

Telluride Science Research Conference, June 22 – 27, 2015

Polymer Physics

Karl Freed, Tim Lodge, M. Muthukumar, Organizers

Monday, June 22

5:00 - 6:30 pm Meet colleagues at the New Sheridan Bar (on the main street next to the hotel) for a drink, and subsequent dinner at a nearby restaurant

Tuesday, June 23

8:00 Breakfast at Telluride Elementary School

8:30 Sanat *Grafted nanoparticle based membranes: theory and experiment*

9:20 Arthi *Tuning enthalpic and entropic driving forces for wetting/dewetting and particle dispersion/aggregation in polymer grafted particles based nanocomposites*

10:10 Break

10:30 Glla *Tuning interactions at melt/brush interfaces for functional polymer films*

11:20 Rob *Predicting the structure and dynamics of polymer nanocomposites*

6:00 Steven Berry Tribute Town Talk and Open House, Elementary School

Wednesday, June 24

8:00 Breakfast at Telluride Elementary School

8:30 Amelie *Ionic aggregation and dynamics in ionomer melts: insights from molecular simulations*

9:20 Nitash *Ion transport in polymers*

10:10 Break

10:30 Muthu *The extraordinary phase in solutions of charged macromolecules*

11:20 Elaine *Ion effect on polyelectrolyte structure in solution and at surface: from monovalent ion to multivalent macroion*

6:00 TSRC Picnic/BBQ, Elementary School

Thursday, June 25

8:00 Breakfast at Telluride Elementary School

8:30 Costantino *Mechanical properties and fracture of hydrogels with chemical and physical crosslinks*

9:20 Mitsu *Toward ideal polymer networks: preparation, structure characterization, simulation, properties, and application*

10:10 Break

10:30 Zhen-Gang *Shear localization in associating polymer gels*

11:20 Tim *Interplay of fibril formation, gelation, and phase separation in methylcellulose solutions*

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Thursday, June 25, continued...

- 7:30 Kevin *The many failures (and few successes) of theory to describe DNA confinement in nanochannels*
- 8:20 Jay *From atoms to complex flow predictions: entangled polymer melts of arbitrary chain architectures*
- 9:20 Brad *Nanostructuring proteins and block copolymers based on ionic interactions*

Friday, June 26

- 8:00 Breakfast at Telluride Elementary School
- 8:30 Chinedum *Exercising spatial control and perfecting order during directed self-assembly of block copolymers*
- 9:20 Friederike *Density-based simulations of polymer interfaces: model development and applications to responsive polymer brushes*
- 10:10 Break
- 10:30 Frank *Order and disorder in short block polymers*
- 11:20 Ryan *Controlling solution crystallization of (and with) conjugated polymers*
- 6:00 Mark *Control of glass structure and stability*
- 6:50 Karl *New observations accompanying the descent to glass-formation*
- 8:00 Conference Dinner at Cosmo (near the gondola)

Saturday June 27

- 8:00 Breakfast at Telluride Elementary School (optional)
- 8:30 Optional group discussion, group hike, etc.

TSRC Host: Mark Kozak, 970-708-4426

Telluride Elementary School at 447 W Columbia Ave