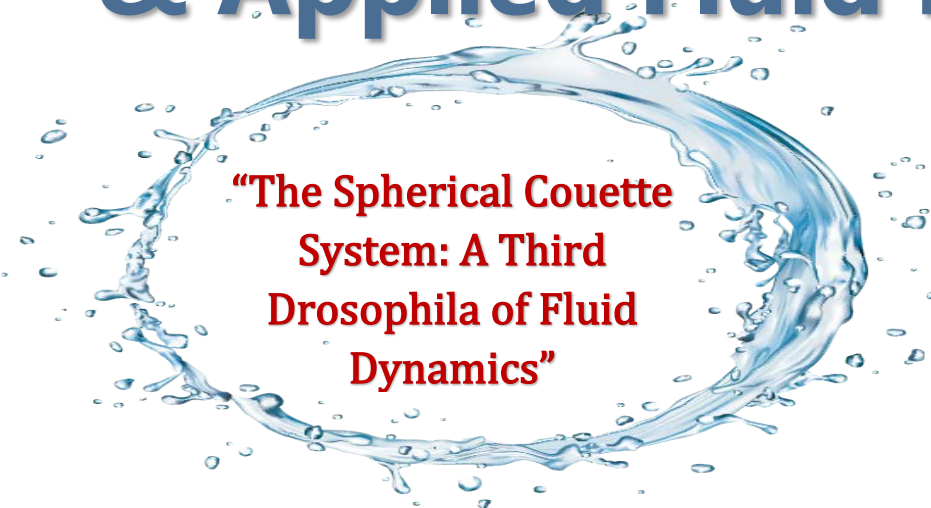


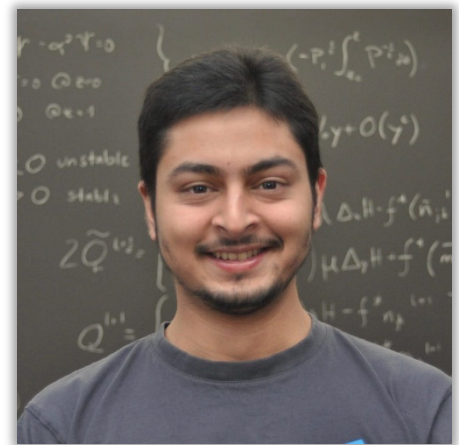
Center for Environmental & Applied Fluid Mechanics



"The Spherical Couette System: A Third Drosophila of Fluid Dynamics"

Dr. Ankit Barik
Johns Hopkins University
Earth and Planetary Sciences

Abstract: The Taylor-Couette (TC) and Rayleigh-Bénard Convection (RBC) are classically often considered the "Drosophilla" of fluid dynamics because of the number of fundamental fluid dynamics phenomena that can be studied with these systems. In this talk I will introduce a new system - the spherical Couette system, the spherical analogue of TC with two coaxial differentially rotating spheres. This system has been used by several experiments aimed at studying the interiors of terrestrial planets and adds an additional complexity - spherical curvature. I will give a brief overview of the behaviour of the system and present results from two of our recent studies - one studying the origin and behaviour of global inertial modes in the system and a second studying the transition to turbulence.



Spring 2025 CEA FM Seminar Series

February 25, 2025 ✦ 3:00 PM ✦ Hodson 210