

**130th Statistical Mechanics Conference
Rutgers University**

**Sunday, May 10, Monday, May 11 & Tuesday, May 12, 2026 Busch Campus, Hill Center,
110 Frelinghuysen Road, Room 116, Piscataway, NJ**

Guests of Honor

Michael Loss, Marc Mézard and Subir Sachdev

Sunday, May 10, 2026: BUSCH Campus, Hill Center, Room 116

Registration and Breakfast 8:00 - 9:00

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| 9:00- 9:30 | Almut Burchard, - University of Toronto
<i>Symmetry-breaking in geometric capacitor problems</i> |
| 9:30 - 10:00 | Gérard Ben Arous - NYU
<i>Recent progress on the Replica Symmetry Breaking phase for the Elastic Manifold</i> |
| 10:00-10:30 | Yin-Chen He - Perimeter Institute
<i>A Fuzzy Sphere Journey into Conformal Gauge Theories</i> |
| 10:30 - 11:00 | <i>Coffee Break</i> |
| 11:00 - 11:30 | Vieri Mastropietro - Università di Roma La Sapienza
<i>Quasi-periodicity in statistical physics: Ising models and Hall insulators</i> |
| 11:30 - 12:00 | Piers Coleman - Rutgers
<i>Kitaev meets Kondo: New insights into Many Body Physics from a merger of two models</i> |
| 12:00 - 12:30 | Alexei Tsvelik - Brookhaven National Laboratory
<i>Fractional order in Kondo lattice models</i> |

Lunch 12:30 - 1:45

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| 1:45 - 2:15 | Jedediah Pixley – Rutgers University
<i>Kondo lattice emulators in stacked transition metal dichalcogenides</i> |
| 2:15 - 2:45 | Leo Radzihovsky - University of Colorado at Boulder
<i>"Boundary" superfluids</i> |
| 2:45 - 3:15 | Chong Wang - Perimeter Institute
<i>Self-dual Higgs transitions: Toric code and beyond</i> |
| 3:15 - 3:45 | <i>Coffee Break</i> |
| 3:45 - 4:15 | Rhine Samajdar - Princeton
<i>Quench spectroscopy of amplitude modes in a one-dimensional critical phase</i> |
| 4:15 - 4:45 | Pietro Bonetti - Max Planck Institute for Solid State Research
<i>Photoinduced Chargin Condensation in a Driven Quantum Spin Liquid</i> |
| 4:45 - 5:15 | David Huse - Princeton
<i>Thermal first-order phase transitions and the eigenstate thermalization hypothesis</i> |

5:15 - 5:45 **Lenka Zdeborova - École Polytechnique Fédérale de Lausanne**
The Rules-and-Facts Model for Simultaneous Generalization and Memorization in Neural Networks

5:45 - 7:45 Cocktails & Concert in the Fiber Optics Auditorium, Busch Campus sponsored by Springer

7:45 Conference dinner at the Hill Center - 7th Floor - Reservation required

Monday, May 11, 2026: BUSCH Campus, Hill Center, Room 116

Registration and Breakfast 8:00 - 8:45

8:45 - 9:45 **Short Talks: Session A**

9:45 - 10:15 **Mehran Kardar - MIT**
Polymer adsorption on phase separating substrate

10:15 - 10:45 **Oriana Diessel - Harvard**
Steady-states and response functions of the periodically driven $O(N)$ scalar field theory

10:45-11:15 Coffee Break

11:15-11:45 **Debanjan Chowdhury - Cornell University**
Frozen Dynamics in Floquet Quantum Matter

11:45 - 12:15 **Maine Christos - CalTech**
Non-Abelian Quantum Low-Density Parity Check Codes and Non-Clifford Operations from Gauging Logical Gates via

12:15 - 12:45 **Human Rights Session: Ian Jauslin and Joel Lebowitz, Rutgers University**

Lunch 12:45 - 2:00 7th Floor Hill Center

2:00 - 2:30 **Anders Sandvik, Boston University**
Defects at the deconfined quantum critical point

2:30- 3:00 **Mathieu Lewin, CNRS & Université Paris-Dauphine (HE ASKED FOR SUNDAY OR MONDAY ONLY)**
The gnocchi phase in nuclear pasta

3:00 - 3:30 **Natan Andrei - Rutgers University**
Thermodynamics in a split Hilbert Space: Quantum Impurity in interacting environments

3:30 - 4:00 Coffee Break

4:00 - 4:30 **Amit Einav - Durham University**
Can we have a little order in all this chaos?

4:30 - 5:00 **Amir Einav, Laudatio for Michael Loss**

5:00 - 5:30 **Lenka Zdeborova, Laudatio for Marc Mezard**

5:30 - 6:00 **Anders Sandvik, Laudatio for Subir Sachdev**

6:00 Cocktails and Dinner at the Hill Center - 7th Floor, reservation required

Tuesday, May 12, 2026: BUSCH Campus, Hill Center, Room 116

Registration and Breakfast 8:00 - 9:00

- 9:00 - 9:30 **Leyna Shackleton - MIT**
Twisted quantum doubles are sign problem-free
- 9:30 - 10:00 **Ian Jauslin – Rutgers University**
A framework to study twisted bilayer graphene in a tight binding model
- 10:00 - 10:30 **Jeff Schenker - Michigan State University**
Disordered Matrix Product States for 1D Spin Chains
- 10:30 - 11:00 Coffee Break**
- 11:00 - 11:30 **David Gamarnik - MIT**
The free energy of the Sachdev-Ye-Kitaev model at high temperature
- 11:30 - 12:00 **Federico Bonetto - Georgia Institute of Technology**
A Kac system interacting with two heat reservoirs.

Lunch 12:00 - 1:00 7th Floor, Hill Center

- 1:00 - 1:30 **Ovidiu Costin - Ohio State University**
Resurgence and boundary crossing in Ramanujan's Mock Theta functions
- 1:30 - 2:00 **Yuhai Tu - Flatiron Institute**
Statistical Physics for Deep Learning: Towards a Theoretical Foundation
- 2:00 - 2:30 **Bill Bialek - Princeton University**
Ensembles of near-optimal organisms
- 2:30 - 3:00 **Herbert Spohn - Technische Universitaet Muenchen**
Diffusion of a tagged Toda fluid quasiparticle