

# Christopher E. Orozco González

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## PROFESSIONAL OBJECTIVE

“Highly accomplished Environmental Scientist and Professor with a proven track record in academia, seeking collaborations and opportunities within esteemed environmental agencies and universities, where I can apply my expertise to advance sustainable practices, conduct impactful research, and foster a passion for environmental stewardship among students and colleagues.”

## EDUCATION

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| <b>2023</b>      | <b>Blue-Green Biodiversity Summer School</b><br>Eidg. Forschungsanstalt WSL Switzerland                                                               |
| <b>2015-2022</b> | <b>Ana G. Méndez University - Gurabo Campus, Puerto Rico</b><br>Graduate School of Natural Sciences and Technology<br>Ph.D. Environmental Sciences    |
| <b>2020</b>      | <b>Ana G. Mendez University- Online Campus</b><br><b>Continue Education School</b><br>Distance Education Certification (PCED)                         |
| <b>2019</b>      | <b>University of Puerto Rico – Medical Science Campus</b><br>Informatics and Educational Resources Office<br>Professional Certificate in Data Science |
| <b>2011-2013</b> | <b>University of Puerto Rico – Medical Science Campus</b><br>Public Health Graduate School<br>Master’s degree in public health                        |
| <b>2005-2011</b> | <b>University of Puerto Rico Cayey, Campus</b><br>Social Sciences Program<br>Bachelor’s degree in social sciences                                     |
| <b>2002-2005</b> | <b>Miguel Meléndez Muñoz High School, Cayey, Puerto Rico</b>                                                                                          |

## EMPLOYMENT

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| <b>Aug.2022- present</b> | <b>The University of the Sacred Heart - San Juan, Puerto Rico</b><br>Professor of the following courses:<br>GIV 201: Information and Communication Technologies<br>GIV 301: Design and Research Technologies<br>GIV 302: Data Management<br>CFI 605: Statistics |
| <b>Jan.2019- present</b> | <b>Ana G. Méndez University- Gurabo Campus</b><br>School of Natural Sciences and Technology<br>Professor and laboratory instructor of the following courses:<br>INSC-102 - Integrated Sciences                                                                  |

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|                             | BIOL 203L General Biology Laboratory I<br>HESCL 207 Microbiology                                                                                                                                                                                                                                                                                      |
| <b>Sept.2013-Aug.2022</b>   | <b>Puerto Rico Health Insurance Administration</b><br>Evaluation and quality analyst<br>Perform quality and statistical analysis. Evaluate quality health metrics.<br>Develop and coordinate quality health initiatives with all the Managed Health Care Organizations contracted under the Government Health Plan of Puerto Rico.                    |
| <b>Aug.2018- Dec.2020</b>   | <b>Ana G. Méndez University- Gurabo Campus</b><br>School of Natural Sciences and Technology<br>Research Assistant<br>Collaborate in field studies in ecology and environmental sciences.                                                                                                                                                              |
| <b>Aug.2014-Dec.2014</b>    | <b>University of Puerto Rico, Medical Sciences Campus Public Health Graduate School</b><br>Assistant Professor<br>Course: Statistics and Methods of Research in Health Promotion and Education for Health                                                                                                                                             |
| <b>Mar. 2013 - Jun 2013</b> | <b>Legislative Internship Jorge Alberto Ramos Comas House of Representatives, Commonwealth of Puerto Rico</b><br>Hon. Carlos J. Vargas Ferrer, District 29<br>Student Intern<br>Collaborate with legislative processes. Prepare legislative projects focused on housing and the well-being of the citizens. Assist the legislator in his daily tasks. |

