

# Center for Soft Matter and Biological Physics Symposium

## Scientific Program

Thursday, May 19, 2016 (Hahn North 130)

- 8:00 – 8:15 **Opening:** Uwe Täuber
- Session 1: Soft materials / biophysics / quantum – chair: Shengfeng Cheng**
- 8:15 – 8:30 Justin Barone Protein nanocomposites
- 8:30 – 8:45 Dorjsuren Theoretical and modeling studies of sense-antisense transcripts  
Battogtokh interactions in the gene network of mammalian circadian clock
- 8:45 – 9:00 Chenggang Tao Scanning probe characterization of 2D materials and hybrid nanostructures
- 9:00 – 9:15 Djordje Minic Quantum biology versus emergent quantum theory in complex adaptive systems
- 9:15 – 9:30 Jing Chen Modeling spatiotemporal regulation of mitotic spindle assembly checkpoint
- 9:30 – 10:45 **Poster session 1 & coffee break**
- Session 2: Polymer / biophysics – chair: Sunny Jung**
- 10:45 – 11:00 Shengfeng Cheng Molecular dynamics simulations of polymers
- 11:00 – 11:15 Nicholas Butzin Translational queuing on synthetic transcripts
- 11:15 – 11:30 Daniel Capelluto Mechanisms of modulation of protein binding to membrane phosphoinositides
- 11:30 – 11:45 Vinh Nguyen "Filming" biomolecules in action with terahertz spectroscopy
- 11:45 – 12:00 Pavel Kraykivskiy From START to FINISH: computational analysis of cell cycle control in budding yeast
- 12:00 – 1:00 **Lunch**
- Session 3: Bacterial / large scale – chair: Daniel Capelluto**
- 1:00-1:15 Steve Melville Polymerization of bacterial type IV pilus filaments
- 1:15-1:30 David Popham Dormancy and revival of bacterial endospores
- 1:30-1:45 Sunny Jung Fluid mechanics on a soft body
- 1:45-2:00 Yow-Ren Chang Hindering bacterial adsorption using topography
- 2:00-2:15 Uwe Täuber Stochastic fluctuations and spatial correlations in biological systems
- 2:15-2:30 Michel Pleimling A theoretical approach to understand spatial organization in complex ecologies
- 2:30 – 3:30 **Poster session 2 & coffee break**
- Session 4: Optics / biophysics – chair: Vinh Nguyen**
- 3:30 – 3:45 Hans Robinson Optics and nanoassembly
- 3:45 – 4:00 Brenden Magill Upconversion and optoperforation: exploring soft matter and biological systems via non-linear optics
- 4:00 – 4:15 Alexey Onufriev Atomistic modeling and simulations
- 4:15 – 5:00 **Concluding session:** Uwe Täuber, Daniel Capelluto, Shengfeng Cheng

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