



ICTS Seminar

- Title : Potpourri: vortex breakdown, vortex rings and shear flow stability
- Speaker : Sharath Jose (Indian Institute of Technology, Madras)
- Date : 29th January 2021
- Time : 12:30 pm
- Abstract : In this talk, I will briefly discuss three topics that I have worked on - vortex breakdown, vortex rings and shear flow stability. Vortex breakdown is a phenomenon observed in numerous systems, such as flows over aerofoil wings and combustion chambers, and has implications on drag and mixing characteristics. The effect of stable density stratification on vortex breakdown is examined in a model flow inside a circular cylinder that is driven by rotation of one of its end walls. Following this, I will describe how vortex rings evolve inside a square duct. The non-axisymmetric nature of the square results in the vortex ring experiencing non-uniform drag along its circumference leading to deformations in its shape. To conclude, I will present how density stratification, viscosity stratification and rotation affect the stability and transition characteristics of bounded plane shear flows.
- Venue : Please click on the link to join the seminar:
<https://zoom.us/j/92964650301?pwd=bnFnTWVM4eXdb0xvRlpuUkZTdZVBUT09>
Meeting ID: 929 6465 0301
Passcode: 579007