9th Southeast Meeting on Soft Materials
Monday, May 16th, 2016

Georgia Tech Scheller College of Business – Room 200
Breakfast, lunch, and refreshments – Atrium

PROGRAM

8:30 am – 9:00 am
Registration and breakfast

9:00 am – 9:05 am
Welcome and opening remarks [Jennifer Curtis]

9:05 am – 10:00 am
Invited Talk
William Irvine, University of Chicago, Keynote Speaker
The life of vortex knots and the flow of knottiness

10:00 am – 10:40 am
Sound Bites I: Fluids and Emulsions [Chair: Alberto Fernandez-Nieves]

10:40 am – 11:00 am
Coffee and refreshments

11:00 am – 11:50 am
Invited Talk
Peter Yunker, Georgia Tech
Soft Matter of Life and Death

11:50 am – 12:35 pm
Sound Bites II: Physics of Living Systems/ Biophysics [Chair: Dan Goldman]

12:35 pm – 1:45 pm
Lunch and discussion

1:45 pm – 2:35 pm
Invited Talk
Justin Burton, Emory University
Echoes from the past: a new take on the low-temperature properties of glasses

2:35 pm – 3:25 pm
Sound Bites III: Polymers and Interfaces [Chair: Justin Burton]

3:25 pm – 3:55 pm
Coffee and refreshments

3:55 pm – 4:45 pm
Invited Talk
Mark Losego, Georgia Tech
Sub-Nanometer Oxide Coatings for Improved Stability of Molecularly Sensitized Devices

4:45 pm – 5:25 pm
Sound Bites IV: Colloids, Glasses and Jamming [Chair: Jennifer Curtis]

5:25 pm – 5:30 pm
Prizes for top sound bites from each Sound Bite Session.

5:30 pm
Meeting Adjourn

Sound Bites

Session I: Fluids and Emulsions

Justin Pye, Emory University
Fluid dynamics at a solid interface: A slippery slope

Alexandros Fragkopoulos, Georgia Tech
Electrohydrodynamic Instabilities of Toroidal Droplets

Clay Wood, Emory University
Effects of surface properties on evaporating sessile droplets

Heyinn Rho, Georgia Tech
Exploring hierarchy in condensation process

Carlos Orellana, Emory University
Forces acting in quasi 2d emulsions

Andrew Yee, Georgia Tech
Colloidal Particle Assembly in Microchannel Flows

Xiaolei Ma, Emory University
The Origin of Star-shaped Oscillations of Leidenfrost Drops

Maritza Mujica, Georgia Tech
Nanowire Synthesis

Stephen Frazier, Emory University
How to make a giant bubble

Perry Ellis, Georgia Tech
Nematic Materials in Toroidal Geometries

Guga Gogia, Emory University
Emergent Phenomena in Dusty Plasma

Session II: Physics of Living Systems and Biophysics

Perrin Schiebel, Georgia Tech
Snake slithering on the surface of sand

Ya-Wen Chang, Georgia Tech
Epithelial Proliferation on Toroidal Hydrogel

Michael Tennenbaum, Georgia Tech
Rheology of Active Matter: Fire ants as a model system

Jiaqi Zheng, Emory University
Velocity correlation of frictionless crowd

Andrea Welsh, Georgia Tech
Pattern Formation of Artemia franciscana

Daniel Kovari, Emory University
Using synthetic nucleotide substitution modify the mechanical properties of DNA

Patrick Chang, Georgia Tech
Polymer Cushions Under the Cell Decreases the Cell Adhesion Strength

Joshua Brockman, Georgia Tech/Emory BME
2D Molecular Force Probes: Taking Tension in New Directions

Wenbin Wei, Georgia Tech
Mechanical Length Regulation in a Living Polymer Matrix of Hyaluronan

Victor Ma , Emory University
Ratiometric tension probes for mapping receptor forces and clustering at intermembrane junctions

Shane Jacobeen, Georgia Tech
Evolving mechanics of nascent multicellular organisms

Aaron Blanchard, Emory University
DNA Motors for Molecular Detection

Arben Kalziqi, Georgia Tech
The Structure of Killing

Session III: Polymers and Interfaces

Roman Baglay, Emory University
Local Glass Transition Near Soft and Hard Polymer-Polymer Interfaces

Cornelia Rosu, Georgia Tech
Polypeptide-assisted Organization of Semiconducting Polymers

Xinru Huang, Emory University
Simultaneous Shifts in Liquid and Glassy Specific Volume with Film Thickness in Supported Polystyrene Films

Svetoslav Nikolov, Georgia Tech
Modeling mechanics of microgels near critical point

Michael Thees, Emory University
Influence of Ultrahigh Molecular Weight on the Physical Aging of Thin Polystyrene Films

Carson Meredith, Georgia Tech
Capillary Foams and Oil-Coated Bubbles

Timothy Ibru, Georgia Tech
Challenges and Opportunities in the Fabrication of Elastomer/Metallic Bilayers

Zachary Mills, Georgia Tech
Modeling Fouling Layer Formation in EGR Heat Exchangers

Sunghan Kim, Georgia Tech
Flexural Properties of Ultrastrong Cellulose Nanocrystal-Graphene Nanomembranes

Dmitriy Boyuk, Georgia Tech
Encoding complex nanoscale structures via semiconductor nanowire synthesis

James Waters, Georgia Tech
Force distribution looped semiflexible polymers

Michael Dimitriyev, Georgia Tech
Buckling Instability of Hydrogel Tori

Session IV: Colloids, Glasses and Jamming

James Kindt, Emory University
Ordering transition of hard spheres adsorbed to a spherical surface

Skanda Vivek, Emory University
Long Wavelength Fluctuations and the Glass Transition in 2D and 3D

Cong Cao, Emory University
Aging near the wall in 3D colloidal glass

Paul Russo, Georgia Tech
Air Donuts and Glass Bullets

Keely Criddle, Emory University
Three-Dimensional Flow through Porous Media

Jonathan Michel, Georgia Tech
Mechanics of Athermal Random Elastic Networks

Dominic Robe, Emory University
Aging Dynamic Heterogeneity in an Aging Colloid

Xin Du, Emory University
Rearrangements during slow compression of a jammed 2-D emulsion

Xun Tang, Georgia Tech
Optimal Control for Colloidal Self-Assembly

Janna Lowensohn
Emory University
How to Deal With Stress by Cracking Up

Parking Directions

Finding the Scheller College of Business is easy.

Scheller College of Business
Technology Square at Georgia Tech
800 West Peachtree St. NW
Atlanta, GA 30308

We are in the same block and building as the campus bookstore, Barnes and Noble, located at the corner of Fifth and Spring streets. **The primary entrance faces West Peachtree Street. Proceed to the 2nd floor, room 200.**

Parking Options:

1) Visitors Area 6: 5th Street & Spring Street
2) Visitors Area 8: Tech Square & GT Hotel and Conference Center