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-patternning 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_

Annik 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