117th Statistical Mechanics Conference

Rutgers University, Busch Campus, Hill Center, Room 114

Sunday, May 7, 2017 - Tuesday May 9, 2017

Honorees

Juerg Froehlich, Tom Spencer, and Herbert Spohn

Sunday, May 7th 2017

Registration and Breakfast 8:00 - 9:00

9:00 - 9:25 **Daniel Ueltschi** - University of Warwick
Universal behavior of loop soup models in D>2

9:25 - 9:50 **Adam Nahum** - Oxford University
Entanglement growth and classical statistical mechanics

9:50 - 10:15 **Avy Soffer** - Rutgers University
Large time behavior of some Quantum Kinetic equations

10:15 - 10:40 ***Coffee Break***

10:40 - 11:10 **Krzysztof Gawedzki** - Laboratory of Physics ENS of Lyon
Response theory for periodically driven 2d crystals

11:10 - 11:35 **Marcello Porta** - Institute for Mathematics, University of Zurich
Universality in the critical Haldane-Hubbard model

11:35 - 12:00 **Gian Michele Graf** - ETH Zurich
Topological insulators and scattering theory

12:00 - 12:25 **Nikita Nekrasov** - Stony Brook University
The Magnificent Four

Lunch 12:25 - 1:55

1:55 - 2:20 **Martin Zirnbauer** - Institute for Theoretical Physics, University of Cologne
Conformal field theory of the integer quantum Hall plateau transition

2:20 - 2:45 **Antti Kupiainen** - University of Helsinki
A Constructive Approach to the Liouville Conformal Field Theory

2:45 - 3:10 **Tatyana Shcherbina** - Princeton University
Transfer matrix approach to 1d random band matrices

3:10 - 3:35 **Paul Wiegmann** - University of Chicago
Hydrodynamics of Onsager vortex flow

3:35 - 4:05 ***Coffee Break***

4:05 - 4:30 **Joachim Krug** - University of Cologne
Genotypes, phenotypes, and Fisher's geometric model

4:30 - 4:55 **Kunihiko Kaneko** - University of Tokyo/IAS
Macroscopic Theory of Phenotypic Adaptation and Evolution: Fluctuation-response, Genetic

4:55 - 5:20 **Edo Kussell** - New York University
Correlated mutations and bacterial recombination

5:20 - 5:45 **Curtis Callan** - Princeton University
The importance of the element of surprise in immunology

5:50 Cocktails & Concert sponsored by Springer (All are invited)
8:00 Banquet at Busch Dining Hall - Reservation required

Monday, May 8 2017

Registration and Breakfast 8:00 - 8:30

8:30 - 10:00 Short Talks: Session A

Coffee Break 10:00 - 10:30

10:30 - 10:55 **John Imbrie** - University of Virginia
Localization and Eigenvalue Statistics for Schroedinger Operators with Discrete Disorder

10:55 - 11:20 **David Huse** - Princeton University
The Many-body Localization Phase Transition

11:20 - 11:45 **Michael Aizenman** - Princeton University
Kac-Ward propagator and graph zeta functions

11:45 - 12:10 **Jennifer Chayes** - Microsoft Research
Graphons and Machine Learning

12:10 - 12:35 **Don Howard** - University of Notre Dame
Physics and Human Rights: Then and Now

Lunch 12:35 - 2:00

2:00 - 2:25 **Horng-Tzer Yau** - Harvard University
Two dimensional coulomb gas

2:25 - 2:50 **Ivan Corwin** - Columbia University
Integrability and Random Interface Growth

2:50 - 3:15 **Elliott Lieb** - Princeton University
A `liquid-solid' phase transition in a simple model for swarming

Coffee Break 3:15 - 3:45

3:45 - 4:10 **Sergio Simonella** - Technical University of Munich
Collisions plus long range interactions in a simple model system

4:10 - 4:35 **Clement Mouhot** - University of Cambridge
De Giorgi-Nash-Moser regularity theory for kinetic equations

4:35 - 5:00 Daniel Ueltschi and Gian Michele Graf - **Laudatio for Juerg Froehlich**
5:00 - 5:25 Antti Kupiainen - **Laudatio for Tom Spencer**
5:25 - 5:50 Joachim Krug and Ivan Corwin - **Laudatio for Herbert Spohn**

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

Tuesday, May 9 2017

Registration and Breakfast 8:30 - 9:00

9:00 - 9:25 **Nicolas Sourlas** - Ecole Normale Superieure
Recent Progress in the Random Field Ising Model

9:25 - 9:50 **Mehran Kardar** - Massachusetts Institute of Technology
Transient Casimir forces from quenches in thermal and active matter

9:50 - 10:15 **Shelly Goldstein** - Rutgers University
Quantum Mechanics a la Juerg

10:15 - 10:45 ***Coffee Break***

10:45 - 11:10 **John Bechhoefer** - Simon Fraser University
Measurement of the functional form of Shannon entropy by partial erasure of a bit

11:10 - 11:35 **Edwin Langmann** - Royal Institute of Technology, Sweden
Heat transport in quasi-free systems

11:35 - 12:00 **Vieri Mastropietro** - University of Milano
Coupled identical localized fermionic chains with quasi-random disorder

12:00 - 12:25 **Stefano Olla** - Paris Dauphine University
Macroscopic temperature profiles in non-equilibrium stationary states

Lunch 12:25 - 1:30

1:30- 1:55 **Roland Bauerschmidt** - University of Cambridge
Delocalized eigenvectors for random regular graphs of fixed degree

1:55 - 2:20 **Steve Miller** - Rutgers University
Energy minimization in 8 dimensions

2:20 - 2:45 **Yakov Sinai** - Princeton University
Littlewood Conjecture

2:45 - 3:10 **Sasha Sodin** - Queen Mary, University of London & Tel Aviv University
Non-Hermitian random Schroedinger operators