

WEDNESDAY

FEBRUARY 17

4:00 P.M.

RM 118 NSH

Refreshments
in Rm 202 NSH
@ 3:30 pm

Failure Modes for Bubble Rafts under Compression

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Bubble rafts, a single layer of bubbles on a water surface, have provided an excellent model system for the flow of foam in a wider range of geometries. Though quasi-two dimensional in nature, they offer excellent control over the bubble sizes and distributions, as well as direct access to all the bubble motions and positions. Recently, bubble rafts have been used to explore the failure modes of foam under tension and compression. In this talk, we will briefly review the results from our studies of the failure of bubble rafts under tension, highlighting the role of local bubble rearrangements in determining whether or not the bubble rafts fails via a pinch-off mechanism or the nucleation of internal rupture zones. Then we will discuss recent results for bubble rafts under compression. In this case, the main failure mode is the nucleation of a double layer of bubbles. We will compare the experimental results to simulations from a simple model.