

**Xavier A. García López**  
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## **PROFILE**

I am a graduate student in the Environmental Science Program at the University of Puerto Rico at Rio Piedras, interested in the sustainable development and recovery of aquatic and terrestrial ecosystems. I have developed a mature and responsible approach to any task that I undertake or the situation that I am presented with. I can work as a team and I'm willing to contribute to the cause of any project and develop new skills.

## **EDUCATION**

University of Puerto Rico at Rio Piedras 01/2020 - Present  
Master of Science in Environmental Sciences San Juan, PR  
**GPA:** 4.00  
**Credits in Progress:** 9  
**Credits Earned:** 6

University of Puerto Rico at Mayagüez 08/2014 - 12/2018  
Bachelor of Science in Geology Mayagüez, PR  
**GPA:** 3.15  
**Credits Earned:** 141

## **WORK EXPERIENCE**

**Tropical Limnology Laboratory** 06/2020 – Present  
**Hours per week:** 18 San Juan, PR  
**Researcher**

- Support in the coordination of field samplings in Lake Las Curiás, both biological and physical-chemical.
- Assist in instrument calibration tasks in the laboratory.
- Insect monitoring tasks in the lake.
- Data management and data transcription to a digital database.
- Support to other student projects carried out on the lake as part of the biological control project of *Salvinia molesta*.
- Writing reports with the results of the field samplings, including tables, figures, and photos, and educational material for the public.

**Supervisor:** Jorge Ortiz Ph.D.

**Contact info:** +1 787-764-0000 Ext 88210, jorge.ortiz23@upr.edu

**Laboratory of Environmental Engineering and Water Resources** 01/2018 - 12/2018  
**Hours per week:** 13 Mayagüez, PR  
**Research Assistant**  
▪ Support to the mission of “Puerto Rico Testsite for Exploring Contamination Threats” (PROTECT) on water quality data collection from the Health Department of Puerto Rico.  
▪ Collection of historical data of pesticides and metals in the water.  
▪ Collection of water samples in caves.  
**Supervisor:** Ingrid Padilla Ph.D.  
**Contact info:** +1 787-409-3167 (text or voice message first), ingrid.padilla@upr.edu

## ACADEMIC RESEARCH

**“Implementation of Biological Control of Giant Salvinia (*Salvinia molesta*) in Puerto Rico.”** 06/2020 - Present  
San Juan, PR  
▪ Investigation about the biological control and the physical-chemical recovery of the aquatic ecosystem at the Lake Las Curiás, using the salvinia weevil, and monitoring of giant Salvinia.  
**Supervisor:** Jorge Ortiz Ph.D.

**“LiDar and RTK GPS SfM Monitoring of the PR-9 Landslide in Ponce, Puerto Rico (2016-2018).”** 08/2018 - 12/2018  
Mayagüez, PR  
▪ Analysis of a landslide that has been moving progressively since 2016, using Geographic Information Systems (GIS), Geographic Position Systems (GPS), drone surveys and photogrammetry techniques.  
**Advisor:** Kenneth Hughes Ph.D.

**“Hurricanes Irma and Maria GIS Landslide Inventory Project, Puerto Rico and U.S Virgin Islands.”** 10/2017 - 06/2018  
Mayagüez, PR  
▪ Identification of landslides in the municipality of Utuado using GIS, aerial images from NOAA, Digital Globe, and a frequency-ratio formula for the geologic substrate and landslides in Puerto Rico after Hurricane María. In collaboration with the USDA NRCS team and the students of the Geology Department of The University of Puerto Rico at Mayagüez. Landslide data from the municipality of Utuado was included in the USGS 2020-1022 Open Report: “Map depicting Susceptibility to Landslides Triggered by Intense Rainfall in Puerto Rico”, published in April 2020.  
**Advisor:** Kenneth Hughes Ph.D.

**“Assessment of Water Quality and Efficacy of Water Treatment Infrastructure in Southwestern Puerto Rico in the Municipality of Lajas.”** 08/2015 - 05/2016  
Lajas, PR  
▪ Training, preparation of equipment, collection of water samples and their processing from streams and drainages of the Lajas valley agricultural reserve.  
**Advisor:** David Sotomayor Ph.D.

