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Department of Marine Sciences
Presents a Seminar By

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Impact of river runoff in the coastal ocean: A glider perspective

During fall/winter off the Oregon coast, oceanographic surveys are relatively scarce because of rough weather conditions. This challenge has been overcome by the use of autonomous underwater gliders deployed along the Newport hydrographic line (NH-Line) nearly continuously since 2006. The discharge from the coastal rivers between northern California and the NH-Line reach several thousands of cubic meters per second, and the peaks are comparable to the discharge from the Columbia River. This freshwater input creates cross-shelf density gradients that together with the wind forcing and the large-scale Davidson Current results in strong northward velocities over the shelf. A persistent coastal current during fall/winter, which the authors call the Oregon Coastal Current (OCC), has been revealed by the glider dataset. Based on a two-layer model, the dominant forcing mechanism of the OCC are quantified: buoyancy, wind stress and the Davidson Current. The OCC is a surface-trapped coastal current, and its geometry is highly affected by the wind stress, consistent with Ekman dynamics. The wind stress has an overall small direct contribution to the alongshore transport; however, it plays a primary role in modifying the OCC structure. The OCC is a persistent, key component of the fall/winter shelf dynamics and influences the ocean biogeochemistry off the Oregon coast.

Host: María Aristizábal
Time & Date: 11:00 am, Friday, November 13, 2015
Place: Marine Sciences Building, Seminar Room 103

Please see this page for cancelations and additional seminar information,
email marinesciences@uconn.edu, or call 860-405-9152 or 860-405-9151