



ICTS

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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS Colloquium

Title : What do stratification and rotation do to shear and vortical flows

Speaker : Rama Govindarajan, ICTS- TIFR, Bangalore

Date : Monday, August 14, 2017

Time : 3:00 PM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : Fluid flows commonly exist in a laminar or turbulent state, and get driven from the former to the latter by a series of instabilities. The process is not well understood even for a single fluid of constant properties. Recognising that temperature and solute concentrations are a function of space and time in most real flows, we ask how such inhomogeneities affect the transition process. Also what happens in a rotating frame. We show some new instabilities and significant modifications of other single-fluid dynamics. In some cases, the dynamics can be set up as singular perturbation problems, so small changes can bring up big effects.