## **PUBLICATIONS**

Garcia Lopez, X. A., S. S. Rios, S. G del Valle, K. S. Hughes, 2018, Quantification of the Effect of Geology, Soil, and Land Use on Landslides in Puerto Rico Caused by Hurricane Maria in 2017, Geological Society of America Abstracts with Programs. Vol. 50, No. 6, ISSN 0016-759 doi: 10.1130/abs/2018am-320480

## **EXTRACURRICULAR EXPERIENCE**

**Environmental Protection Agency (EPA) Watershed Management Training Certificate.** 02/2020 - 05/2020

- Completion of fifteen Web-based training modules on the fundamentals of watershed management.

**Community Emergency Response Team (CERT) Program.** 11/2019

- Disaster preparedness for the hazard that may impact Puerto Rico, Quebradillas, PR and training in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations.

**GSA On to the Future Professional Skills Short Course for Students.** 03/2019

- Workshop about resumes, cover letters, social capital, and networking. Kansas, USA

**The Geological Society of America 130th Annual Meeting.** 10/2018

- Poster Presentation "Quantification of the Effect of Geology, Soil, and Land Use on Landslides in Puerto Rico Caused by Hurricane Maria in 2017" Indiana, USA

**52nd ACS Junior Technical Meeting, 37th Puerto Rico Interdisciplinary Scientific Meeting.** 04/2018  
Gurabo, PR

- Oral Presentation of "Frequency-Ratio of Geologic Substrate and Landslides in Puerto Rico after Hurricane María."

**Geologic Field trip with the University of Puerto Rico at Mayagüez.** 04/2017

- Geologic field trip to visit different formations of sedimentary, igneous, and metamorphic rocks of Arizona and New Mexico. AZ and NM, USA

**Field trip/Camp with the University of Puerto Rico at Mayagüez.** 12/2015

- Field trip to Vieques Island to describe the mineralogy, biology, and ecology of the island. Vieques, PR

## **VOLUNTEER EXPERIENCE**

**El Verde Field Station** 09/2019 - 10/2019

**Hours per week: 30** Rio Grande, PR

**Volunteer Field Technician in the "Seedling Drought Experiment"**

- Fieldwork in El Yunque National Forest. Duties included cleaning the rain-out shelters, censuring seedlings, watering the seedlings after rains, measuring soil moisture, and data entry.

**Supervisor:** Jamaris Torres M.Sc.

## AWARDS

### GSA Joint Section Meeting Award

03/2019

- Travel award to attend the Geological Society of America (GSA) joint section meeting.

Kansas, USA

### GSA “On to the Future Scholarships”

11/2018

- Travel scholarship to undergraduate and graduate students, and recent graduates, studying geosciences, to attend their first Geological Society of America (GSA) Annual Meeting.

Indiana, USA

### Eagle Scout Rank, Troop 822 of Quebradillas, Puerto Rico

12/2012

- The highest rank of the Boy Scouts of America (BSA) conferred after completing all previous ranks requirement and the final service project. The project consisted of creating and installing an iron security door in “The Home of Battered Girls, Fray Luis Amigó” in Camuy, Puerto Rico.

Camuy, PR

## AFFILIATIONS

### Geological Society of America (GSA)

10/2018 - Present

- Subscribed Member

### Hispanic Association of Colleges and Universities (HACU)

08/2016 - Present

- Subscribed Member

### Boy Scouts of America (BSA)

08/2003 - Present

- Eagle Scout

## SKILLS

- Spanish Language: Native/Fluent
- English Language: Second Language/Fluent
- Geodetic GPS Field Techniques
- Ground Penetration Radar (GPR)
- Proficient in Microsoft Word, Excel, and Power Point
- Drone Surveys Techniques
- GIS Techniques
- Field Work Mapping Techniques
- Scoutcraft Skills
- Web Soil Survey Data
- Cloud Compare Software
- 3D Models Techniques
- Agisoft PhotoScan Software
- 3D Models Techniques
- Knowledge in Adobe Illustrator
- Water Sampling
- Soil Sampling
- Data Entry