ABSTRACT:

Usually smooth, liquid interfaces may however undergo strong deformations when subjected to flows. I will present experimental work on various liquid systems whose interfaces are strongly perturbed. Large water drops falling into air deform until they burst due to aerodynamics forces. The bursting of a soap film in a viscous atmosphere is a way to create cusped interfaces. The impact of a liquid jet on a bath of the same liquid, if fast enough, may rupture the interface: air is then entrained in the bath. Experimental observations, mostly from high-speed imaging, are explained by means of scaling laws.

TUESDAY, NOVEMBER 27, 2007
2:30 PM
Building 2, Room 105

Refreshments at 3:30 PM in Building 2, Room 349
(Applied Math Common Room)