## **VOLUNTEER WORK**

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| <b>2017-present</b> | <b>Community educator (independent)</b><br>Conduct educational workshops and seminars on environmental conservation practices, organize community clean-up events to promote environmental stewardship, and offer training and workshops for community members interested in becoming environmental leaders.                                                                                                                             |
| <b>2017-2019</b>    | <b>Department of Natural and Environmental Resources of Puerto Rico Heritage Rivers Program, High-Value Natural Rivers, and Recreational Rivers Program of Puerto Rico</b><br>Volunteer Scientist<br>Collaborate with data management, conduct surveys and analyze results, help promote the program among communities adjacent to aquatic ecosystems, and work on different methodologies to evaluate the ecosystem services of rivers. |
| <b>2013-2015</b>    | <b>University of Puerto Rico, Medical Sciences Campus</b><br>Public Health Graduate School Program: Health of Mother and Child<br>Public Health Scientist<br>Provide input and collaborate in various tasks for data collection and management— analysis of scientific literature.                                                                                                                                                       |

## RESEARCH EXPERIENCE

- 2024**                      **Assessment of the condition of stream crossing to maintain ecological connectivity in Puerto Rico's rivers.**  
Study design, (in progress: data collection, data analysis, and study report.)
- 2024**                      **Relationship between the physicochemical parameters of Neotropical rivers and Veliidae populations.**  
Study design, (in progress: data collection, data analysis, and study report.)
- 2023**                      **Descriptive Analysis of Sampling Methods for Aquatic Macroinvertebrates**  
Study design, data collection, data analysis, and study report.
- 2023**                      **Discharges in a Neotropical River: A Descriptive Study**  
Study design, data collection, data analysis, and study report.
- 2023**                      **The Impact of Climate Change on the Ecosystem Services of Rivers**  
Study design, data collection, data analysis, and study report.
- 2018-2023 (Ph.D. thesis)**                      **Aquatic Macroinvertebrates as Bioindicators of Water Quality: A Study of an Ecosystem Regulation Service in a Tropical River**  
Study design, data collection, data analysis, and study report.
- 2018-2023 (Ph.D. thesis)**                      **Ecosystem Services of the Lapa River in the Planadas-Yeyesa Nature Reserve: a community survey**  
Study design, data collection, data analysis, and study report.
- 2018-2022 (Ph.D. thesis)**                      **Evaluation of the presence of decapods as a potential provisioning ecosystem service of a river located inside and downstream of a nature reserve.**  
I evaluated decapod censuses and water physicochemical parameters in a long-term monitoring project to address the decapods as provisioning ecosystem services.  
Study design, data collection, data analysis, and study report.
- 2013 (Master's thesis)**                      **Associated Factors to HIV/AIDS Prevention among Injecting Drug Users Participating in a Needle Exchange Program in Puerto Rico: A Survival Analysis for Cohort 2007-2010.**  
University of Puerto Rico, Medical Sciences Campus  
Public Health Graduate School  
Performed data analysis and data visualization, among other tasks.
- 2013**                      **Satisfaction with General Health and Reproductive Health in a sample of women homeless services in San Juan, Puerto Rico.**  
University of Puerto Rico, Medical Sciences Campus  
Public Health Graduate School  
Reader and research assistant of the Thesis Director, Prof. Victor M. Reyes.
- 2013**                      **Development and Validation of HCV Knowledge Questionnaire for a Sample of Puerto Rican Islanders Injecting Drug Users.**  
University of Puerto Rico, Medical Sciences Campus,  
Public Health Graduate School  
Study design, data collection, data analysis, and study report.

**2007** **Thermoregulation and Fluid Balance in Puerto Rican Female Soccer Players.**

Howard Hughes Program University of Puerto Rico, Cayey

Mentor: M. Echegaray PhD

Study design, data collection, and run statistics.

**2006** **Incidence of exon seven deletion in SMN1 and SMN2 gens among Puerto Rican patients of Spinal Muscular Atrophy.**

Howard Hughes Program University of Puerto Rico, Cayey

Mentor: M. Echegaray PhD

The study design ran a PCR analysis and worked with the study report.

