80th New England Complex Fluids Workshop
Shapiro Campus Center Theater
Brandeis University

September 20, 2019

SCHEDULE

Registration & Coffee: 9:00 - 9:30 AM
Shapiro Campus Center, Room 236.

2 Talks: 9:30AM - 11:00 AM, Shapiro Theater (30 minutes + 10 discussion)

9:30 AM Wim M. van Rees, MechE, MIT
  *Simulation and inverse-design of thin shape-shifting structures*

10:15 AM Allyson Sgro, Biomedical Engineering, BU
  *Coordinating multicellular biological behaviors through intracellular signaling*

Coffee: 11:00 AM - 11:30 AM, Shapiro Center, Room 236

Sound Bites: 11:30 - 12:30 PM, Shapiro Theater
  Four minute updates of current research

Lunch: 12:30 - 1:30 PM, Shapiro Center, Room 236

Sound Bites: 1:30 PM – 2:30 PM, Shapiro Theater
  Four minute updates of current research

Coffee: 2:30 PM - 3:00 PM, Shapiro Center, Room 236

2 Talks: 3:00 PM - 4:30 PM, Shapiro Theater (30 min + 10 discussion)

3:00 PM Tal Cohen, Civil & Environmental, and MechE, MIT
  *Growth, instability, and failure: bringing order into the chaos of natural phenomena*

3:45 PM Daniel Harris, Engineering, Brown University
  *Hydrodynamic mechanisms for particle aggregation at fluid interfaces*

Registration (free) required: [http://complexfluids.org](http://complexfluids.org)
Registration deadline: 8am, September 18, 2019

*Sponsored by the Brandeis University NSF MRSEC: Bioinspired Soft Materials*
Sound Bites Morning Session: 11:30 AM – 12:30 PM

PC: Put your soundbites on John Berezney’s laptop (berezney@brandeis.edu)
Mac: Put your soundbites on Ian Hunter’s laptop (ihunte01@brandeis.edu)

Sound Bites, 4 minutes (14)

Joanna Dahl  UMass Boston  joanna.dahl@umb.edu
"Non-contact Mechanical Characterization of Extracellular Vesicles"

Nikolay P. Ionkin  Brown  nicks1212@gmail.com
"Shear-induced migration of a suspension under planar confinement"

Ahmed Saad  Harvard  ahmed.mohamedsaad@kaust.edu.sa
"Viscoelasticity of Crude Oil-Water Interfaces"

Neda Nazemifard  University of Alberta  nn1@ualberta.ca
"Nanofluidics for Thin Film Rheology"

Maria Eleni Moustaka  Brandeis  mmoustak@brandeis.edu
"Control of a microfluidic three-ring chemical oscillator network"

Matteo Milani  Harvard  mmilani@g.harvard.edu
"Droplet Sorter"

Mathew Giso  Tufts  mathew.giso@tufts.edu
"Sculpting high aspect ratio crystals from an oil in water emulsion"

Jay X. Tang  Brown  Jay_Tang@Brown.edu
"Assessment of transient bacterial attachment to a solid surface by applying an electric field"

Tina Huang,  Harvard  yutinghuang01@g.harvard.edu
"Microfluidic Fabrication of Asymmetric Polymer and Lipid Vesicles"

Arash Manafirad  UMass Amherst  amanafirad@umass.edu
"Micro-manipulation of an active lipid bilayer system"

Victor Massatoshi Kawakami Tsuda  Harvard Public Health  victor.tsuda@fm.usp.br
"Collective cell migration and energy metabolism"

Daichi Hayakawa  Brandeis  dhayakawa@brandeis.edu
"DNA origami particles self-assemble into nano-tubes"

Sharath C. Mahavadi  Schlumberger - Doll Research  SMahavadi@slb.com
"Crude Oil Chemistry @ Interfaces"

Brendan Deveney  Harvard  bdeveney@g.harvard.edu
"Thermoresponsive polymer shells"
Sound Bites Afternoon Session: 1:30 PM – 2:30 PM

PC: Put your soundbites on John Berezney’s laptop (berezney@brandeis.edu)
Mac: Put your soundbites on Ian Hunter’s laptop (ihunte01@brandeis.edu)

Sound Bites, 4 minutes (16)
Sarah Zuraw UMass Amherst szuraw@umass.edu
"Deformation and disruption of lipid membranes via particle binding: Experiments with tunable particle shape and adhesion"

Andrew Clark Tufts Andrew.Clark@tufts.edu
"Probing structure and conductivity in blends of PVDF with a zwitterionic copolymer using dielectric relaxation spectroscopy"

Alexander Hensley Brandeis ahensley@brandeis.edu
"Measuring crystal nucleation and growth of DNA-grafted colloidal particles"

Zach Gault Harvard zach.gault@gmail.com
"Visualization and mechanical study of a transparent filled rubber"

Georgios Katsikis MIT geokats@mit.edu
"A Microfluidic Sonar for measuring the stiffness of biological matter"

Saha, Sarthak UMass Amherst ssaha@umass.edu
"Polymer based microfluidic devices for protein crystallography"

Wentian Liao Boston wtliao@bu.edu
"Torque estimations of Helicobacter pylori in different pHs using Resistive Force Theory"

Janna Lowensohn Brandeis jlowen@brandeis.edu
"Establishing design rules for linker-mediated assembly and crystallization of colloids"

Bertrand Ottino Loffler MIT bottinol@mit.edu
"A Richards-Like Stochastic Population Growth Model"

Nicholas Patino Harvard/Williams nhp1@williams.edu
"Bogers-Burgers f.c.c.-b.c.c. Transition Mechanism in Colloidal Crystals"

Beatrice Lunsford Poe Johns Hopkins blunsfordpoe@umass.edu
"Lenses in Topological Defects in Cholesteric Liquid Crystals Confined to Microchannels"

Matteo Sabato Harvard nhp1@williams.edu
"Microscopic aspects of crack dynamics in model soft solids"

Zhaoyu Xie Tufts Zhaoyu.Xie@tufts.edu
"Percolation governs order to disorder transition for two-dimensional dense particle packing"
Yilin Zhu  Boston  ylzhu96@bu.edu
"Creation of pH gradients for bacteria chemotaxis"

Johnson Agyapong  Brandeis  johnsonna16@brandeis.edu
"The Chemical Stability of Belousov Zhabotinsky (BZ) Microgels in Response to Changes
in Reactant Flow Rate"

Huang Fang  Brandeis  fangh@brandeis.edu
"Exploring nucleation pathways and solid-solid transitions in two-dimensional binary
colloidal crystallization"