

CENTER FOR FLUID MECHANICS
AND
THE FLUIDS, THERMAL AND CHEMICAL PROCESSES GROUP
OF
THE DIVISION OF ENGINEERING
SEMINAR SERIES

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Capillary Dynamics: Conical Drops and Bursting Bubbles

Capillary forces are responsible for a variety of ubiquitous phenomena. When washing your hands in a bathroom sink, the effects of capillarity are observed both when the liquid jet from the faucet breaks up into a stream of individual droplets, and when these droplets coalesce into a puddle at the bottom of the sink. Additionally, capillarity is critical to shape and function of soap bubbles as you clean your hands. In this talk, I describe two recently uncovered capillary phenomena: the repulsion of oppositely charged drops and the ‘inverse coarsening’ cascade that can occur when bubbles rupture. I will show high-speed movies and discuss how experiments and mathematical modeling have given us insight into the underlying physical mechanisms.

TUESDAY, OCTOBER 6, 2008
BARUS & HOLLEY, ROOM 190
4:00pm