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ICTS Open Seminar

Title : Approximate models for water waves and an algorithm for detection of bottom boundary

Speaker : Manisha Goyal (ICTS-TIFR, Bengaluru)

Date : Friday, 07th July 2023

Time : 03:00 PM (IST)

Abstract : In this talk, we will discuss the shallow water approximate models for incompressible, inviscid, and irrotational fluid, with a focus on their wellposedness. These models provide a solution to the challenging problem of detecting the bottom boundary using measurements of the surface deviation and an initial estimate of the bottom profile. We address two problems: the reconstruction of the bottom boundary based on surface displacements and velocities, and the recovery of surface velocities using the surface deviation and a rough estimate of the bottom boundary. By analyzing the error estimates associated with these two problems and combining them, we present an effective algorithm for accurately detecting the bottom boundary.

Venue : Emmy Noether Seminar Room & Online

Zoom link: <https://icts-res-in.zoom.us/j/82903064206?pwd=UjZOeEh3d1JNUTJUR1BXMnJ5eXdxZz09>

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