

Weekly CEA FM Seminar: Fall 2017



JOHNS HOPKINS
Center for Environmental
& Applied Fluid Mechanics

Date: **Friday, December 1, 2017**

Time: 11:00 AM

Location: Hodson Hall # 210

Speaker: **Dr. Scott E. Wunsch** (JHU - APL)

Title: ***"Internal Waves in Variable Stratification"***

Abstract

Internal waves are oscillatory motions of a density-stratified fluid. They are ubiquitous in Earth's oceans and atmosphere, transporting momentum and energy and playing an important role in climate. In varying stratification, internal waves transfer energy to harmonic modes. This nonlinear process may contribute to the transfer of internal wave energy from large to small scales in geophysical flows. This seminar will explore harmonic generation in variable stratification using weakly nonlinear theory, numerical simulation, and laboratory experiment.

Bio

Scott Wunsch is a member of the principal professional staff at the Johns Hopkins University Applied Physics Laboratory. He specializes in fluid physics, focusing on the dynamics of Earth's oceans and atmosphere, especially nonlinear waves, turbulence, and naval applications. Prior to joining Johns Hopkins, Scott was a post-doctoral research fellow and then staff member at Sandia National Laboratories, where he studied turbulent mixing in fluids with applications to inertial confinement fusion and astrophysics.

Scott earned his PhD in physics from the University of Chicago, under the supervision of Professor Leo Kadanoff and with the support of a Hertz Fellowship. He graduated from Princeton University with a degree in mechanical engineering, and was a Churchill Scholar at Cambridge University before beginning his PhD program.