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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS Fluid Weekly Seminar (HYBRID)

Title : Submesoscale Ocean Dynamics: Theory and Progress from Recent Observational Campaigns

Speaker : Alex Kinsella (Woods Hole Oceanographic Institution)

Date : Wednesday, 29th March 2023

Time : 02:00 pm (IST)

Abstract : The oceanic submesoscale, generally characterized by horizontal spatial scales from 1-10 km, is an intermediate scale connecting the larger ocean mesoscale to smaller scales at which energy is dissipated. Due to vigorous frontogenesis in this parameter range, the submesoscale is populated by many density fronts and eddies that can exhibit large vertical velocities, allowing for localized subduction of carbon, heat, nutrients, and biomass beneath the mixed layer. In this talk, I will present some of the research questions, observational tools, and preliminary results from my participation in the recent CALYPSO and S-MODE observational campaigns that took place in the central Mediterranean Sea and California current region, respectively. I will focus in particular on the role of submesoscale air-sea interaction, where sharp gradients in sea surface temperature and wind stress are important for the dynamics and exchange processes.

Venue : **Offline:** Chern Lecture Hall (ICTS)

Online: Please click the below link to join the seminar.

https://icts-res-in.zoom.us/j/81670729756?pwd=NFMzWjZnQU1rdldKRnhFdERkeTZtUT09

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International Centre for Theoretical Sciences - TIFR
Survey No. 151, Shivakote Village, Hesaraghatta Hobli, Bengaluru (North) - 560089 Tel: +91 80 4653 6000 Fax: +91 80 4653 6002
Email: academicoffice@icts.res.in **Website:** www.icts.res.in