

Moving Ship Tomography and Passive Processing Approaches to Characterize Environmental Parameters

Kay L. Gemba, Ph.D.

Associate Professor of Physics
Naval Postgraduate School

Wednesday, November 17
3:30 pm – 4:30 pm Seminar

Zoom Meeting ID: 935 9608 7383
Passcode: OREseminar



Scan code for website & Zoom link

Abstract

Passive processing approaches provide utility to characterize acoustically relevant parameters to improve environmental awareness. Of particular interest are transiting surface vessels due to their high acoustic intensity and wide-band energy. To understand quantitatively the value-added of moving ship observations, a controlled experiment was conducted in the Santa Barbara Channel in 2016. These data are used in a data-assimilation approach, initialized with an oceanographic circulation model. The estimated vertical sound-speed structure compares well with ground-truth observations. Current work focuses on translating that approach to ships of opportunity, and I also will discuss a proof-of-concept of how a recording of an uncontrolled source can be processed to inform about parameters of interest.