

NCS6 @



STEVENS
INSTITUTE of TECHNOLOGY
THE INNOVATION UNIVERSITY

6th Northeast Complex Fluids and Soft Matter Workshop

Friday, January 13th, 2017

Stevens Institute of Technology, Hoboken, NJ

- 08:15 - 08:55 a.m. **Breakfast and Registration**
Babbio Center, Room 122
Registration and poster setup in atrium outside room 122.
- 08:55 - 09:00 a.m. **Welcome Remarks: Mo Deghani**, Vice Provost of Research
- 09:00 - 09:30 a.m. **Invited Talk: Pinar Akcora**, Stevens Institute of Technology
“Dispersion of ion-containing polymer grafted nanoparticles in ionic liquids”
- 09:30 - 10:00 a.m. **Invited Talk: Kyle Bishop**, Columbia University
“Contact charge electrophoresis for powering colloidal machines”
- 10:00 - 10:20 a.m. **Coffee Break**
- 10:20 - 11:50 a.m. **Short Presentations I: Experiments**
1. **Wei Xu**, Stevens Institute of Technology.
“Low-voltage droplet manipulation via tunable wetting on smart polymers”
 2. **Xiaoyi Hu**, Stony Brook University.
“Destabilization of viscosity stratifications in microfluidic channel: interfacial waves and droplets”
 3. **Dong Song**, Stevens Institute of Technology.
“A comparison between static de-icing and dynamic anti-icing properties of superhydrophobic surfaces”
 4. **Lin Lei**, Rutgers University.
“Morphological control of melting gel materials by electrospray”
 5. **Madhu Majji**, City College of New York.
“Inertial migration in Taylor-Couette flow”
 6. **Siqi Du**, Rutgers University.
“Deterministic lateral displacement systems with anchored-liquid obstacles”
 7. **David Gagnon**, University of Pennsylvania.
“Swimming in shear-thinning fluids”
 8. **Tianxing Ma**, Rutgers University.
“Focused laser spike dewetting of metallic thin films”
 9. **Ivana Seric**, New Jersey Institute of Technology
“Explicit demonstration of the role of Marangoni effect in the breakup of nanoscale liquid filaments”

- 11:50 - 1:20 p.m. **Lunch and Poster Presentations**
Babbio Atrium
- 01:20 - 01:50 p.m. **Invited Talk: Shahriar Afkhami**, New Jersey Institute of Technology
“Large scale simulation of forced dewetting”
- 01:50 - 02:20 p.m. **Invited Talk: Eric Furst**, University of Delaware
“Microrheology for soft materials discovery and characterization”
- 02:20 - 02:40 p.m. **Coffee Break**
- 02:40 - 03:40 p.m. **Short Presentations II: Theory and Simulations**
1. **Salman Sohrabi**, Lehigh University.
“Efficient Capture and Release of Cells through a Micro-patterned Surface”
 2. **Abbas Fakhari**, University of Notre Dame.
“Numerical simulation of partial coalescence cascade”
 3. **Sheng Mao**, Princeton University.
“Particle aggregation during receptor-mediated endocytosis”
 4. **Pejman Sanaei**, New Jersey Institute of Technology.
“Modeling Branching Pore Structures in Membrane Filters”
 5. **Siddhartha Sarkar**, Princeton University.
“Elastic multipole method for describing deformations of 2D solid structures”
 6. **Tianya Yin**, Rutgers University.
“Molecular dynamics simulation of particle re-entrainment induced by a moving liquid-liquid interface”
- 03:40 - 04:00 p.m. **Coffee Break**
- 04:00 - 04:30 p.m. **Invited Talk: Joel Koplik**, City University of New York
“Nanoparticles at interfaces”
- 04:30 - 05:00 p.m. **Invited Talk: Valentina Prigiobbe**, Stevens Institute of Technology
“Nanoparticle-stabilized foam transport in porous media”
- Closing Remarks**

Friday May 26th

NCS7 @ Princeton University

Organizers: Howard Stone and Andrej Kosmrlj



List of contributed posters:

1. **Jian Xu**, Stevens Institute of Technology.
“Self-cleaning polymer membrane for oil/water separation”
2. **Isabel Liberis**, Rutgers University.
“Coalescence of sessile drops”
3. **Omer Akabidalkreem**, Rutgers University.
“Experimental study of drying process in particles-stabilized foams”
4. **David Cunningham**, Rutgers University.
“Non Darcy flow through self affine rock fractures”
5. **Yu Han**, Rutgers University.
“Droplet penetration method as a wettability test for pharmaceutical powders”
6. **Filippo Cellini**, New York University.
“Thermosensitive polymer tracers for particle image velocimetry”
7. **Minglu Li**, Rutgers University.
“Advancing and receding contact angles and wetting dynamics of powders in close columns”
8. **Valeria Saro-Cortes**, Rutgers University.
“Parallel photolithographic manufacturing of ionic thrusters for use in small satellites”
9. **Qingjian Li**, Stevens Institute of Technology.
“Flow behavior of nanoparticle-stabilized foam in porous media”
10. **Peng Zhang & Violet Mwaffo**, New York University.
“Flow physics induced by zebrafish swimming in a water channel”
11. **Zhanjie Liu**, Rutgers University.
“A novel method to measure the dynamic contact angle between liquid and powders”
12. **Chongfeng Zhang**, Stevens Institute of Technology.
“Evaporation controlled particle patterns in a polymer droplet”

Sponsors:

We would like to acknowledge support from the Mechanical Engineering department at Stevens Institute of Technology.

-The local organizing committee
Pinar Akcora
Chang-Hwan Choi
Kevin Connington
Valentina Prigiobbe

