

Program

7th Southeast Meeting on Soft Materials and Interfaces
Georgia Institute of Technology
Friday, May 24, 2013

Marcus Nano Technology Bldg. Rm. 1116
Breakfast, Lunch, Coffee Break - Atrium

9:00 a.m. – 9:30 a.m.

Breakfast and Registration, First Floor Atrium

9:30 a.m. – 9:35 a.m.

Welcome from Elisa Riedo, Alberto Fernandez-Nieves and Dan Goldman

Morning Invited Speakers: [Chair: Elisa Riedo]

9:35 a.m. – 10:15 a.m.

Maria Santore, Key Note Speaker, UMASS

Adhesion at Heterogeneous Surfaces: From Fundamental Colloidal Interactions to Manipulation of Proteins and Cells

10:15 a.m. – 11:30 a.m. [Chair: Alberto Fernandez-Nieves]

SOUND BITES 1: Interfaces, Nano-Materials, Polymers and Liquid Crystals

Keith Carroll, Georgia Tech

Thermochemical Nanolithography: Control and Parallelization

Yang Gao, Georgia Tech

Thermochemical Nanolithography on Functional Graphene

Laura Gray, Emory University

Physical Aging of Polymer Glasses Vitrified Under Stress

Jonathan Gross, University of Georgia

Monte Carlo Simulations of Polymers on GPUs

Bo Li, Georgia Tech

Crafting Ordered Structures by Flow-Enabled Self-Assembly (FESA)

Ekapop Pairam, Georgia Tech

Determination of the Twist Angle of Nematic Liquid Crystal Tori

Justin Pye, Emory University

Physical Aging of Thin Polystyrene Films Quenched & Measured Free-Standing

Kai Qi, University of Georgia

Autocorrelation Study on Coarse-Grained (CG) Polymer Model

Connie Roth, Emory University

Glassy Dynamics Near Interfaces

Richard Sullivan, Georgia Tech

Effects of DNA on Gold Nanorod Growth

Maeling Tapp, Georgia Tech

Exploring the Effects of Incubating Gold Nanoparticle Seeds with Nucleotides and Oligonucleotides

Yi Zhang, Georgia Tech

High Strength, Lightweight Materials From Particle-stabilized Foam

Suenne Kim, Georgia Tech

Nanomechanics of Ultrathin Films

Yu Gu, Clemson University

Collective Alignment of Nanorods in Thin Films

Ngozi Eze, Georgia Tech

Employing Locked Nucleic Acids for Recognition-Based Assembly and Disassembly

Morning Invited Speakers [Chair: Elisa Riedo]

11:30 a.m. – 12:15 p.m.

Dong Qin, MSE/Chemistry – Georgia Tech

Ag Nanoplates: Synthesis, Stability, and Applications.

12:15 p.m. – 1:30 p.m. Lunch & Discussion

Evening Invited Speaker [Chair: Alberto Fernandez-Nieves]

1:30 p.m. – 2:15 p.m.

Vladimir Tsukruk, MSE – Georgia Tech

Engineered Bionanocomposites

2:15 p.m. – 3:30 p.m.

SOUND BITES 11: Biological Systems, Fluids, Granular Materials, Colloids

Edoardo Albisetti, Politecnico di Milano

Nano-patterning of Chemical Gradients by Thermochemical Nanolithography for Tailoring Neuronal Adhesion and Growth

Eric Berger, Georgia Tech

Particle Image Velocimetry for Collapsing Toroidal Droplets

Ya-Wen (Winnie) Chang, Georgia Tech

Living Torus - Cells in Toroidal Droplets

Alexandros Fragkopoulos, Georgia Tech

Stability of Electrically Charged Toroidal Droplets

Nick Gravish, Georgia Tech

Arrest and Relaxation in Collective Locomotion

Josefa Guerrero-Millan, Georgia Tech

The Helicoidal Structure of the Whipping

John Hyatt, Georgia Tech

Structural Relaxations of Dense Microgel Suspensions

Tung Le, Georgia Tech

Single-molecule FRET Study on the Spontaneous Repositioning of Nucleosomes

Joohyung Lee, Georgia Tech

Surfactant-Mediated Electrophoretic Properties of Non-Polar Dispersions

Annie Lesiak, Georgia Tech

DNA Containing RNA Insertions: Structural Information from Molecular Dynamics

Xi Lu, Georgia Tech

Nanolithographic Templates for Self-replicating Colloidal Particles

Daria Monaenkova, Georgia Tech

The Effect of Soil properties on the Soil Manipulation Strategies Exploited by Red Imported Fire Ants

Sarah Sharpe, Georgia Tech

Subsurface Snake Slithering: Movement in a Tube

Abialo Shitta, Georgia Tech

Encapsulation of Agrochemicals via Particle Stabilized Double Emulsions

Joanna Tsao, Georgia Tech

Role of Local Curvature in Surface Interactions in Aqueous Electrolyte Solutions

Diane Wiener, Emory University

Transcriptional Repression by Phage 186 CI at the Single-molecule Level

Tingnan Zhang, Georgia Tech

A Terradynamic Timulation of Heterogeneous Granular Ground

Xia Hong, Emory University

Experiments on Avalanches of Rearrangements in 2D Emulsion Hopper Flow

Patrick Chang, Georgia Tech

Using Fluorescent Aggrecan to Study Pericellular Matrix

Annika Kriisa, Emory University

Electrical Fields and Phase Separation of PS/PVME Blends

Alexander Truinske, Georgia Tech

Controlled Actin Fiber Growth Using TCNL

Anton Souslov, Georgia Tech

Directed Polymer Liquids Addressed Via the Two-dimensional One-component Plasma

3:30 p.m. – 3:45 p.m. Coffee Break

Evening Invited Speaker: [Chair: Dan Goldman]

3:45 p.m. – 4:30 p.m.

Harold Kim, Georgia Tech

Softer than you think: small-scale mechanical behavior of DNA

4:30 p.m. – 6:00 p.m. (Q&A discussions)

6:00 p.m. Workshop Conclusion