

Fundamental Polymer Rheology Enabling Next - Generation Technologies

April 21 - 22, 2022

A Rheology-focused Workshop in Honor of Professor Don Baird

Thursday, April 21, 2022		
Time	Event	Venue: SkySong
11:30 AM – 12:30 PM	Welcoming Reception at Biodesign, hosted lunch (<i>in-person</i>)	
12:30 – 1:00	Travel time to SkySong ASU (<i>in-person</i>)	
1:00 – 1:15	Welcoming and Introductory Remarks <i>Presenter: Prof. Timothy Long, Director, Biodesign SM3</i>	
1:15 – 1:45	“Recent Advances in Polymer Viscoelasticity from General Rigid Bead-Rod Theory” <i>Presenter: Jeff Giacomin, Queen’s University</i>	
1:45 – 2:15	“Swimming with Swirl in a Viscoelastic Fluid: Toward a Swimming Rheometry” <i>Presenter: Eric Shaqfeh, Stanford University</i>	
2:15 – 2:45	“Gaborheometry: Applications of the Gabor Transform to Time-Resolved Oscillatory Rheometry” <i>Presenter: Gareth McKinley, MIT</i>	
2:45 – 3:00	Break	
3:00 – 3:30	“Rheology, and Liquid Crystalline and Crystalline Phase Transitions in Polyethylene” <i>Presenter: Ron Larson, University of Michigan</i>	
3:30 – 4:00	“Recycling of Waste Polyolefins via Dissolution and Rheological Challenges” <i>Presenter: Dimitris Collias, P&G</i>	
4:00 – 4:30	“The Live Cell Rheometer: Solving Problems at the Interface between Human Health and Rheology” <i>Presenter: Gerry Fuller, Stanford University</i>	
4:30 – 4:45	Break	

4:45 – 5:30	“Long Fiber Orientation Behavior in the Startup of Shear and Non-Lubricated Squeeze Flow” <i>Presenter: Don Baird, Virginia Tech</i>
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7:00 PM – 10:00	Celebratory Dinner <i>By invite only at Dr. Tim Long’s residence</i>
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Friday, April 22, 2022

Time	Event	Venue: SkySong
9:00 – 9:30 AM	“Flow-induced Anisotropy, Relaxation, and Crystallization of Polymers during Material Extrusion Additive Manufacturing” <i>Presenter: Jonathan Seppala, NIST</i>	
9:30 – 10:00	“Tying Formulation and Extensional Rheology to Processability in the Manufacturing of Ultrafine Fibers” <i>Presenter: Blair Kathryn Brettmann, Georgia Tech</i>	
10:00 – 10:30	“Beyond Alignment: New Routes for Controlling Block Copolymer Rheology and Microstructure via Magnetic Fields” <i>Presenter: Michelle A. Calabrese, University of Minnesota</i>	
10:30 – 10:45	Break	
10:45 – 11:15	“Shear-induced Nematic Phase in Entangled Rod-like PEEK Melts” <i>Presenter: Ralph Colby, Penn State University</i>	
11:15 – 11:45	“Photo-rheology Accelerating the Design of Advanced Materials for Advanced Manufacturing” <i>Presenter: Tim Long, Arizona State University</i>	
11:45 – 12:15	“High Shear Rheology of Nanocellulose Suspensions” <i>Presenter: Mike Bortner, Virginia Tech</i>	
12:15 – 12:30	Closing Remarks & Adjourn	