Shape sculpting and Shapeshifting with soft matter

Tim Atherton

Thursday, January 11th
11:10 am - Noon
Building 53 Room 215

Soft matter encompasses a wide variety of everyday materials, from food products like coffee, wine, ice cream and mayonnaise, consumer and health products like toothpaste and contact lenses to important commercial materials like crude oil, plastics and liquid crystals used in displays. All of these materials have a rich internal structure, and have the property that they’re readily deformable at room temperature. Shape plays a key role in soft materials: the shape of the constituent components can cause or inhibit ordering; the shape of the container controls how the material assembles. In this talk, I’ll present examples of my groups work on mathematically modeling some of these systems, particularly focusing on situations where the shape of the material can change or isn’t known ahead of time.

Bio information
Tim Atherton is Associate Professor of Physics at Tufts University. He received his PhD in Physics in 2007 from the University of Exeter in the UK. He then spent two years as a postdoctoral scholar at Case Western Reserve University in the Rosenblatt group. He joined the faculty of Tufts University in the Department of Physics and Astronomy in Fall 2011. As a Research Corporation for Science Advancement Cottrell Scholar and a National Science Foundation CAREER award recipient, he places a strong emphasis on the integration of research and teaching in Soft Materials.