## **PUBLICATIONS**

**2023** **Orozco-González, C.E.** The Impact of Climate Change on the Ecosystem Services of Rivers. Las ciencias biológicas y la construcción de nuevos paradigmas de conocimiento 2023, 101-110. DOI: 10.22533/at.ed.0472311107

**2023** **Orozco-González, C.E.;** Ocasio-Torres, M.E. Aquatic Macroinvertebrates as Bioindicators of Water Quality: A Study of an Ecosystem Regulation Service in a Tropical River. Ecologies 2023, 4, 209-228. [tps://doi.org/10.3390/ecologies4020015](https://doi.org/10.3390/ecologies4020015)

**2013** **Orozco-González, C. E.;** Reyes, V.; Rodríguez J.; Flores, J.; Arce, F.; Casanova, M.; Cotto. C.; Maisonet. M.; Mercado, M.; Ortiz, S.; Pacheco, P.; et al. Development of a scale of satisfaction and impact of socio-demographic variables on the satisfaction with needle exchange services received by a sample of people who inject drugs in Puerto Rico. Scientific International Journal 2014, 11, 18-25.

## **POSTER PRESENTATIONS**

**September 2023** Orozco-González, C.E.; Ocasio-Torres, M.E. **Ecosystem Services of the Lapa River in the Planadas-Yeyesa Nature Reserve: a community survey.** Eidg. Forschungsanstalt WSL Switzerland

**August 2023** Orozco-González, C.E.; Ocasio-Torres, M.E. **Using a community survey to assess the perception and knowledge of a river's ecosystem services.** 2023 ESA Annual Meeting. Portland, Oregon.

**July 2023** Orozco-González, C.E.; Ocasio-Torres, M.E. **Evaluation of the presence of decapods as a potential provisioning ecosystem service of a river located inside and downstream of a nature reserve.** VI Latin American Congress of Macroinvertebrates and Aquatic Ecosystems.

**June 2023** Orozco-González, C.E.; Ocasio-Torres, M.E. **Aquatic Macroinvertebrates as Bioindicators of Water Quality: A Study of an Ecosystem Regulation Service in a Tropical River.** Freshwater Sciences Conference. Brisbane, Australia

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| <b>May 2023</b>   | Orozco-González, C.E. <b>Impact of climate change on the river's ecosystem services in Puerto Rico.</b> 3 <sup>rd</sup> International Conference on Climate Change and Sustainability, Rome, Italy                                                                                                                                                   |
| <b>April 2023</b> | Orozco-González, C.E.; Ocasio-Torres, M.E. <b>Aquatic Macroinvertebrates as bioindicators of water quality: A study of an ecosystem regulation service in a tropical river</b> XX Research Meeting Ana G. Méndez University                                                                                                                          |
| <b>May 2022</b>   | Orozco-González, C.E.; Ocasio-Torres, M.E. <b>Ecosystem Services of the Lapa River in the Planadas-Yeyesa Nature Reserve: a community survey.</b> Undergraduate and Graduate Research Symposium -Ana G. Méndez University                                                                                                                            |
| <b>May 2022</b>   | Orozco-González, C.E.; Ocasio-Torres, M.E. <b>Assessing aquatic macroinvertebrates as bioindicators of water quality and pollution: A pilot project in the Lapa River in Puerto Rico.</b> Joint Aquatic Science Meeting 2022, Michigan, USA                                                                                                          |
| <b>June 2021</b>  | Orozco-González, C.E. <b>Evaluation of the ecosystem services of the Lapa River in the Cerro Las Planadas Nature Reserve.</b> 5th National and 1st International Congress of Environmental Sciences "Environmental Sciences in the Anthropocene." Colombian Network for Environmental Education and University of Applied and Environmental Sciences |
| <b>2021</b>       | Orozco-González, C.E. <b>The Impact of Climate Change on the Ecosystem Services of Rivers.</b> Fifth Latin American Congress Aquatic Macroinvertebrates and Ecosystems. anamá.                                                                                                                                                                       |
| <b>2015</b>       | Conference Medicaid/CHIP Quality: <b>Maternal and Infant Health Roundtable Improving Postpartum Visit Rates and Quality of Care</b> Puerto Rico Health Insurance Administration                                                                                                                                                                      |

