Athina Lange, Ph.D | Coastal Scientist

Seeking a Coastal Scientist position to leverage my passion for understanding the environment and proven expertise in data analysis, modeling and remote sensing to protecting our coastal regions.

Contact

Phone   (858) 356-8859

Email   drathinalange@gmail.com

LinkedIn   Athina Lange

Technical Skills

- Coastal Oceanography
- Deep Learning
- Machine Learning
- Computer Vision
- Data Analysis and Visualization
- Numerical Modeling (SWASH, SWAN)
- Scientific Coding (MATLAB, Python)

Soft Skills

- Project Management
- Problem-Solving
- Technical Writing
- Public Speaking
- Adaptability
- Creativity

Language

English (Native)

French (Fluent, DALF C1)

German (Fluent, Abitur)

Certificates

FAA Part 107, UAV Pilot

PADI Advanced Open Water Scuba

Other Interests

Snowboarding

Knitting

Drone Piloting

- Skilled technical professional with a rigorous scientific and project management background, conducting innovative research in coastal processes.
- Experienced in coordinating complex field campaigns to achieve diverse research objectives and utilizing cutting-edge technology, including remote sensing, numerical modeling, and deep learning, to enhance data collection and analysis.

Education

2018 - 2023

Scripps Institution of Oceanography | San Diego, CA

Doctor of Philosophy (Ph.D), Oceanography

Thesis: Improved wave runup forecasts using remote observations and numerical models
Advisors: Mark Merrifield and Bob Guza

2014 - 2018

University College Dublin | Dublin, Ireland

Bachelor of Science (B.Sc.), Theoretical Physics

Experience

2023 - Present

Scripps Institution of Oceanography | San Diego, CA

Postdoctoral Scholar

- Developing an innovative automated UAV rectification tool leveraging airborne LiDAR surveys and computer vision algorithms, reducing human oversight and enhancing efficiency in coastal monitoring projects.
- Coordinating a four-month-long field campaign involving cameras, LiDAR, and in-situ surveys to collect a comprehensive dataset of beach evolution during a beach nourishment.

2019 - 2023

Scripps Institution of Oceanography | San Diego, CA

Graduate Researcher

- Improved wave runup forecasting using a multidisciplinary approach:
  - Utilized nearshore numerical models to investigate the effect of nearshore bathymetry on wave runup for coastal hazard forecasting.
  - Used in-situ observations to better understand and quantify the nearshore wave field and create a more accurate boundary condition for numerical models.
  - Employed UAV remote sensing data to develop a neural network / deep learning to identify wave crests and improve bathymetry estimates.
- Organized a comprehensive four-month-long field campaign, overseeing the deployment and operation of 17 specialized instruments and managing a team of 15 personnel to ensure the successful execution of data collection and multiple research objectives.