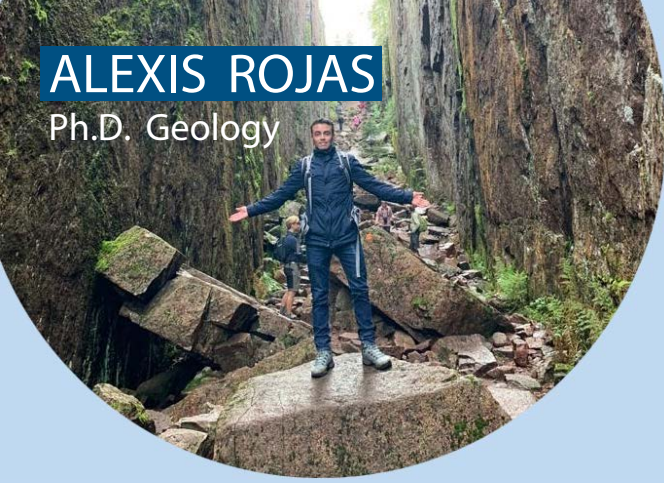


ALEXIS ROJAS

Ph.D. Geology



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Geobiology.github.io



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RESEARCH SUMMARY

I am a geoscientist working beyond disciplinary boundaries. My research explores the multiscale interactions among biological, physical, and societal components of natural and built environments. I aim to answer the ultimate question of how the complex nature of life, climate, and society affects each other. Science education is an integral component of my research program and I aim to bridge the gap between research and teaching practices by promoting best practices in data collection, data-driven learning and systems thinking.

RESEARCH INTEREST AND TECHNICAL SKILLS

Higher-order networks
Learning on graphs (LoG)
Spatial Statistics
Causal Discovery
Programming for Data Science

Human-Earth Systems Interactions

Marine Biosphere

Computational humanities

Geoheritage

Biotic Interactions

Geology & Stratigraphy of Northern South America

LANGUAGES



English (fluid)

Applied Network Science



Spanish (native)



Swedish (beginner)



Finnish (beginner)



German (beginner)

Geography

Science Education

Biology

Paleobiology

Network Science

Geology

GIScience

SELECTED PROJECTS

-The bivalves as an archive of responses to Pliocene and Holocene warming events. University of Bologna, Italy.

-HAT: Comparing evolutionary processes in nature and society. University of Helsinki.

-The Panama Canal Paleontology/Geology Project. Smithsonian Tropical Institution.

SELECTED PUBLICATIONS

-Rojas et al. (2021). A multiscale view of the Phanerozoic fossil record reveals the three major biotic transitions. *Communications Biology* 4, 309.

-Pilotto, et al. (2022). Late Holocene anthropogenic landscape change in northwestern Europe impacted insect biodiversity as much as climate change did after the last Ice Age. *Proceedings of the Royal Society B: Biological Sciences* 289.

-Rojas, et al. (2025). Spatial patterns of trematode-induced pits on bivalve skeletons: Challenges and prospects for research on parasite-host dynamics. *The Holocene* 35.

-Rojas et al. Learning from the multiple fossil records bridges research and teaching practices and promotes systems thinking in paleontology education. Preprint.

SCIENCE OUTREACH & ACTIVITIES

La Prensa (Panama)

Science Daily

Phys.org

Informationsdienst Wissenschaft

Sciencealert

Earth Day (FLMNH)

ForskarFredag (Sweden)

Stratigraphy Research Group (UN)

Mentoring students (UPN)

EDUCATION AND EXPERIENCE

2026

Experience Events Education

JKU U. Bologna U. Helsinki Umeå University

2025 Postdoc, Inst. of Applied Statistics Johannes Kepler University of Linz, JKU Causal discovery in Paleobiology

2024 Research fellow, BiGeA, UNIBO Conservation Paleobiology

2023 Guest Lecture, Dep. of Languages, UH Speech and Language Evolution

2022 Postdoc, Dep. Computer Science, UH Evolution in nature and society

2021 Research on multilayer networks in paleobiology hits media coverage

2019 IceLab Interdisciplinary Camp

2018 Postdoc, Dep. of Physics, UmU Applied Network Science

2017 Ph.D. Geology, University of Florida Geography (minor)

2017 Graduate Certificate, UF Geography Digital Geography and GIS

2016 Stratigraphic PaleoBio Field Course

2015 Nichol Paleontology Award, UF

Teaching Assistant, UF

Research Assistant, Invertebrate Paleo Florida Museum of Natural History

2012 Enrolled at University of Florida (UF)

2012 Grant recipient, Florida Paleo. Society

2010 Grant recipient, Yale University

2009 Research Intern, Smithsonian (STRI) Panama Geology Project

2008 Sci. Advisor at museum exhibition

2008 B.S. Geology, UNAL

2007 Undergraduate Grant, Asociacion Geologos y Geofisicos del Petroleo

2006 Collections Assistant, UNAL

2004 Enrolled at Geosciences department Universidad Nacional (UNAL)

2004 B.Ed. Biology Education Universidad Pedagogica (UPN)

2004

Smithsonian UPN Universidad Nacional

1998 Primary School - Teaching Assistant Liceo Conviva

1997 High School Diploma - Education Escuela Normal Superior (ENSNSP)