KITP Conference: Non-Equilibrium Universality in Many-Body Physics
(Sep 27-30, 2021)
Coordinators: Letitia F. Cugliandolo, Kaden Hazzard, Mohammad Maghrebi, and Jörg Schmiedmayer

Monday, Sep 27, 2021

8:50am Mark Bowick (KITP) Introduction
9:00am Tomaz Prosen (U Ljubljana) Exact spectral form factors in interacting lattice systems
9:30am Frank Pollmann (TUM) Non-Equilibrium Dynamics in Dipole- and Higher-Moment Conserving Systems
10:00am Dmitry Abanin (U Geneva) Influence matrix approach to ergodic and non-ergodic quantum dynamics
10:30am Coffee Break

1:30pm Ehud Altman (Berkeley) TBD
2:15pm Benjamin Lev (Stanford) An optical lattice with sound
3:00pm Coffee Break

3:30pm Anatoli Polkovnikov (BU) Adiabatic flows and many-body dark states in a non-integrable Ising model
4:15pm Sebastian Erne (TU Wien) Universal dynamics and non-thermal fixed points
5:00pm Jon Simon (U Chicago) TBD
5:45pm Dinner

8:00pm SHUTTLE TO BWSCI

Tuesday, Sep 28, 2021

9:00am Matteo Mitrano (Harvard) Dynamical control of electronic interactions in quantum materials
9:30am Camille Aron (ENS Paris) Non-Analytic Non-Equilibrium Field Theory
10:00am Giulio Biroli (ENS Paris) Dynamical Mean-Field Theory in Non-Equilibrium Many-Body Statistical Physics:
anaging, glassy dynamics, and high-dimensional chaos

10:30am Anushya Chandran (BU) Quantized energy pumps far out of equilibrium

11:00am Coffee break

Lunch

1:30pm Ana Rey (CU Boulder) Simulating dynamical phases of BCS superconductors with cavity QED systems and trapped ion arrays

2:15pm Guido Pagano (Rice U) Out-of-Equilibrium Phenomena in Trapped-Ion Spin Systems

3:00pm Coffee break

3:30pm Aditi Mitra (NYU) Critical Properties of the Prethermal Floquet Time Crystal

4:15pm Chong Yu Ruan (MSU) Nonequilibrium dynamics following an interaction quench in quantum materials

5:45pm Dinner

8:00pm

SHUTTLE TO BWSCI

Wednesday, Sep 29, 2021

9:00am Marzena Szymanska (UCL) TBD

9:30am Zala Lenarcic (Jožef Stefan Inst.) Extracting complexity of quantum dynamics using machine learning

10:00am Sebastian Diehl (U Cologne) Measurement induced phase transitions in fermion systems

10:30am Raju Venugopalan (BNL) Thermalization in quantum chromodynamics: Ab initio approaches and interdisciplinary connections

11:00am Coffee break

Lunch

1:30pm Andy Lucas (CU Boulder) Breakdown of hydrodynamics below four dimensions in a fracton fluid

2:15pm Thomas Schaefer (NC State) Quantum transport in ultracold atomic Fermi gases

3:00pm Coffee break

3:30pm Sarang Gopalakrishnan (Penn State) Superdiffusion in spin chains

4:15pm Vedika Khemani (Stanford) TBD

5:00pm Austen Lamacraft (Cambridge) Absence of superdiffusion in certain random spin models

5:45pm Dinner
8:00pm

SHUTTLE TO BWSCI

Thursday, Sep 30, 2021

9:00am Herbert Spohn (TUM)  Hydrodynamic scale for integrable classical many-body systems
9:30am Benjamin Doyon (King's College)  Correlation functions from hydrodynamics beyond the Boltzmann-Gibbs paradigm
10:00am David Weiss (Penn State)  Practical integrability
10:30am Jerome Dubail (Inst. Jean Lamour)  Quantum fluctuations around Generalized Hydrodynamics
11:00am  Coffee break

Lunch

1:30pm Pedram Roushan (Google Inc - Santa Barbara)  Observation of Time-Crystalline Eigenstate Order on a Quantum Processor
2:15pm Natan Andrei (Rutgers)  Quench dynamics of an optical lattice - local and global aspects
3:00pm  Coffee break

3:30pm Julian Leonard (Harvard)  Many-body localization under the microscope
4:15pm Zhihong You (UCSB)  Nonreciprocity as a generic route to traveling and oscillatory states
5:00pm  CONFERENCE END-SHUTTLE TO BWSCI *Also available to SB Airport and SB Airbus, Goleta location. (See Registration Desk BEFORE THURSDAY to sign up.)