FRANCISCO J. GUERRERO B. | 2788 SW Pickford St., Apt. 101, Corvallis, OR 97333
guerrero.francisco.jose@gmail.com | 541-829-2371

Education

PhD-Dual Major**: Water Res. Science-Sustainable Forest Management**-Oregon State University

M.Sc.: **Hydrosystems** – Pontificia Universidad Javeriana, Colombia

B.Sc.: **Aquatic Biology** – Universidad del Magdalena, Colombia

Relevant Work Experience

Pacific Northwest National Laboratory
Corvallis, OR
05/2022 – Present

ICON Science and Communication Research Associate

- To design and implement a strategic data-science communication plan across the River Corridors Science Focus Area (Rivers Hydro-biogeochemistry), including a global assessment of river respiration (WHONDRS), Data-Model Integration through AI (ModEx), ICON, and ICON-ModEx
- To create and implement workflows for scientists at the River Corridors SFA to integrate strategic communication tools along the scientific production lifecycle (from Ideation to Publication), including collaborative proposal writing, crowdsourced data collection and analysis, inclusive data communication for Indigenous communities, collaborative writing of scientific manuscripts, publication, and engagement
- To design and implement communication infrastructure (workshops, panels, working groups) across the River Corridors SFA and external organizations

National Center for Ecological Analysis and Synthesis UC-Santa Barbara
Corvallis, OR
08/2020 – 01/2021

Science Communication Liaison

- Designed, delivered, and evaluated science communication workshops, seminars, webinars, and coaching sessions for a network of 100+ scientists from NCEAS and Synthesis Working Groups encompassing a broad range of researcher/stakeholder communities
- Developed, communicated, and implemented the First Open Panel on Open Science Communication within the Annual Conference of the Society for Open, Reliable, and Transparent Ecology and Evolutionary Biology (Sortee)
- Assisted with developing the Science Solutions program at COMPASS designed to connect recent scientific findings from NCEAS Synthesis research with relevant stakeholders, including policymakers.
- Assisted in elaborating a proposal (for a $20,000,000 NSF Grant) aimed at creating an Institute for Environmental Open Science
- Assisted or attended multiple training sessions on Open Science, including the Openscapes Champions session on “Data, coding, and team culture strategies for future us”(Facilitator) and “Reproducible Research Techniques for Synthesis: A five-day immersion into widely adopted R-based tools for open science” (Attendee)

University of Wisconsin-Madison-Wisconsin Dept. of Nat. Resources
Madison, WI
12/2018 – 12/2019

Post-doctoral Water Science-Policy Fellow

- Developed, communicated, and implemented results from a research project titled: “Improving Water Quality Assessments Via Effective Communication of Statistical Model Outcomes.”
- Developed hourly Total Phosphorus and Total Suspended Solids models to capture the effects of short-intense storms on the water quality of WI aquatic ecosystems (R-based scripting)
- Developed science communication training materials and explored the role of knowledge brokers in synthesizing and articulating science to support policy formulation at WDNR
- Participated in regular planning meetings held by the Water Quality Bureau to discuss advances and tasks related to various projects, including TMDL assessments, emerging contaminants, biomonitoring
- Assisted in writing draft language for policy related to monitoring phosphorus concentrations in Wisconsin streams.
- Co-authored a scientific paper based on the collective experience of several Wisconsin Water-Science Policy Fellows cohorts

Oregon State University
Corvallis, OR
03/2013 – 11/2018

Researcher

- Collected and/or analyzed hydro-sedimentological data corresponding to ~4000+ water years across 500+ sampling locations between Western Oregon and Wisconsin, including a 1500-year-long sediment core
- Created 30+ scientific communication products between invited talks (7), publications (5), and conference presentations (19) about particulate carbon fluxes in aquatic ecosystems
- Raised $300,000+ in funding in awards and fellowships, including a $243,000 competitive scholarship for international doctoral studies (first place among 450+ applications)
- Reviewed 20+ applications for funding and scholarships across several scientific organizations, including NOAA, USGS, and the Society of Freshwater Sciences (SFS)

Multiple Organizations
Bogota, Colombia
12/2006 – 12/2012

Water Resources Consultant

- Supervised working teams tasked with the development of a methodology for the design of a national hydro-meteorological network in Colombia for the National Meteorological Institute, as well as national guidelines for establishing environmental flows for the tropical fluvial system with the highest sediment yield of any large river in South America (Magdalena River, Colombian Andes), in collaboration with The Nature Conservancy.
- Reviewed and synthesized existing scientific knowledge on best management practices in wastewater management to formulate indicators of the environmental performance of wastewater collection and treatment systems.
- Performed water quality data analysis for a geospatial water quality model across fluvial networks in Bogota, a dense urban area with 8 million inhabitants.

Publications
(selected)

- Voter. C. B., Guerrero-Bolaño, F., A. Latzka, B. Maitland & J. Hauxwell. 2021. Adaptable University-Agency Early-Career Fellowship Program Creates a Win-Win-Win for Wisconsin's Waters. Journal of Contemporary Water Research and Education 174: 139-154.
- Graça, M. A. S., V. Ferreira, C. Canhoto, A. C. Encalada, F. Guerrero-Bolaño, K. M. Wantzen & L. Boyero. 2015. A conceptual model of litter breakdown in low order streams. International Review Hydrobiology 100 (1): 1–12
- García, H. A, Guerrero-Bolaño, F. & N. Obregón-Neira. 2009. A nested genetic algorithm for the numerical solution of non-linear coupled equations in water-quality modeling. 2nd International Symposium on Computational Mechanics (ISCM II).12th International Conference on Enhancement and Promotion of Computational Methods in Engineering and Science (EPMESC XII). Hong Kong – Macau
- Castillo, C. Cepeda, C. Díaz, A. Domínguez, E., García, P., Guerrero, F., Hassidoff, A., Saavedra, L., Segura, A. 2008. Evaluación del nivel de aplicación de protocolos de modelación en trabajos sobre simulación del proceso lluvia-escorrentía. Avances en Recursos Hidráulicos 19: 55-70. ISSN 0121-5701
- Guerrero-Bolaño, F., A. Manjarrés-Hernández y N. Nuñez-Padilla. 2003. Los macroinvertebrados bentónicos de Pozo Azul (cuenca del río Gaira, Colombia) y su relación con la calidad del agua. Acta Biológica Colombiana 8 (2) 43-55 p.

Professional References

Mary Santelmann
(Former Supervisor)
Director-Water Resources Graduate Program | Oregon State University
Email: santelmm@geo.oregonstate.edu | Phone: 541 602 4377

Ben Halpern
(Former Supervisor)
Director-National Center for Ecologican Analysis and Synthesis| University of California-Santa Barbara
Email: Halpern@nceas.ucsb.edu | Phone: 805 259 7474

Alex Latzka
(Peer)
Fisheries Systems Biologist| Wisconsin Department of Natural Resources
Email: Alexander.Latzka@wisconsin.gov | Phone: 608 616 2073