



« Interfacial Fluid Mechanics : past, present, and future »

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**VENDREDI 30 MARS 2007 à 10h30
INSTITUT DE MECANIQUE DES FLUIDES
allée du Professeur Camille Soula, Toulouse**

The study of fluid flows driven by the forces associated with the presence of an interface has a long history in fluid mechanics, yet many fascinating and counter-intuitive phenomena continue to be discovered. This talk will touch on some classical results due to G.I. Taylor on viscous fingering, drop deformation and breakup, and electrohydrodynamics. It will also feature some discussion of the outstanding NCFM educational film by Lloyd Trefethen. Current work in our group on related problems - the effect of chemical reactions on fingering, spontaneous chemically driven tip-streaming of droplets, and chaotic advection driven by electrical stresses - will be discussed. The talk will conclude with a preview of what the future holds.