

## Seeking a PhD student in coastal physical oceanography to begin Fall 2018

**Project details:** We are looking for a PhD student to join a team of researchers on a 3-year National Science Foundation funded project **investigating how river water mixes into the coastal ocean, and the role the leading edge of the discharge plays**. Fundamental gaps exist in our understanding of the role of processes at the seaward boundary of a river discharge into the coastal ocean, and particularly how these flows affect the physics of circulation and flow near the river mouth and throughout the coastal region. This work will result in a better understanding of the details of processes at the riverine-ocean interface, enabling better predictions of these processes, and thus improve the predictive capabilities of large-scale models. This work will be pursued using 21<sup>st</sup> century current, hydrography and microstructure measurements to assess mixing using various techniques, as well as hydrostatic and non-hydrostatic realistic and idealized numerical models. The student would be advised by Drs. Kimberly Huguenard and Kelly Cole at the University of Maine. Candidates will also be expected to work with participating senior scientists and graduate students at UMassD and UConn to explore the dynamics associated with this type of boundary and their impacts for the understanding of similar water mass boundaries at a variety of scales throughout the world's oceans.

The position will afford the successful candidate numerous skill building and professional development opportunities, including the ability to build, analyze and manage large geophysical datasets, publishing journal articles and networking and presenting work at professional conferences.

**Qualifications:** We are searching for a creative, motivated student with a MS degree in physical oceanography, coastal engineering or closely related field, who is interested in solving coastal problems. The candidate should have strong written and verbal communication and analytical skills and work well in a research environment. Proficiency in MATLAB, Python or a similar programming language and a strong quantitative background are required. The candidate should be interested in numerical modeling, in addition to collecting and analyzing field data.

**Location:** The student will join a team of 5 other graduate students and 1 postdoc advised by Dr. Kimberly Huguenard at the University of Maine Department of Civil and Environmental Engineering in Orono, Maine. The student will be co-advised by Dr. Kelly Cole in the Oceanography program at the School of Marine Sciences at the University of Maine.

**Application procedure:** Please submit application materials to the University of Maine's graduate School: <https://umaine.edu/graduate/apply/>. We encourage prospective students to send a CV and cover letter to Drs. Kimberly Huguenard ([kimberly.huguenard@maine.edu](mailto:kimberly.huguenard@maine.edu)) and Kelly Cole ([kelly.cole@maine.edu](mailto:kelly.cole@maine.edu)) by March 31<sup>st</sup>, 2018, in addition to their graduate application.

**More information:** Please contact Kimberly Huguenard ([kimberly.huguenard@maine.edu](mailto:kimberly.huguenard@maine.edu)) and Kelly Cole ([kelly.cole@maine.edu](mailto:kelly.cole@maine.edu)) with questions. The University of Maine is an equal opportunity/affirmative action institution.