

Cornell Fluid Dynamics Seminar Series

Presents

Sutanu Sarkar

Department of Mechanical and Aerospace Engineering

University of California - San Diego

“Turbulence and Internal Waves in a Stratified Environment”

12:15-1:15 p.m.

Tuesday, November 03, 2009

178 Rhodes Hall

Pizza and refreshments will be served at noon.

Background fluid stratification, often prevalent in the environment, inhibits vertical turbulent motion, allows wave-like motion, and promotes the formation of coherent structures. Numerical simulations allow the investigation of environmental flows in unprecedented detail and enable a high-fidelity description of transport processes. An overview of our recent work on turbulent flows in the environment that includes the wake of a self-propelled submersible, a jet and an oscillatory boundary layer will be presented. We will highlight the role of stratification in altering the dynamics of these fundamental turbulent shear flows.