School of Molecular Sciences
Arizona State University

SMS Fall 2023 Seminar Series

Friday October 20 | 3pm | Biodesign Auditorium

Some Puzzles and Research Opportunities in Soft Matter Science and Engineering

A fundamental challenge of modern physical science is to form structure that is not frozen in place but instead reconfigures internally driven by energy throughput and adapts to its environment robustly. With catalytic enzymes, we find problems of mechanobiology. With chemical reactions, we find problems of active matter. Exploring the potential of liquid-phase TEM to image individual molecules and their mutual interactions, we analyze failed and successful encounters of polymers and proteins, and visualize enzyme conformational changes in real time. A picture emerges in which simple experiments, performed at single-particle and single-molecule resolution, can dissect macroscopic phenomena in ways that surprise.

Steve Granick

Professor, University of Massachusetts

Steve Granick is a member of the U.S. National Academy of Sciences and American Academy of Arts and Sciences. Among his other major awards are the Paris-Sciences Medal, APS national Polymer Physics Prize, and ACS national Colloid and Surface Chemistry Prize.

He worked at the University of Illinois at Urbana-Champaign (30 years) and as Director of the IBS Center for Soft and Living Matter, which is the Korean version of a Max-Planck Institute (8 years). In 2023, he joined the University of Massachusetts.

**ZOOM option available: https://asu.zoom.us/j/81517529537*