Department of Aerospace and Mechanical Engineering

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Dynamics of Foams

**Tuesday,
January 14, 2014,
3:30P.M.**

**Lower Level
Auditorium,**

Geddes Hall

Refreshments served
at 3:00 p.m. in the
Geddes Hall
Coffee House

Consider a foam of liquid and gas in which the liquid fraction is very low and so the bubbles are polygonal due to crowding. As time proceeds, the thin films between bubbles thin by capillarity until the films are so thin that van der waals instabilities cause rupture, and the coalescence of neighboring bubbles. This coarsening continues until the foam has disintegrated. We introduce a new numerical approach to monitor a multibubble foam by formulating a 'network model' consisting of 1d film flow, static menisci, and van der Waals instability criteria. We follow the foam for large times and derive scaling laws for the dynamics.

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If you are interested in meeting individually with Dr. Davis, please contact Linda at 631-5431.