

# Cornell Fluid Dynamics Seminar Series

Presents

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## “Drop Pinch-off in Concentrated Surfactant Solutions”

12:15-1:15 p.m.

Tuesday, October 06, 2009

178 Rhodes Hall

Pizza and refreshments will be served at noon.

Droplet pinch-off in air is a common phenomenon that occurs all around us. At the point of pinch-off, the drop radius shrinks to zero in a finite amount of time. The pressure exerted by the interface is inversely proportional to the minimum radius and becomes singular at Pinch-off. In Newtonian fluids, this finite time singularity gives rise to universal features in the pinch-off process that can be described by similarity solutions for the fluid air interface. In this talk I will address the question of how this process is altered when observed in structured fluids. One surprise we have found is that in concentrated surfactant solutions in the lamellar phase pinch-off is a mix between universal and non-universal behavior.