

Lía V. Vergara Peña

3223 I-STEM Research Building 2, Athens, GA 30602 • lvergarap@uga.edu • <https://www.linkedin.com/in/liavergarap/>

SUMMARY OF QUALIFICATIONS

- Experienced in hydrologic, water quality (conventional parameters and toxic substances), and one-dimensional and two-dimensional hydraulic modeling.
- Skilled in processing statistical, hydrologic, and hydraulic information in GIS software.
- Competent in civil structure design.
- Qualified for the elaboration of wastewater discharge permit, environmental impact assessment, feasibility studies, and design studies (Colombia's regulations).

EDUCATION

University of Georgia Athens, GA, United States of America
Master of Science, Civil and Environmental Engineering 2025 – 2027 (expected)

Universidad Nacional de Colombia Medellín, Colombia
Specialist in Hydraulic Resource Utilization 2017 - 2018

Universidad del Norte Barranquilla, Colombia
Bachelor of Science, Civil Engineering 2012 - 2017

SKILLS

Technical: ArcGIS, QGIS, SAGA GIS, HEC-RAS, HEC-HMS, QUAL2Kw, WASP8, OTIS, Autodesk Civil 3D, Autodesk AutoCAD, and HY-8.

Professional: Critical thinking, teamwork, self-motivation, adaptability, technical expertise, and problem-solving.

RESEARCH EXPERIENCE

University of Georgia Athens, GA, United States of America
Graduate Research Assistant August 2025 – Present

University of Georgia Athens, GA, United States of America
Temporary Research Assistant July 2025 – August 2025

- Assisted a graduate student with research.
- Processed hydrology model results.
- Performed a sensitivity analysis.
- Developed code for conduct a flood depth frequency analysis.

Universidad del Norte Barranquilla, Colombia
Research Assistant September 2016 – December 2016

- Assisted a graduate student with research.
- Performed physicochemical analyses of lake sediment cores.

Universidad del Norte Barranquilla, Colombia
Research Assistant February 2015 – July 2015

- Processed hydrological data from gauge stations.
- Performed physicochemical analyses of lake sediment cores.

Universidad del Norte Barranquilla, Colombia
Research Assistant March 2014 – November 2014

- Conducted secondary information searches.

- Processed hydrological data from gauge stations.
- Performed physicochemical analyses of lake sediment cores.

PROJECT EXPERIENCE

Group Project, *Hydrodynamic modeling of the lower Nechí River basin for flood risk analysis* (April 2023–July 2024)

- Analyze flood hazard in the lower Nechí River basin under different flood events and climate change scenarios, using a two-dimensional hydrodynamic model.
- Identify the most vulnerable sites, villages, and urban areas to flood hazard.
- Evaluate whether the Cauca River can influence the flow of the Nechí River within their confluence, due to the backwater effect.

PROFESSIONAL EXPERIENCE

Freelance consulting

Consulting engineer

Medellín, Colombia
October 2024 – May 2025

- Planned and coordinated projects, providing technical guidance.
- Developed studies in hydraulics, hydrology, and water quality.
- Analyzed data and processed technical information.
- Conducted hydraulic and water quality modeling.
- Designed hydraulic structures.

Hidrased Ingeniería Sostenible

Technical Project Coordinator

Medellín, Colombia
November 2022 – October 2024

- Planned and coordinated projects, providing technical guidance.
- Developed studies in hydraulics, hydrology, water quality, and sediment.
- Led and organized water quality monitoring campaigns.
- Analyzed data and processed technical information.
- Conducted hydraulic, hydrologic, and water quality modeling.
- Designed hydraulic structures.

Integral Ingenieros Consultores

Junior Engineer (Water Resources)

Medellín, Colombia
March 2018 – November 2022

- Developed studies in hydraulics, hydrology, water quality, and sediment.
- Analyzed data and processed technical information.
- Conducted hydraulic and water quality modeling.
- Designed hydraulic structures.

CONFERENCE ACTIVITY

- Restrepo A., I. C.; Vergara P., L. V.; Escobar P., H. A.; Balbin B., S. *Hydrodynamic modeling of the lower Nechí River basin for flood risk analysis*. XXXI Latin American Hydraulics Congress. Medellín, Colombia. October 2024.

LANGUAGES

Spanish: Native or bilingual proficiency | English: Professional working proficiency