

Complex Fluids Design Consortium Annual Meeting

Thursday, February 5, 2015

Materials Research Laboratory, Room 2053
University of California, Santa Barbara

- 9:00-9:30 am *CFDC: Welcome and update*
Prof. Glenn Fredrickson, Director CFDC, Chemical Engineering and Materials, UCSB
- 9:30-9:45 am *CFDC software update: PolyFTS*
Dr. Kris Delaney, MRL, UCSB
- 9:45-10:15 am *Towards computer aided design of block copolymer templates*
Sean Paradiso, MRL and Chemical Engineering, UCSB
- 10:15-10:45 am Coffee Break
- 10:45-11:15 am *Field-theoretic study on polymer-induced depletion interaction between colloids in solution*
Dr. Wei Li, MRL, UCSB
- 11:15-11:45 am *Constructing dynamic phase-field simulations of polymer solutions and blends*
Dr. Doug Tree, MRL, UCSB
- 11:45-12:00 pm *Barriers to defect melting in chemo-epitaxial directed self-assembly of lamellar-forming diblock copolymer/homopolymer blends*
Dr. Ken-ichi Izumi, JSR and MRL, UCSB
- 12:00-12:15 pm *Level set strategy for free boundary SCFT and inverse lithography*
Gaddiel Ouaknin, Mechanical Engineering, UCSB
- 12:15-1:00 pm Lunch on MRL 3rd Floor Patio
- 1:00-1:30 pm *Computing fluctuation corrections to the phase diagrams of block-copolymer melts*
Dr. Kris Delaney, MRL, UCSB

- 1:30-2:00 pm *Density functional model for fluctuating polymer solutions*
Dr. Yi-Xin Liu, Fudan University and MRL, UCSB
- 2:00-2:30 pm *Modeling the flow of polymer solutions in a pipe: Concentration-stress coupling and pipe entrance effects*
Yassine Dhane, Chemical Engineering, UCSB
- 2:30-3:00 pm *Introducing MPI-GPU parallelism*
Michael Carilli, MRL and Physics, UCSB
- 3:00-3:30 pm Coffee Break
- 3:30-4:00 pm *Modeling of bottle brush copolymers: General properties and morphologies*
Dr. Bongkeun Kim, MRL, UCSB
- 4:00-4:30 pm *Accelerating the search for globally stable block polymer microphases using genetic algorithms*
Carol Tsai, Chemistry and MRL, UCSB
- 4:30-5:00 pm *Flow phase diagrams of shear banding in polymer solutions*
Joe Peterson, Chemical Engineering, UCSB
- 5:00-5:15 pm *SCFT investigation of tandem grapho- and chemo-epitaxy in linear arrays of block copolymer cylinders*
Corinne Carpenter, Chemical Engineering and MRL, UCSB
- 5:15-5:30 pm *Refining a phase field mapping of field theoretic simulations*
Jimmy Liu, Chemical Engineering and MRL, UCSB
- 5:30 pm Adjourn CFDC meeting
- 5:30-6:00 pm CFDC Steering Committee Meeting
Steering Committee Members Only, MRL 3117D

CFDC Dinner – 6:30 pm, Flavor of India