

Laura Rossana Fracica Gonzalez

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Education

PhD in Natural Science Geography

Department of Physical Geography, Göttingen University
HiLandEr Project

Expected in Summer 2027 - Summer 2024
Göttingen, Germany

Master of Science in Geology

Northern Illinois University
GPA: 4/4; Member of the Climbing Club and Capoeira Club

Fall 2022 - Spring 2024
DeKalb, IL, USA

Bachelor of Science in Geology

Universidad Nacional de Colombia
GPA: 4.2/5; Member of Field and Track, and Climbing Sport Teams

Fall 2016 - Spring 2022
Bogotá D.C., Colombia

Research Experience

Research Intern

EAPS Department, Purdue University

2021/02/20 - 2021/12/21
West Lafayette, IN, USA

- Assessment of the geochemical processes affecting springs across spatial scales in two alpine mountain study areas in the USA.
- Quantifying groundwater circulation depths using geothermometry.
- Assess how the d13C signature of geogenic CO₂ is retained when mixing different fractions of modern recharge with modern d13C values by creating a two-end-member mixing model.

Undergraduate Research Assistant

MEGIA Project, Universidad Nacional de Colombia

2019/11/01 - 2020/06/31
Bogotá D.C., Colombia

- Synthesize and analyze secondary information for data compilation in a Database
- Reinterpret and analyze Vertical Electrical Soundings (VES) with IPI2win software
- Support the Hydrogeology and Geophysics group in the construction of the geological and geophysical 3D model that focused on main hydrogeological units.

Leadership experience

Graduate Teaching Assistant

Department of Earth, Atmosphere and Environment
Northern Illinois University

2022/08 – 2024/05

DeKalb, IL, USA

- GEOL 105 Natural Resources and the Environment
- GEOG 492 Hydrology
- GEOL 477 Field Methods Environmental Geology (Hydrogeology)
- EAE 108 Environmental Geology

Vice-President

UN Recurso Hídrico CyS Student Group
Universidad Nacional de Colombia

2019/07 - 2020/11

Bogotá D.C., Colombia

- Formulate and conduct undergraduate research projects related to groundwater.

Undergraduate Teaching Assistant

IEU, Universidad Nacional de Colombia
Class: Economics of Climate Change Seminar, Metropolitan Areas and Natural Disasters

2020/09/14 - 2020/12/11

Bogotá D.C., Colombia

Certificates

- Hazardous Waste Operations and Emergency Response (HAZWOPER) - Summer 2023
- Data Science for All (DS4A) – Summer 2022

Citations:

* Ángel-Martínez, C.E., Prieto-Gómez, G.A., Cristancho-Mejía, F., Sarmiento-Orjuela, A.M., Vargas-Quintero, J.A., Delgado-Mateus, C.J., Torres-Rojas, E., Castelblanco-Ossa, C.A., Camargo-Rache, G.L., Amazo-Gómez, D.F., Cipagauta-Mora, J.B., Lucuara-Reyes, E.D., Ávila-López, K.L., **Fracica-González, L.R.**, Martín-Ravelo, A.S., Atuesta-Ortiz, D.A., García-Romero, D.F., Triviño Cediell, R.J., Jaimes Villareal, V.N., y Alarcón Rodríguez, W.F.(2021). Proyecto MEGIA: Modelo Geológico-Geofísico del Valle Medio del Magdalena. Producto No. 5. Bogotá: 192 pp

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Awards and Scholarships

- Montgomery Award, Northern Illinois University, Department of Earth, Atmosphere and Environment, \$1,000, Fall 2023
- On To The Future Award, The Geological Society of America, to present in GSA Connect Meeting, \$500, Fall 2023
- Brian Fugiel Scholarship, Northern Illinois University, Department of Earth, Atmosphere and Environment, \$1,500, Spring 2023
- Graduate Student Research Grant, \$2,200, The Geological Society of America, Spring 2023
- Illinois Groundwater Association (IGA), Student Award for Research, \$1,000, Fall 2022
- Berg Fellowship, Northern Illinois University, Department of Earth, Atmosphere and Environment, \$2,000, Fall 2022
- Undergraduate Research Experience Purdue - Colombia, Universidad Nacional de Colombia and Purdue University, 6 months research internship scholarship, Fall 2019
- Geoscience Department, Universidad Nacional de Colombia, Best 15 GPA undergraduate students, Fall 2016

Poster Sessions

- Fracica-Gonzalez, L.R., Bautista-Leal, R.M., Brown, M.R.M., Lenczewski M.E., (2024/09/12), "Using Acoustic Doppler Current Profiler (ADCP) to measure groundwater flow in the Yucatan Peninsula, Mexico and its correlation with water clarity", IAH World Groundwater Congress 2024, Davos, Switzerland
- Fracica-Gonzalez, L.R., Lenczewski M.E., (2023/12/05), "Long-term groundwater geochemical impacts of prairie restoration", Groundwater Week 2023, Las Vegas, NV, USA
- Fracica-Gonzalez, L.R., Bautista-Leal, R.M., Brown, M.R.M., Lenczewski M.E., (2023/10/14), "Groundwater flow and water visibility at cenotes in the Yucatan Peninsula", GSA Connects 2023, Pittsburgh, PA, USA, doi: 10.1130/abs/2023AM-391206
- Fracica-Gonzalez, L., Frisbee, M.D., Miller, J., (2021/12/15), "Geochemical modeling of glaciated mountain aquifers in Mount Hood, Oregon, and Glacier National Park, Montana", AGU Fall Meeting, New Orleans, LA, USA
- Fracica-González, L., Fernandez-Bermudez, C., Rincón-Chacón, J., Orjuela-Salazar ,S., Torres-Rojas, E., Ángel-Martínez, C. (2019/08/15), "Caracterización de la conductividad hidráulica de la Formación Sabana mediante el uso de pruebas Slug en piezómetros del campus de la Universidad Nacional de Colombia sede Bogotá", XVII Congreso Colombiano de Geología, Santa Marta, Colombia

Conferences

- Fracica-González, L., Ángel-Martínez, C., (2020/11/16), "Evaluación del potencial de aplicación de riverbank filtration en la llanura aluvial del Río Magdalena entre Puerto Wilches y San Pablo", XVI Semana Técnica de Geología, Ingeniería Geológica y Geociencias, Online session
- Fracica-González, L., Fernandez-Bermudez, C., Rincón-Chacón, J., Orjuela-Salazar ,S., Torres-Rojas, E., Ángel-Martínez, C., (2019/06/13), "Caracterización de la conductividad hidráulica de la Formación Sabana mediante el uso de pruebas Slug en piezómetros del campus de la Universidad Nacional de Colombia sede Bogotá", I Semana Técnica Colombiana de Hidrogeología, Bucaramanga, Colombia.

Volunteering

Grey Lady Volunteer

2019/10/07 - 2020/11/30

Colombian Red Cross

Bogotá D.C., Colombia

- Promote alternative sources of income in communities displaced by the violence
- Offer first aid attention and monitoring of vital signs in Monserrate, Bogotá's mountain
- Plant small trees, collect seedlings, sow seeds in the greenhouse, and clean the natural area of the Salitre Wetland

Technical Skills

Programming: Python, R, RStudio, Visual Basic.

Spatial analysis: QGIS, ArcMap, ArcGIS Pro

Others: AutoCAD, IPI2Win, Geochemist Workbench, Grapher, MODFLOW, Origin, Surfer

Language skills

Native language: Spanish

Other languages: English (C1), German (A1)