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THEORETICAL
SCIENCES

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS Fluid Dynamics Seminar

Title : Waves and tracer dispersion in oceans

Speaker : Sanjay C P (ICTS -TIFR, Bengaluru)

Date : Tuesday, 25th June 2024

Time : 5:00 PM (IST)

Abstract : Oceanic flows play a vital role in the transport, dispersion, and mixing of tracers such as carbon, oxygen, nitrogen, and other nutrients. These oceanic flows include coherent eddies as well as internal waves whose energy ratios exhibit significant seasonal and geographical variations. Eventhough significant amount of studies have been performed to understand eddy induced tracer transport, the role of waves is less explored. In this study, using numerical simulations, we look at wave induced tracer dispersion. We mainly investigate the role of internal waves and near-inertial waves in the stirring and mixing of tracers. Findings of our study show that presence of waves in the flows can significantly enhance tracer dispersion and hence has to be considered in the ocean circulation models.

Venue : Online

Zoom link: <https://icts-res-in.zoom.us/j/97760771039?pwd=NmiJMGJlwbsq0KF5bk14t79MzQXvzZ.1>

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