Bayesian Statistical Framework for Testing Paleomagnetic Reconstructions.” *Florida Undergraduate Research Conference*. Vol. 14. 2024. Jacksonville, FL. Poster presentation.
6. **Ruse, J.A.***, Meert, J.G., “Using the Bayesian Statistical Framework for Testing Paleomagnetic Reconstructions.” *UF Fall Undergraduate Research Symposium*. 2023. Gainesville, FL. Poster presentation.