Lawrence Angelo Hortinela Balitaan

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Education

Aug 2020 | **BS in Oceanic and Atmospheric Sciences**, University of California, San Diego (UCSD)
GPA: 3.54

May 2018 | **Physics for Transfer**, Santa Barbara City College (SBCC)

Work Experience

Nov 2020 – Present | **Research Data Analyst I | Scripps Oceanography | La Jolla, CA**

- Run, review, edit, and verify automated whale call detection and classification software in MATLAB
- Scan through, annotate, analyze, and interpret active and passive acoustic recording data for baleen whale calls and anthropogenic sounds using MATLAB
- Write reports including charts, tables, plots, and other visual aids to document project steps and progress and assist with manuscript preparation
- Advisors: Simone Baumann-Pickering, John Hildebrand, Ally Rice

June 2019 – Sept 2019 | **Undergraduate Research Intern | California Current Ecosystem Long Term Ecological Research (CCE LTER) | La Jolla, CA**

- Researched how the spatiotemporal redirection of mesoscale eddies driven by El Niño affect plankton distribution in the California Current System
- Used MATLAB to test ROMS-NEMURO, a coupled physical-biogeochemical ocean model
- Created composite time series and correlation plots of 11 physical, biological, and chemical variables during El Niño, normal, and La Niña conditions
- Characterized significant trends after analyzing the relationships between variables
- Advisors: Art Miller, Nathali Cordero-Quirós

Research Experience

Nov 2018 | **Day-Long R/V Sproul Research Cruise | Scripps Oceanography | San Diego, CA**

- Measured seawater temperature, salinity, and chlorophyll at various depths and distances off the coast of Point Loma using a CTD (Conductivity, Temperature, Depth) and chlorophyll fluorometer
- Collected ocean current profiles and bathymetric data using an Acoustic Doppler Current Profiler (ADCP)
- Collected atmospheric data using a radiosonde, thermometer, barometer, anemometer, and hygrometer
- Collected plankton using a tow net and analyzed contents through microscopy to see biological diversity

Peer-Reviewed Publications

2020 | Cordero-Quirós, N., Miller, A. J., Pan, Y., **Balitaan, L.**, Dussin, R., and Curchitser, E. (2020). Physical-ecological response of the California Current System to ENSO events in ROMS-NEMURO. *Ocean Dynamics, sub judice.*

Presentations

Mar 2020 | **Ocean Sciences Meeting 2020 | American Geophysical Union | San Diego, CA**

- Co-author for the presentation, *Composite Response of the California Current System to ENSO in the ROMS-NEMURO*

Sept 2019 | **CCE LTER Presentation | La Jolla, CA**

- Presented my research results of the multiannual effects of El Niño on plankton in the California Current Ecosystem using a physical-biogeochemical model to experts in plankton ecology, chemical oceanography, and climate science

Outreach

Apr 2017, 2018 | **Science Discovery Night | Citrus Glen Elementary School | Ventura, CA**

- Educated students and their families by performing physics experiments related to electricity and magnetism, optics, acoustics, and thermodynamics with Physics Club (2018)
- Educated students and their families on zoology by engaging them with interactive live and taxidermic animals with Biology Club (2017)

Apr 2017, 2018 | **Science Night | Harding Elementary | Santa Barbara, CA**

- Educated students and their families by performing physics experiments related to electricity and magnetism, optics, acoustics, and thermodynamics with Physics Club (2018)
- Educated students and their families on zoology by engaging them with interactive live and taxidermic animals with Biology Club (2017)

Mar 2017, Apr 2018 | **Noche de Ciencias | Casa de la Raza | Santa Barbara, CA**

- Educated students with underprivileged and underrepresented backgrounds and their families by performing a wide range of physics experiments to promote awareness on their ability to pursue careers in physics and engineering with Physics Club (2018)
- Educated students with underprivileged and underrepresented backgrounds and their families by engaging them with interactive live and taxidermic animals to promote awareness on their ability to pursue careers in STEM with Biology Club (2017)

Mar 2017, 2018 | **Science Discovery Day | SBCC | Santa Barbara, CA**

- Educated the public by performing electricity and magnetism physics experiments with Physics Club (2018)
- Increased climate change awareness and educated the public on ocean science with Geology Club (2018)
- Educated students and their families on zoology by engaging them with interactive live and taxidermic animals with Biology Club (2017)

Mar 2017, 2018 | **Science Night | Monroe Elementary | Santa Barbara, CA**

- Educated students and their families by performing physics experiments related to electricity and magnetism, optics, acoustics, and thermodynamics with Physics Club (2018)
- Educated students and their families on zoology by engaging them with interactive live and taxidermic animals with Biology Club (2017)

Feb 2017, 2018 | **Science Night | Adams Elementary | Santa Barbara, CA**

- Educated students and their families by performing physics experiments related to electricity and magnetism, optics, acoustics, and thermodynamics with Physics Club (2018)
- Educated students and their families on zoology by engaging them with interactive live and taxidermic animals with Biology Club (2017)

Leadership

Aug 2017 – May 2018 | **Vice President of Physics Club | SBCC | Santa Barbara, CA**

- Led outreach programs to increase physics awareness to children
- Strengthened a joint program between University of California, Santa Barbara Physics Club and SBCC Physics Club which helps SBCC STEM students ease the transfer process through networking and academic advising
- Coordinated events with various on-campus science and diversity clubs to expand Physics Club's influence
- Planned workshops to provide members the ability to design experiments to practice the scientific method
- Created interactive how-to videos of physics experiments to improve member retention

Honors

May 2018 | **Tau Sigma Honors Society | Eta Psi**

2018 – 2020 | **Provost Honors | UCSD**

2015 – 2018 | **SBCC Honors Program**

2015 | **President's Honor Roll | SBCC**

Computational skills

Programming Languages | MATLAB

Tools and Software | GitHub, LaTeX

References

Dr. Simone Baumann-Pickering:

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Associate Researcher in Biological Oceanography
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