

# MARIA CATALINA SEVILLANO RIVERA, EIT

sevillanorivera.maria@gmail.com | 1 (617) 416-2593 | LINKEDIN: maria-sevillano-rivera

## EDUCATION

### **Northeastern University**

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

Dissertation: "*Exploring microbial populations in drinking water systems: Application of metagenomics towards characterization of functional potential*"

**Graduation: Sep 2021**

**Boston, MA, USA**

### **Technical University of Madrid,**

#### **Master in Environmental Engineering**

Final project: LCA of a biomass power plant

**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-Present**

**Boston, MA**

- Designed several sampling campaigns and addressed all related logistical challenges. This included material and expense budgeting, flight scheduling, and coordination of sampling participants.
- Consistently and successfully executed laboratory work with molecular biology tools, such as DNA extraction, PCR, qPCR and analytical tools such as TOC analyzer.
- Processed and analyzed metagenomic data from DNA sequencing using bioinformatic and statistical approaches.
- Supervised and trained Masters and Undergraduate students in experimental design and general lab work practices.
- Taught lectures for *Environmental Engineering Laboratory*, organized materials and prepared solutions for students' experimental work.
- Presented scientific information at National and International conferences and collaborated with researchers in Europe and USA to publish high quality research articles. Worked effectively even when met with cultural or geographic issues.

### **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.
- Aided in fabrication of microfluidic reactors.

### **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.
- Participated in the reactor design and prepared the experimental set-up for degradation experiments.

### **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 performed 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).