

María Catalina Sevillano Rivera, PhD, EIT

sevillanorivera.maria@gmail.com | 1 (617) 416-2593 | LINKEDIN: [maria-sevillano-rivera](#) | <https://msevi.github.io/>

Environmental Engineer with 5 + years of research experience in metagenomic sequencing analyses to generate insights about microbial populations in drinking water systems. Seeking to apply bioinformatics and data analysis skills to other microbiomes in an industry setting.

EDUCATION

Northeastern University

Doctor of Philosophy (Ph.D.) Civil and Environmental Engineering

Graduation: Sep 2021

Boston, MA, USA

Technical University of Madrid,

Master in Environmental Engineering

Mar 2014

Madrid, Spain

University of Puerto Rico

Bachelor of Science in Civil Engineering (Magna Cum Laude)

Jun 2012

Mayagüez, Puerto Rico

RESEARCH EXPERIENCE

Northeastern University

Research Assistant / Teaching Assistant

Jan 2016-Aug 2021

Boston, MA

- Processed and analyzed metagenomic data from DNA sequencing of drinking water microbiomes. Performed QC, *de novo* assembly, binning, and annotation. Used multivariate statistical analyses to contextualize results.
- Developed Rmarkdown documents and shiny apps to share results and exploratory analyses internally.
- Consistently and successfully executed laboratory work with molecular biology tools, such as DNA extraction, PCR, qPCR and analytical tools such as TOC analyzer. Gained familiarity with flow cytometry staining and cell counts.
- Taught lectures for *Environmental Engineering Laboratory*, organized materials and prepared solutions for students' experimental work.
- Supervised and trained students in experimental design and general lab work practices.
- Presented scientific information at national and international conferences. Collaborated with researchers in Europe and USA to publish high quality research articles. Worked effectively even when met with cultural or geographic issues.
- Designed several sampling campaigns and addressed all related logistical challenges. This included material and expense budgeting, travel scheduling, and coordination of sampling participants.

Massachusetts Institute of Technology

Summer Research Intern

Jun 2011-Aug 2011

Boston, MA

- Responsible for continuous upkeep of bacterial cultures of several strains of *Vibrio spp.* Recorded their respective growth curves, and performed culture staining for microscope visualization.

University of Puerto Rico

Undergraduate Researcher

Aug 2010-May 2011

Mayagüez, Puerto Rico

- Performed enrichment and isolation of phthalate degraders from landfill leachate and monitored several biological and chemical parameters.

University of Michigan

Summer Research Intern

Jun 2010-Aug 2010

Ann Arbor MI

- Collected samples from a full-scale drinking water treatment plant and distribution system. Concentrated biomass of drinking water samples through filtration methods, performed DNA extraction, and HPC.

RELEVANT WORKSHOPS

IDWT

Institute in Drinking Water Treatment

Aug 2018

Northampton, MA

EDAMAME

Explorations in Data Analysis for Metagenomic Advances in Microbial Ecology

Aug 2017

Hickory Corners, MI

SKILLS

Programming: Proficient with R (tidyverse, shiny), familiar with SQL, Python and Bash. | **Software:** familiar with SimaPro, ArcGIS, AutoCAD, Cytoscape | **Languages:** Fully Bilingual (Spanish and English).