

## **ICTS Colloquium**

Title : Geophysical turbulence at oceanic mesoscales

Speaker : Jim Thomas (University of North Carolina at Chapel Hill, USA)

Date : Tuesday, 16<sup>th</sup> February 2021

Time : 06:00 pm (IST)

Abstract : Oceanic mesoscales, ranging from 10-100 km horizontal scales, are constrained by the effects of rapid rotation and strong density stratification. Conventional wisdom in the past decades used to be that the turbulence phenomenology at these scales is set primarily by nonlinear interaction of geostrophic vortices. In contrast, recent oceanic satellite altimeter datasets, in situ measurements, and realistically forced global scale oceanic model outputs point out that oceanic mesoscales are rich with high energy internal gravity waves; consisting of wind generated near-inertial waves and gravitationally generated tides. In this talk I will present a comprehensive overview of wave-geostrophic flow interactions and subsequent energy transfers. The goal of this research direction is to understand how waves affect and potentially dissipate geostrophic vortices in the ocean, shaping the geophysical turbulence at oceanic mesoscales. The results of this study will benefit development of improved parameterizations for a broad set of large scale general circulation models.

Venue : Please click on the link to join the meeting.

<https://zoom.us/j/93725989131?pwd=WUI4cG1PM0IyblFQQ3RVclo5RXFVZz09>

Meeting ID: 937 2598 9131

Passcode: 585069