## **CERTIFICATES AND WORKSHOPS**

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| <b>2024</b> | Virtual Analog Astronaut Certification<br>Mars-Moon Astronautics Academy & Research Science (MMAARS)<br>cohort in collaboration with the Puerto Rico Space Foundation |
| <b>2021</b> | Nature Education course<br>Cornell University: Professional development online course                                                                                 |
| <b>2020</b> | Bugs 101: Insect-Human Interactions<br>Coursera: University of Alberta                                                                                                |
| <b>2020</b> | Fundamental concepts for the study of the environment<br>Coursera: Austral University                                                                                 |
| <b>2020</b> | Ecosystem Services: A Method for Sustainable Development Coursera:<br>University of Geneva                                                                            |
| <b>2019</b> | Biological Diversity (Theories, Measures and Data Sampling techniques)<br>Coursera: National Research Tomsk State University                                          |
| <b>2019</b> | Workshop: SPSS<br>Ana G. Mendez University- Gurabo Campus                                                                                                             |

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| <b>2018</b> | Paleontology: Theropod Dinosaurs and the Origin of Birds University of Alberta                                                                                             |
| <b>2017</b> | Descriptive Statistics<br>Institute of Statistics of Puerto Rico                                                                                                           |
| <b>2017</b> | Quantum Geographic Information System (QGIS)<br>Institute of Statistics of Puerto Rico                                                                                     |
| <b>2017</b> | Health Literacy for Public Health Professionals<br>CDC Training Center                                                                                                     |
| <b>2012</b> | Epidemics Outbreaks: Effect on the Health System of Puerto Rico<br>University of Puerto Rico, Medical Sciences Campus<br>Training Center in Puerto Rico and Florida health |
| <b>2012</b> | Ethics and integrity in research University of Puerto Rico, Rio Piedras<br>Center for Academic Excellence                                                                  |
| <b>2012</b> | Animals and Bioethics<br>University of Puerto Rico, Rio Piedras<br>Center for Academic Excellence                                                                          |

#### **ACADEMIC FELLOWSHIPS, SCHOLARSHIPS, AND AWARDS**

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| <b>2024</b>      | Mars-Moon Astronautics Academy and Research Sciences<br>WINNER in the MMAARS scholarship (Join as a crew member in a MMARS low-fidelity analog astronautics mission at Mojave Desert, California, USA.                               |
| <b>2020-2022</b> | GRADS Scholarship<br>Ana G. Mendez University                                                                                                                                                                                        |
| <b>2021</b>      | WINNER in the best DOCTORAL THESIS PRESENTATION<br>Subcategory, with the topic: "The Impact of Climate Change on The Ecosystem Services of Rivers." Fifth Latin American Congress Aquatic Macroinvertebrates and Ecosystems. Panamá. |

#### **AFILLIATIONS**

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| <b>2024</b>         | Sierra Club – Puerto Rico                                                                                                                                                                                       |
| <b>2023-present</b> | Forest Health and Protection Working Group – US Forest Service                                                                                                                                                  |
| <b>2023-present</b> | Ecological Society of America<br>Chapter membership: <ul style="list-style-type: none"> <li>1. Early Career Ecologist Section</li> <li>2. Aquatic Ecology Section</li> <li>3. Latin American Chapter</li> </ul> |
| <b>2022-present</b> | Society for Freshwater Science                                                                                                                                                                                  |

#### **SKILLS AND KNOWLEDGE**

Experience with computer programs (Word, PowerPoint, Excel, Access, Internet); QGIS and Statistical programs: R, STATA, and SPSS; database work; scientific writing; aquatic macroinvertebrates sampling; dissolved oxygen meter; conductivity meter; pH meter; temperature meter; community surveys; Scientific mentoring and, scientific education.

