

Luke Vincent Colosi

Research Interests

Air-sea Interactions, Surface Gravity Waves, Remote Sensing.

Education

- | | | |
|-----------|--|---|
| DEC. 2020 | | BS in Oceanic and Atmospheric Sciences , University of California, San Diego (UC-GPA: 3.586) |
| DEC. 2020 | | Minor in Mathematics , University of California, San Diego (Minor-GPA: 3.74). |

Relevant Course work

- | | | |
|---------------|--|--|
| OCEAN SCIENCE | | Satellite Remote Sensing (Graduate Level).
Analysis of Physical Oceanographic Data (Graduate Level).
Geophysical Fluid Dynamics.
Fluid Dynamics.
Observational Physical Oceanography.
Chemistry of the Atmosphere and Oceans.
Physics of the Atmosphere.
Introduction to Physical Oceanography.
Introduction to Ocean Waves. |
| MATHEMATICS | | Introduction to Applied Mathematics I (Graduate Level).
Introduction to Probability.
Applied Complex Analysis.
Elements of Complex Analysis.
Introduction to Partial Differential Equations.
Applied Linear Algebra. |

Research Experience

- | | | |
|-------------------|--|--|
| DEC. 2020–PRESENT | | Staff Research Associate 1 - Air-Sea Interaction Laboratory at Scripps Institution of Oceanography (SIO)
My research aims to use novel remote and in-situ observations to improve our understanding of submesoscale air-sea interaction processes and how they affect large scale processes in the ocean. The focus is to analyze observations of the upper ocean made by Wave Gliders. Advisors: Luc Lenain , Nicholas Pizzo, Laurent Grare. |
| 2017–2020 | | Undergraduate Student Researcher - SIO
My research at Scripps aims to improve our understanding of wave and wind climates using satellite remote sensing observations. The focus is to determine how local atmospheric conditions influence the intraannual variability of the surface wave field. Advisors: Sarah Gille , Bia Villas Bôas. |

Publications and Presentations

- 2020 | **Colosi, Luke V**, Sarah T Gille, and Ana B Villas Bôas. The seasonal cycle of significant wave height in the ocean: Local vs remote forcing. *Journal of Geophysical Research: Oceans*, in finalizing stage
- 2020 | **AGU Ocean Science Meeting Poster**
The Seasonal Cycle of Significant Wave Height in the Ocean: Local vs Remote Forcing.
- 2019 | **Summer Undergraduate Research Fellowship Symposium - SIO**
I presented a poster on intraannual variability of waves and winds with further developments in statistical methods and quantifying uncertainties.
- 2019 | **Undergraduate Research Conference - University of California, San Diego (UCSD)**
Participant in the campus wide multidisciplinary research conference for undergraduate students where I presented to university professors and peers my ongoing research on intraannual variability of waves and winds, at global and regional scales, and its possible implications to the sea state.
- 2018 | **Scripps Undergraduate Research Symposium - SIO**
I presented a poster on global and regional analysis of the annual variability of surface wave significant wave height.

Fellowships and Awards

- 2018 | **Summer URS Hiestand Scholarship for cross-disciplinary Engineering and SIO projects** – SIO, University of California, San Diego
- 2017–2019 | **Provost Honors at University of California, San Diego** – Awarded during Fall 2017, 2018, and 2019, Winter 2019 and 2020, and Spring 2017, 2018, and 2020 quarters.

Work Experience

- 2018 | **Coordinator for the Sandman Triathlon, California State Parks Santa Cruz, CA** – Assisted with organizing the Sandman Triathlon supporting California State Parks and headed coordination of the transition area.
- 2015–2018 | **California State Parks Ocean Lifeguard, Santa Cruz, CA** – Patrolled 3 miles of coastline and monitored up to 300 beach patrons to ensure beach and aquatic safety. Monitored off-road recreational facility, Hollister Hills. Executed medical procedures and aquatic rescues in communication with diverse agencies including Firefighters, State Park Rangers, and ground ambulance.

Teaching Experience and Community Involvement

- 2020-Present | **Software Carpentry Instructor** - Certified Software Carpentry instructor responsible for two day workshops teaching best practices for scientific computing to a broad range of audiences. Workshop curriculum focuses on the Unix shell, version control with Git, and programming in Python.
- 2019-2020 | **Software Carpentry Workshop Assistant** - Assistant for the Software Carpentry Workshop at SIO, San Diego, CA for Ocean and atmospheric science majors at UCSD (Summer 2019) and the Scripps Summer Undergraduate Research Fellowship program (remote; Summer 2020).

2020	Moderator for SIO undergraduate majors' quarterly meeting on "How to get into a Summer REU". I led group discussions guiding students interested in beginning ocean and atmospheric sciences research.
2019	Introduction to Academic Tutoring of Secondary School Students - Tutor for intermediate algebra at Gompers Preparatory Academy, San Diego, CA.
2015-2018	Junior Lifeguard Instructor, California State Parks Santa Cruz, CA - Educated 6 to 14 year olds on lifeguarding skills and led discussions about ocean conditions and aquatic safety.
2013	Seymour Marine Discovery Center Exhibit Guide, Santa Cruz, CA - Educated the public about exhibits involving marine organisms in their ocean environment.

Extracurricular Activities

2017-2019	Student Minister - Served and supported the student community at the UCSD Newman Center through leading community building events, coordinating off campus retreats, and participating in social justice activities such as feeding the homeless and food/clothing drives.
	Hobbies - Running, Surfing, and Rock Climbing.

Computational skills

OPERATING SYSTEMS	Unix-based operating systems.
PROGRAMMING LANGUAGES	Python, Bash, Shell-Script and MatLab.
TOOLS AND SOFTWARE	Jupyter notebooks, LaTeX, and version control systems (Git).

External Funding Applied For

American Meteorological Society Graduate [Fellowship](#).

References

Dr. Sarah Gille:

sgille@ucsd.edu

Scripps Institution of Oceanography
9500 Gilman Drive #0230
La Jolla, CA 92093
+1 858-822-4425

Dr. Fiamma Straneo:

fstraneo@ucsd.edu

Scripps Institution of Oceanography
9500 Gilman Drive #0206
La Jolla, CA 92093-0206
+1 858-822-1413

Dr. Richard Salmon:

rsalmon@ucsd.edu

Scripps Institution of Oceanography
9500 Gilman Drive #0213
La Jolla, CA 92093-0213
+1 858-534-2090