### Sunday, December 18th 2022

**Registration and Breakfast 8:00 - 9:00**

9:00 - 9:25  **Leo Radzihovsky** - University of Colorado  
Lifshitz dualities

9:25 - 9:50  **Daniel Stein** - NYU  
Ground State Stability and the Nature of the Spin Glass Phase

9:50 - 10:15  **Michael Aizenman** - Princeton University  
Ruminations on Matrix Convexity and the Strong Subadditivity of Quantum Entropy

10:15 - 10:40  **Gérard Ben Arous** - NYU  
High-dimensional limit theorems for SGD: Effective dynamics and critical scaling

10:40 - 11:10  **Coffee Break**

11:10 - 11:35  **Charles Kane** - University of Pennsylvania  
Quantum Brownian Motion 35 years later

11:35 - 12:00  **Werner Krauth** - Ecole normale supérieure  
Lifted non-reversible Markov chains: From solvable models to real-life applications

12:00 - 12:25  **Dmitry Krotov** - IBM Research  
Modern Hopfield Networks in AI and Neurobiology

**Lunch 12:25 - 1:50**

1:50 - 2:15  **Daniel Fisher** - Stanford University  
A Hitchhiker’s Guide to Spin Glasses

2:15 - 2:40  **Jon Machta** - University of Massachusetts  
Optimal Paths for Annealing Algorithms: Insights from Non-equilibrium Statistical Physics

2:40 - 3:05  **Nina Holden** - NYU  
Regularity of the Schramm-Loewner evolution: Up-to-constant variation and modulus of continuity

3:05 - 3:40  **Smitha Vishveshwara** - University of Illinois  
Fractional Quasiparticles: A Collective Quest

3:40 - 4:10  **Coffee Break**

4:10 - 4:35  **Stefano Martiniani** - NYU  
Play. Pause. Rewind. Model-free measurement of local entropy production and extractable work in active matter

4:35 - 5:00  **Roger Melko** - University of Waterloo/Perimeter  
Autoregressive models for quantum simulation

5:00 - 5:25  **Lai-Sang Young** - NYU  
Growth and depletion in some stochastic reaction networks

5:25 - 5:50  **Eric Siggia** - Rockefeller University  
Geometry and Genetics
6:00    Cocktails & Concert in the Fiber Optics Auditorium, sponsored by Springer's Journal of Statistical Physics (All are invited)
7:50    Banquet at at the Hill Center - 7th Floor - Reservation required

**Monday, December 19th 2022**

*Registration and Breakfast 7:45 - 8:30*

8:30 - 9:30    Short Talks: Session A
9:35 - 10:00   Lily Reeves - Cornell University
                Chemical distance for 2d critical percolation
10:00 - 10:25  Michael Damron - Georgia Institute of Technology
                First-Passage Percolation in the Critical Regime

*Coffee Break 10:25 - 10:55*

10:55 - 11:20  Rodica Costin - Ohio State University
                Non-perturbative Solution of the 1d Schrodinger Equation
11:20 - 11:45  Reza Gheissari - Northwestern University
                Low-temperature Ising dynamics from ground state initializations
11:45 - 12:10  Senthil Todadri - Massachusetts Institute of Technology
                The dipolar Bose Hubbard model
12:10 - 12:30  Human Rights Session - Ian Jauslin and Joel Lebowitz

*Lunch 12:30 - 1:50*

1:50 - 2:15    Eyal Lubetzky - NYU
                On the level lines of the Solid-On-Solid model above a wall
2:15 - 2:40    Ovidiu Costin - Ohio State University
                Noise Effects on Padé Approximants and Conformal Maps
2:40 - 3:05    Sagar Vijay - UC Santa Barbara
                Monitored Quantum Dynamics and Beyond
3:05 - 3:30    Romain Vasseur - University of Massachusetts Amherst
                Learning global charges from local measurements

*Coffee Break 3:30 - 4:00*

4:00 - 4:25    Bulbul Chakraborty - Brandeis University
                The collective behavior of particles with “noisy” interactions
4:25 - 4:50    Louis-Pierre Arguin - CUNY, Baruch College
                A statistical mechanics perspective on the large values of the Riemann zeta function
4:50 - 5:15    Daniel Stein - Laudatio for Chuck Newman
4:15 - 5:40    Leo Radzihovsky - Laudatio for Matthew Fisher

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

**Tuesday, December 20th, 2022**

*Registration and Breakfast 7:45 - 8:15*

8:15 - 9:15    Short Talks: Session B

9:15 - 9:40    Federico Bonetto - Georgia Institute of Technology
                Autonomous evolution for the speed of 2 electrons in a thermostated system

9:40 - 10:05   Federico Camia - NYU
                Conformal Statistical Mechanics
Coffee Break 10:05 - 10:30

10:30 - 10:55  **Natan Andrei** - Rutgers University
Kondo Effect in 1-D superconductors

10:55 - 11:20  **Ravi Krishnamurthi** - Suny New Paltz
Convergence of discrete dynamical web to dynamical Brownian web

11:20 - 11:45  **Vedika Khemani** - Stanford University
Operator relaxation and the optimal depth of classical shadows

11:45 - 12:10  **Misha Tsodyks** - Institute for Advanced Study
Human Memory: Theory vs Experiments

Lunch 12:10 - 1:25

1:25 - 1:50  **Wei Wu** - NYU Shanghai
Massless phases for the Villain model in d>3

1:50 - 2:15  **Nick Read** - Yale University
Short-range spin glasses: single-replica equivalence and indecomposable metastates

2:15 - 2:40  **Ilya Gruzberg** - Ohio State University
Conformal invariance and Anderson transitions

2:40 - 3:05  **Jed Pixley** - Rutgers University
Universality classes of observer driven phase transitions

3:05 - 3:30  **David Huse** - Princeton University
Transitions to many-body quantum chaos and thermalization