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Experimental Findings of Fixed Oscillating Water Column Wave Energy Converter System through the Testing Expertise and Access for Marine Energy Research Program

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3:30 pm – 4:30 pm Seminar

Zoom Meeting ID: 935 9608 7383
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Abstract

With a rising interest in blue economy applications of wave energy, a shift in the design process for wave energy converters needs to be considered for each alternate application. Autonomous underwater vehicle (AUV) docking powered by a wave energy converter (WEC) has been investigated over the past decade, but as separate technologies. Recent developments in the blue economy have brought the two technologies together in a proposed design of an underwater docking system for a WEC-based station. This talk presents the findings of a geometric study on a fixed version of the proposed oscillating water column (OWC) type WEC. The geometry was tested at Oregon State University's O.H. Hinsdale Wave Research Laboratory in the Directional Basin. A review of previous OWC type WECs was conducted to design a novel geometry. This geometry was tested to investigate power performance relative to incident wave angle, wave height, and period. This experimental work was supported by the Testing Expertise and Access for Marine Energy Research (TEAMER) program.

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