

School of Physical Sciences

Prof Chris Bean

Dublin Institute for Advanced Studies

Thursday 02 February 2017

Physics Building, N115, 13:00

Title: The Ocean-Solid Earth System: Monitoring the World's Oceans and Solid Earth Through Ocean-Generated Terrestrial Ground Vibrations

Abstract:

Wind-driven ocean gravity waves can interact to produce pressure fluctuations that propagate deep into the solid Earth, propagating as seismic waves throughout our planet. These waves can be recorded on terrestrial seismic stations where they can be inverted to yield information on ocean wave state and how it changes in space and time. As these vibrations are continuous in time, under restricted conditions they can also be used for monitoring temporal changes in Earth properties that are driven by climate change and evolving potential geohazards. In this presentation we will explore this emerging tool for long term Earth monitoring.