

126th Statistical Mechanics Conference
Rutgers University, Busch Campus, Hill Center, Room 114
Sunday, May 19, 2024 - Tuesday May 21, 2024
Guests of Honor
Amnon Aharony, K.R. (Sreeni) Sreenivasan, Simone Warzel

Sunday, May 19th 2024

Registration and Breakfast 8:00 - 9:00

- 9:00 - 9:25 **David Nelson** – Harvard University
Active Antagonism: Reproducing Microorganisms and Fluid Flows
- 9:25 - 9:50 **Vlad Vicol** – NYU
On anomalous diffusion
- 9:50 - 10:15 **Bruno Nachtergaele** - University of California, Davis
The gapped phases of $SO(n)$ quantum spin chains
- 10:15 - 10:40 **Alexander Migdal** - New York University Abu Dhabi, IAS, Princeton
Quantum Solution of Classical Turbulence. \\ Decaying Energy Spectrum
- 10:40 - 11:10 *Coffee Break***
- 11:10 - 11:35 **Aharon Kapitulnik** – Stanford
Anomalous metals: From “failed superconductor” to “failed insulator”
- 11:35 - 12:00 **Diego Donzis** – Texas A&M
Degrees of freedom and the dynamics of fully developed turbulence
- 12:00 - 12:25 **Herbert Spohn** - TU Munich
Universality of coupled Burgers equations with degenerate flux Jacobian

Lunch 12:25 - 1:50

- 1:50 - 2:15 **Yuval Gefen** – Weizmann Institute of Science
Quantum Steering with Frustrated and non-Frustrated Hamiltonians
- 2:15 - 2:40 **Frederik Ravn Klausen** – University of Copenhagen
Decoherence is an echo of Anderson localization in open quantum systems
- 2:40 - 3:05 **Alain Joye** – Université Grenoble Alpes
Adiabatic Lindbladian Evolution with Small Dissipators
- 3:05 - 3:30 **Jacek Miekisz** - University of Warsaw
On stability of non-periodic Sturmian ground states in one-dimensional classical lattice-gas models
- 3:30 - 4:00 *Coffee Break***
- 4:00 - 4:25 **Wolfgang Spitzer** – FernUniversität in Hagen
Entanglement entropy of the ideal Fermi gas in magnetic fields
- 4:25 - 4:50 **Sachin Bharadwaj** – NYU
Can Quantum Computers Simulate Classical Flows?
- 4:50 - 5:15 **Joseph Niemela** - International Center for Theoretical Physics
Ruminations on some turbulent themes
- 5:15 - 5:40 **Virginia Trimble** - University of California, Irvine
HOW SCIENCE CHANGES ITS MIND: The Demise of Steady State Cosmology

5:50 - 7:20 Cocktails & Concert in the Fiber Optics Auditorium, sponsored by Springer

7:30 Banquet at the Hill Center - 7th Floor - Reservation required

Monday, May 20th 2024

Registration and Breakfast 8:40 - 9:30

9:30 - 10:00 **Short Talks: Session A**

10:00 - 10:30 *Coffee Break*

10:30-10:55 **Gregory Bewley** - Cornell University

How turbulence and intermittency relate to flight

10:55 - 11:20 **Mehran Kardar** - MIT

Boundaries, inclusions, and randomness in active matter

11:20 - 11:45 **Steven Kivelson** – Stanford

New physics from strong electron-phonon coupling including deconfined phases and emergent “photons”

11:45 - 12:15 **Human Rights Session, Virginia Trimble, UC Irvine, Ian Jauslin and Joel Lebowitz, Rutgers University**

Lunch 12:20 - 1:50

1:50 - 2:15 **Thomas Banks** - University of California, Santa Cruz , Rutgers University

The Quantum Statistics of Causal Diamonds as "Derived" From Jacobson's Hydrodynamic

2:15 - 2:40 **Maxime Van de Moortel** - Rutgers University

Scattering of the Klein-Gordon equation on a black hole

2:40 - 3:05 **Michael Aizenman** - Princeton University

On entanglement in stoquastic states

3:05 - 3:30 **Camillo De Lellis** – Institute for Advanced Study

On the uniqueness of the Cauchy problem for hyperbolic systems of conservation laws

3:30 - 4:00 *Coffee Break*

4:00 - 4:25 **Dhrubaditya Mitra** – NORDITA

Fun with turbulence and polymers

4:25 - 4:50 **Yuval Gefen, Brooks Harris**, Laudatio for Amnon Aharony

4:50 - 5:15 **Joseph Niemela**, Laudatio for K.R. (Sreeni) Sreenivasan

5:15 - 5:40 **Bruno Nachtergaele**, Laudatio for Simone Warzel

5:45 Cocktails and Dinner at the Hill Center - 7th Floor, reservation required

Tuesday, May 21st, 2024

Registration and Breakfast 8:30 - 9:00

9:00 - 9:30 **Short Talks: Session B**

9:30 - 9:55 **Michael Kiessling** – Rutgers University

Some rigorous results on T_c in the Eliashberg theory of superconductivity

9:55 - 10:20 **Mira Shamir** – Queen Mary University of London

On the abominable properties of the Almost Mathieu operator with Liouville frequencies

10:20 - 10:50 *Coffee Break*

10:50 - 11:15 **Ron Peled** – Tel Aviv University

Mathematical study of disordered elastic media

11:15 - 11:40 **Jeffrey Schenker** – Michigan State University

Disordered Quantum Trajectories under Random Generalized Measurements

11:40 - 12:05 **Nigel Goldenfeld** – University of California, San Diego

Stochasticity in Transitional and Fully-Developed Turbulence

Lunch 12:05 - 1:20

- 1:20 - 1:45 **Luca Moriconi** – Instituto de Física: Universidade Federal do Rio de Janeiro
Contour Shape Dependency of Circulation Statistics in Homogenous and Isotropic Turbulence
- 1:45 - 2:10 **David Huse** – Princeton University
Quantum Kibble-Zurek plus coarsening after a ramp through a quantum critical point
- 2:10 - 2:35 **Roland Bauerschmidt** - NYU
Probabilistic view on the Schwarzian Field Theory