

Miraflor Santos

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EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY WOODS HOLE OCEANOGRAPHIC INSTITUTION

Doctorate in Biological Oceanography

Coursework: Applied Statistics, Ecology, Scientific Machine Learning

Boston and Woods Hole, MA
Aug 2019 - 2025

NEW YORK UNIVERSITY, ABU DHABI (NYUAD)

B.S. (Hons.) in Biology (GPA: 3.78/4)

Abu Dhabi, UAE
Aug 2014 - May 2019

EXPERIENCE

SOSIK LAB

Graduate Assistant

- Implemented object detection and classification algorithm for automated Ichthyoplankton shadowgraph analysis from scratch
- Developed method to detect heterotrophic bacteria from decadal time series with the Attune Flow Cytometer
- Implemented DADA2 algorithm for taxonomic classification of genomic microbial time series

Woods Hole, MA
Aug 2019 - Present

AMIN LAB

Research Assistant

- Worked with Prof. Shady Amin on automated analyses of genetic, transcriptomic, and metabolomic data from of co-culturing experiments with phytoplankton and bacteria
- designed and implemented first microbial time series observations of genetic diversity in the Arabian Gulf from scratch

Abu Dhabi, UAE
Aug 2018 - May 2019

LONG LAB

Research Assistant

- developed bubble traps to measure ebullition of oxygen bubbles from supersaturated seagrass meadows to constrain uncertainty in eddy covariance estimates of seagrass productivity
- interviewed and produced short documentary on the potential for seagrass meadows to act as long term carbon sink

Woods Hole, MA
May 2017 - Aug 2017

MINISTRY OF CLIMATE CHANGE

UNFCCC Student Delegate for the United Arab Emirates

- tracked negotiations on damage and loss at COP22
- informed UAE delegation on the scientific basis for climate change and ongoing oceanographic research on climate change in the Arabian Gulf and the Indian Ocean

Abu Dhabi, UAE
Aug 2016 - Dec 2016

PUBLICATIONS

- Ahmed A. Shibl, Ashley Isaac, Michael A. Ochsenkühn, Anny Cárdenas, Cong Fei, Gregory Behringer, Marc Arnoux, Nizar Drou, **Miraflor P. Santos**, Kristin C. Gunsalus, Christian R. Voolstra, Shady A. Amin **Diatom modulation of select bacteria through use of two unique secondary metabolites** In of the National Academy of Sciences Nov 2020, 117 (44) 27445-27455; DOI:10.1073/pnas.2012088117

SKILLS

- **Programming Languages:** Python, Julia, R, Matlab
- **Other Technologies:** Latex, HTML, CSS, Adobe Suite

LEADERSHIP AND HONORS

- Awarded **Ocean Ridge Initiative Fellowship** (First Year Graduate Fellowship) Sep 2019 - Sep 2020
- worked for Grad Students for a Healthy MIT to **increase mental health coverage** from 12 free sessions with 20 USD copay after to 52 sessions with 5 USD copay after for all graduate students Sep 2019 - Feb 2020
- Awarded **NYU Abu Dhabi Full Merit Scholarship** (70,000 USD per year scholarship) Aug 2014 - May 2019
- NYU Global Leaders in Change Fellow (won a **fellowship at a Global Leadership Conference in Shanghai, China** to learn about climate change policy and education in China) Jun 2017 - Aug 2017
- Won UNESCO-Salon Youth Video Competition and premiered winning film about **Education for Sustainable Development** at the Paris Climate Change Conference Jul 2015 - Dec 2015