

# PHYSICAL MATHEMATICS SEMINAR

## DISTORTED INTERFACES

**ETIENNE REYSSAT**

Ecole Supérieure de Physique et de  
Chimie Industrielles (ESPCI)  
FRANCE

### 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)*



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