

The 2015 Berkeley Mini Statistical Mechanics Meeting
January 9 – 11, 2015

Friday, January 9, 2015

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

Saturday, January 10, 2015

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| 7:45 am | Breakfast | Tan Hall Lobby |
| 8:45 am | Introductory Remarks David Chandler | 120 Latimer Hall |

Saturday Lecture Session I – Discussion chair: Robert Jack **120 Latimer Hall**

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| 9:00 am | Fabio Martinelli, University of Roma Tre <i>“The influence of dimension on the relaxation process of East-like models: rigorous results”</i> | |
| 9:30 am | Matthieu Wyart, New York University <i>“The memory of sand”</i> | |
| 10:00 am | Fred MacKintosh, Vrije Universiteit <i>“Non-equilibrium fluctuations and phase transitions in cells and active gels”</i> | |
| 10:30 am | Coffee Break | Tan Hall Lobby |

Saturday Lecture Session II – Discussion chair: Paul Goldbart **120 Latimer Hall**

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| 10:45 am | Michael Hagan, Brandeis University <i>“A new order in active nematics”</i> | |
| 11:15 am | M. Cristina Marchetti, Syracuse University <i>“Dynamics and topology of active nematics”</i> | |
| 11:45 am | Sriram Ramaswamy, TIFR Centre for Interdisciplinary Sciences <i>“Granular flocks”</i> | |
| 12:15 pm | Lunch | 775 Tan Hall |

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| Saturday Lecture Session III – Discussion chair: Phill Geissler | 120 Latimer Hall |
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- 2:00 pm** **Julien Tailleur, University of Paris Diderot - CNRS**
“A Generic Framework for the Transition to Collective Motion”
- 2:30 pm** **Takahiro Sagawa, The University of Tokyo**
“Fluctuation Theorem for Information Processing”
- 3:00 pm** **Roger Loring, Cornell University**
“Old quantum theory meets new measurements: semiclassical paths for multidimensional vibrational spectroscopy”
- 3:30 pm** **Coffee Break** **Tan Hall Lobby**

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| Saturday Lecture Session IV – Discussion chair: Martin Head-Gordon | 120 Latimer Hall |
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- 3:45 pm** **Ali Alavi, Max Planck Institute for Solid State Research**
“A quantum Monte Carlo approach to the full CI problem”
- 4:15 pm** **Garnet Chan, Princeton University**
“Quantum chemistry in the condensed phase”
- 4:45 pm** **Steven R. White, University of California, Irvine**
“Minimally entangled typical thermal states”
- 5:15 pm** **Coffee Break**
- 5:30 pm** **Poster Session II – Two minute talks** **120 Latimer Hall**
- 6:30 pm** **Poster Session II – Discussions & Light Reception** **Tan Hall Lobby**

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| Sunday, January 11, 2015 |
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- 7:45 am** **Breakfast** **Tan Hall Lobby**

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| Sunday Lecture Session I – Discussion chair: David Limmer | 120 Latimer Hall |
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- 9:00 am** **Christopher Jarzynski, University of Maryland**
“A method to compute absolute free energies of crystalline solids”
- 9:30 am** **Osamu Mishima, National Institute for Materials Science**
“Volume of supercooled water under pressure”
- 10:00 am** **Valeria Molinero, University of Utah**
“Liquid crystals from spherical particles”

10:30 am Coffee Break Tan Hall Lobby

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| Sunday Lecture Session II – Discussion chair: Oskar Hallatschek | 120 Latimer Hall |
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10:45 am Massimo Vergassola, University of California, San Diego
“Beating turbulence to find a mate.”

11:15 am Frédéric van Wijland, University of Paris Diderot
“Nonequilibrium dissipation in living oocytes”

11:45 am Jeremy England, Massachusetts Institute of Technology
“Boltzmann's Dog and Darwin's Finch: The statistical thermodynamics of self-replication and evolutionary adaptation”

12:15 pm Closing Remarks: David Chandler

12:30 pm Dim Sum Party 775 Tan Hall