

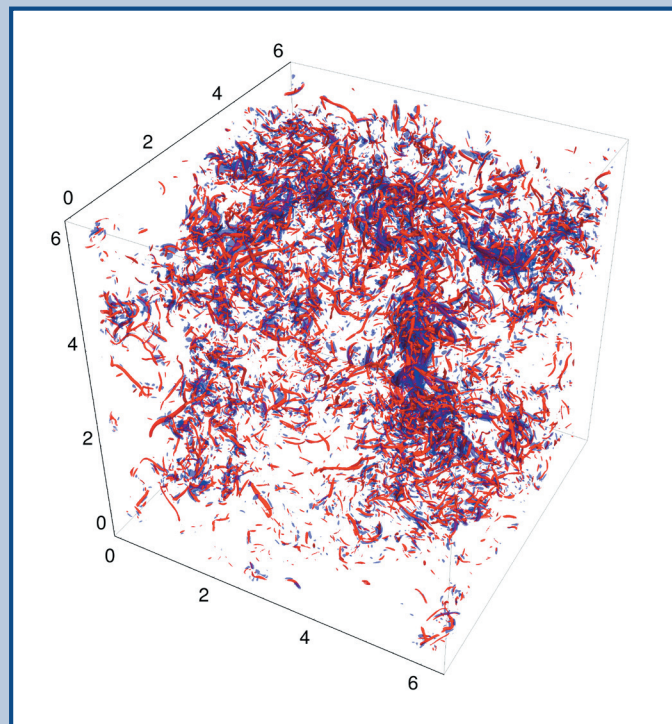
Institut de Mécanique des Fluides

Amphithéâtre Nougaro (Entrée A) - 2 Allée du Pr Camille Soula, Toulouse

Mercredi 19 septembre - 10 h 30

**R. Govindarajan
(ICTS, Bengaluru, India)**

Droplets, vortices and cloud microphysics



In this talk I will discuss the dynamics of droplets in the vicinity of vortices. The dynamics is described by simple parameter-free equations which have a boundary layer structure. Droplets within a critical distance from the vortex centre can participate in caustics events, and seed rapid droplet growth by collisions and coalescence. Our simulations provide evidence for this in three dimensions. I will then discuss how small droplets falling under gravity are affected by the Basset history force, a force which is normally extremely cumbersome to compute, but which we solve by an efficient method. Finally I will discuss how turbulence is affected by condensation on droplets.