

The 2017 Berkeley Statistical Mechanics Meeting
January 13 – 15, 2017

Friday, January 13, 2017

2:00 pm	Registration & Check-In	Bixby Commons
4:00 pm	Poster Session I - Two-minute Talks David Limmer Presiding	120 Latimer Hall
5:00 pm	Poster Session I - Discussions & Light Reception	Tan Hall Lobby

Saturday, January 14, 2017

7:45 am	Breakfast	Tan Hall Lobby
8:45 am	Introductory Remarks Phill Geissler	120 Latimer Hall

Saturday Lecture Session I – Discussion chair: Adam Willard **120 Latimer Hall**

9:00 am	Christoph Dellago, University of Vienna <i>“Cavitation in water at negative pressure”</i>	
9:30 am	Amish Patel, University of Pennsylvania <i>“Characterizing hydration at nanostructured surfaces – Applications to materials design and protein interaction prediction”</i>	
10:00 am	David Weitz, Harvard University <i>“Melting of Wigner crystals”</i>	
10:30 am	Coffee Break	Tan Hall Lobby

Saturday Lecture Session II – Discussion chair: Aaron Dinner **120 Latimer Hall**

10:45 am	Surya Ganguli, Stanford University <i>“Statistical mechanics of deep learning”</i>	
11:15 am	Eugene Shakhnovich, Harvard University <i>“Evolutionary dynamics on biophysical fitness landscapes of viruses and bacteria”</i>	
11:45 am	Arup Chakraborty, Massachusetts Institute of Technology <i>“How to hit HIV where it hurts with antibodies: A crossroad of statistical physics, immunology, and evolutionary biology”</i>	
12:15 pm	Lunch	775 Tan Hall

Saturday Lecture Session III – Discussion chair: Norman Yao **120 Latimer Hall**

- 2:00 pm** **Immanuel Bloch, Max Planck Institute of Quantum Optics**
“Probing many-body localisation from an ultracold atom perspective”
- 2:30 pm** **Chris Monroe, JQI and University of Maryland**
“Nonequilibrium and nonthermalization in trapped ion spin chains”
- 3:00 pm** **Gil Refael, California Institute of Technology**
“Strong disorder Wegner flow and 1d localization transitions”
- 3:30 pm** **Coffee Break** **Tan Hall Lobby**

Saturday Lecture Session IV – Discussion chair: Kateri DuBay **120 Latimer Hall**

- 3:45 pm** **Hartmut Löwen, Heinrich-Heine-Universität Düsseldorf**
“Microswimmers in complex environments: From magnetic clusters to motion in optical landscapes”
- 4:15 pm** **Will Irvine, University of Chicago**
“Spinning top-ology: Order, disorder and topology in mechanical gyro-materials and fluids”
- 4:45 pm** **Poster Session II – Two minute talks** **120 Latimer Hall**
- 5:45 pm** **Poster Session II – Discussions & Light Reception** **Tan Hall Lobby**

Sunday, January 15, 2017

- 7:45 am** **Breakfast** **Tan Hall Lobby**

Sunday Lecture Session I – Discussion chair: Margaret Johnson **120 Latimer Hall**

- 9:00 am** **Thomas Weikl, Max Planck Institute of Colloids and Interfaces**
“Membrane-mediated cooperativity of proteins in cell adhesion”
- 9:30 am** **Ned Wingreen, Princeton University**
“Protein phase-separation in and out of cells”
- 10:00 am** **Nikta Fakhri, Massachusetts Institute of Technology**
“Self-organized stress patterns drive state transitions in actomyosin cortices”
- 10:30 am** **Coffee Break** **Tan Hall Lobby**

10:45 am **Jeff Gore, Massachusetts Institute of Technology**
“Emergent phenomena in microbial communities”

11:15 am **Shin-Ichi Sasa, Kyoto University**
“Thermodynamic entropy as a Noether invariant”

11:45 am **Ajay Sood, Indian Institute of Science**
“A micrometer sized heat engine operating between bacterial reservoirs”

12:15 pm **Closing Remarks: Phill Geissler**

12:30 pm **Dim Sum Party**

775 Tan Hall