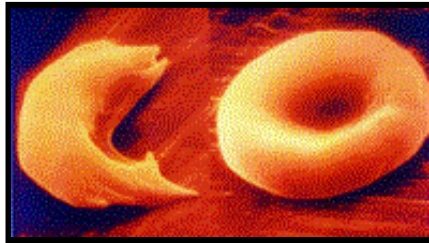


Gordon Research Conference on Complex Fluids,

August 13-18, 2000:

SOFT INTERFACES UNDER STRESS

[T. Witten](#), University of Chicago, Chair --- [A. Ajdari](#), ESPCI, CNRS, Paris, Co-chair



Organisms and industrial processes abound with soft interfaces contorted by external stresses. The red blood cell* on the left is distorted by abnormal aggregation of proteins within it, altering its shape and properties dramatically. Other examples are the pearling structure of a stretched lipid vesicle, onion structures in sheared surfactant solutions, the reversible, large-amplitude buckling of lung-surfactant monolayers at an air-water interface, liquid interfaces distorted by altered surface tension, external fields or liquid-crystalline order, and the fingerlike structures at the interface of a dissolving soap cake. Analogous forces and buckled structures occur in macroscopic sheets and liquid flows. There has been a recent resurgence of interest in droplet separation in fluids, crumpling in membranes and new forms of strain-free deformation.

The 2000 Gordon Research Conference on complex fluids will focus on soft interfaces under stress like those listed above. It will be held on the Newport, Rhode Island seacoast at [Salve Regina College](#), August 13-18, 2000. It will bring together soft matter experts and those who study such stresses in macroscopic, non-fluctuating materials. In this way, the meeting can explore how stress-induced phenomena familiar in the macroscopic world appear in new forms in complex fluids. The conference will include **poster sessions** where participants can show their latest findings.

Invited speakers and discussion leaders

These speakers and discussion leaders have accepted our invitation as of 12/1/99 Other invitees will be added when they have accepted. Still others have yet to be invited.

[N. Abbott](#), University of Wisconsin, [B. Audoly](#), École Normale Supérieure, [R. Austin](#), Princeton University, [M. Buchanan](#), University of Edinburgh, [M. Cates](#), University of Edinburgh, [E. Guyon](#), École Normale Supérieure, [B. Frisken](#) Simon Fraser University, [V. Kumaran](#), Indian Institute of Technology, [K. Lee](#), University of Chicago, [H. Möhwald](#), Max Planck Institute for Colloids and Interfaces, [L. Mahadevan](#), Massachusetts Institute of Technology, [S. Nagel](#), University of Chicago, [T. Mason](#), Exxon Research and Engineering Co, [H. Rehage](#), University of Essen, [D. Roux](#), Paul Pascal Research Center, [E. Sackmann](#), Technical University of Munich, [M. Shin](#), Massachusetts Institute of Technology, [H. Stone](#), Harvard University, [I. Stavans](#), Weizmann Institute, [R. Yerushalmi-Rozen](#) Ben Gurion University,

See <http://mrsec.uchicago.edu/~tten/Gordon00/> to apply and for updates.

* micrograph of sickle cell and normal red blood cell from S. Flegler, used by permission of Visuals Unlimited.