

The SUMO Speaker Series for Undergraduates

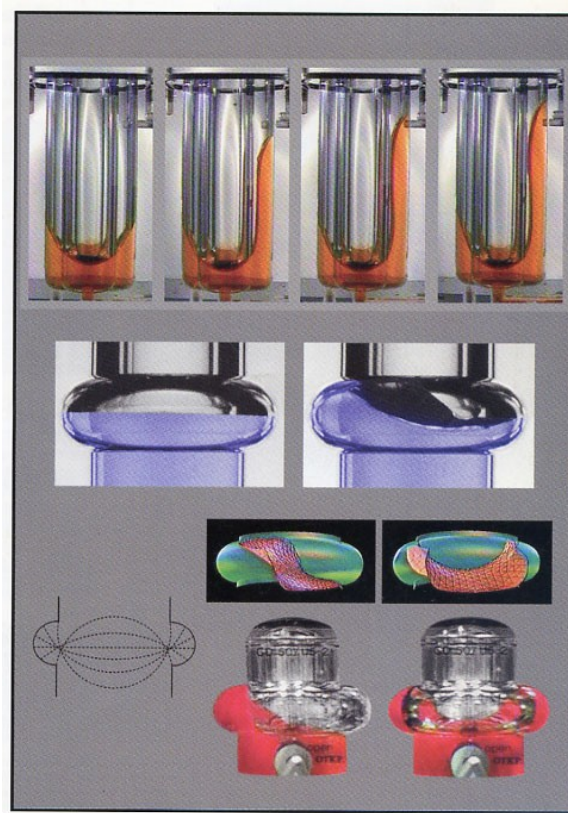
Wednesday, February 18th
5:15-6:15, room 380Y (ROOM CHANGED)

Capillary Surfaces

Professor Robert Finn

ABSTRACT:

Written observations on capillarity phenomena can be traced at least to Aristotle c. 350 B.C. Quantitative description became a major challenge for top world scientists during the 18th century, with no success during that period. Major achievements appeared during the following century, and elegant but highly nonlinear equations and boundary conditions were formulated. There was then a long hiatus with little activity, but the needs of space travel and medicine led to new interest. Recently, formal mathematical studies based directly on idiosyncrasies in the equations yielded surprising predictions of exotic behavior of such surfaces. Experiments verified some of the predictions, thus providing strong support for the equations as model of reality. A beautiful theory is developing, with remarkable connections to real world phenomena. Much of the theory is accessible on an undergraduate level, and in fact Stanford undergraduates developed some of it. I will report on these developments.



Food from Pizza Chicago

<http://sumo.stanford.edu/speakers>