SCHEDULE

9:00 - 9:15 AM  
Registration & Coffee  
Shapiro Campus Center, Room 236

9:15 - 10:00 AM  
Research Talk: Shapiro Theater (30 minutes + 15 discussion)  
Christina M. Bailey-Hytholt, Assistant Professor of Chemical Engineering at  
Worcester Polytechnic Institute  
“Lipid-based systems: from therapeutics to in vitro models”

10:00 - 11:00 AM  
Sound Bites I: Shapiro Theater  
(Four minute updates of current research)

Bansil, Rama  
*Gastric mucus generated in human gastric organoids exhibits viscoelastic properties*

Barotta, Jack  
*Reversible wave-propelled capillary spinners*

Chisholm, Nicholas  
*Active colloids at fluid interfaces: flow and micromixing*

Davidson, Zoey  
*Laser damage to liquid crystal alignment materials in ordinary and extraordinary modes*

Dickie, Joshua  
*From diffusion to convection, the effect of microtubule-kinesin active fluid in self-mixing*

Huynh, Simon  
*Elastic instability of cylindrical vessels immersed in fluid*

Kroo, Laurel  
*Adaptive and sensory machines: active foam and swimming rheometers*

Lou, Wan  
*Flow states of active gels driven by external shear*

Micale, Sophia  
*Uncovering how cell fusion impacts subcellular organization*

Murphy, Ian  
*Quantifying binding ratios for dna oligonucleotides on urease*

Najma, Bibi  
*Extensile to contractile transitions in 3d active microtubule network*

Seyforth, Hunter  
*Characterizing composition of binary crystals of DNA-coated colloids*
Stehnach, Michael  
*Making active matter systems run forever with microfluidics*

Talreja, Hriday  
*Droplet coarsening subject to activity-generated advection*

Toole, Sasha  
*Probing microtubule-kinesin active matter in a low activity regime*

Vessel, Theadora  
*Effect of collagen and ddr2 on neuroblastoma cell dynamics and cell migration*

Zarei, Zahra  
*Structured illumination for active matter experiments*

**11:00 - 11:15 AM Coffee**: Shapiro Center, Room 236

**11:15 AM – 12:45 PM Industrial Panel (University to Industry), Shapiro Center, Room 236**

*Entrepreneurs and industrial scientists will describe creating and working in companies, discuss what qualities they seek in applicants and give advice for navigating the transition from academics to industry.*

*Joia Miller, Dewpoint*  
*Stephen DeCamp, Generate Biomedicine*  
*Gabriel Redner, Google*  
*Ian Hunter, Eink*  
*Rajnish Kaushik, Director of Licensing and Strategic Alliances, Brandeis University*

**12:45 - 2:00 PM Lunch and informal discussions with panel**: Shapiro Center, Room 236

**2:00 – 3:15 PM Sound Bites II: Shapiro Theater**

*Four-minute updates of current research*

Alvarado, Izaiah  
*Characterization of actin monomer turnover factor srv2 in polymerization-driven motile beads*

Asadi, Sima  
*Producing shape-engineered alginate particles using viscoplastic fluids*

Attia, Lucas  
*Core-shell hydrogel particles for the formulation of hydrophobic small-molecule apis*

Borja, Marco  
*Liquid-liquid phase separation of programmable DNA nanostars*

Hayakawa, Daichi  
*Geometrically programmed self-limited assembly of tubules using DNA origami colloids*

Hegde, Omkar  
*Liquid-liquid phase separation of multivalent “DNA nano-stars”*
Huang, Tina
*Asymmetric polymer-lipid vesicles*

Johnson, Silverio
*Run and tumble analysis of enterobacter sp. sm3 in dilute aqueous media*

Kim, Chungman
*Multiscale structure and properties measurement using a single platform: tribo-rheometry*

Koretsky, Adrian
*Using DNA nanostars as linkers in dna-coated nanoparticle crystallization*

Krug, Thomas
*Salt-dependent RNA condensate gelation*

Lee, Lani
*Mechanical characterization of aging in primary mouse pulmonary fibroblasts*

Mata, Josselyn
*Paper powered pharmaceutical manufacturing*

Paine, Amelia
*Viral capsid permeability measurements using fluorescent intercalating dyes*

Saha, Rupam
*Curvature controlled self-limited assembly using dna origami building blocks*

Shiiba, Isabelle
*Measuring active stresses in microtubule-based 3D active gel*

Videbaek, Thomas
*Controlling interparticle mechanical properties for self-limited assemblies*

Wei, Wei-Shao
*Hierarchical assembly is more efficient than egalitarian assembly in synthetic capsids*

**3:15 – 4:00 PM**  
**Research Talk**: Shapiro Theater (30 minutes + 15 discussion)

**William Shih**, Professor of Biological Chemistry and Molecular Pharmacology at Harvard Medical School

“*Multi-micron crisscross structures grown from DNA-origami slats*”

**Registration (free) required**: [https://complexfluids.org](https://complexfluids.org)

Registration deadline: Monday 8am, September 19, 2022

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