

724. WE-Heraeus-Seminar: Collective Effects and Non-Equilibrium Quantum Dynamics

28th -30th June 2021 Programme

Time Zone: CEST, Local Time Germany

Hot topic talks

MONDAY 28 th June 2021		
09:45-10:00	Welcome and introduction (Scientific Organisers +WE- Heraeus Foundation)	<i>Chairperson: Thorsten Ackemann</i>
10:00-11:00	Ehud Meron , Classical self-organization: Mechanisms and functional aspects	
11:00-11:30	MINGLING on meetanyway platform	
11:30-12:10	Giovanna Morigi , Quantum interference in the Bose-Hubbard model of many-body cavity quantum electrodynamics	<i>Chairperson: Tobias Donner</i>
12:10-12:35	Jean-Philippe Brantut, Cavity quantum-electrodynamics with atoms and pairs in a strongly interacting Fermi gas	
12:35-14:30	LUNCH	
14:30-15:10	Davide Dreon , Emerging atom pump in a non-hermitian system	<i>Chairperson: Andreas Nunnenkamp</i>
15:10-15:50	Oded Zilberberg , Out-of-equilibrium phases: the role of dissipation, noise, and competing drives	
15:50-16:15	Coffee Table Discussion	
16:15-17:45	POSTER / Coffee table discussion	
17:45-18:00	BREAK	
18:00-18:40	Benjamin Lev , An optical lattice with sound	<i>Chairperson: Sebastian Slama</i>
18:40-19:20	Monika Schleier-Smith , Atoms interlinked by light: programmable interactions and emergent geometry	
TUESDAY 29 th June 2021		
09:00-09:40	Igor Lesanovsky , Time-crystal phase transition, fluctuations, and quantum correlations in an emitter-waveguide system with feedback	<i>Chairperson: Gian-Luca Oppo, or Tobias Donner</i>
09:40-10:20	Andreas Nunnenkamp , Higher-order and fractional discrete time crystals	
10:20-10:45	Hans Kessler, Observation of a dissipative time crystal in a driven atom-cavity system	
10:45-11:30	Coffee table discussion	
11:30-12:10	Corinna Kollath , Dissipative phase transition of atoms in a cavity	<i>Chairperson: Sebastian Slama</i>
12:10-12:35	Francesco Ferri, Emerging dissipative phases in a superradiant quantum gas	
12:35-14:30	LUNCH	
14:30-15:10	Helmut Ritsch , Spontaneous self-ordering and crystallization via collective coherent atom-photon dynamics	<i>Chairperson: Gordon Robb</i>
15:10-15:50	Peter Kirton , Dissipative phase transitions in collective spin models	
15:50-16:15	Coffee table discussion	
16:15-18:00	POSTER / Coffee Table Discussion	
20:00-21:00	Panel discussion session	<i>Chairperson: Giovanna Morigi</i>
WEDNESDAY 30 th June 2021		
09:00-09:40	Nir Davidson , Observation of Spin-Spin Fermion-Mediated Interactions and nonlinear spin dynamics in a BEC	<i>Chairperson: Cornelia Denz</i>
09:40-10:20	Sonja Franke-Arnold , An atomic compass - detecting magnetic field alignment with vector vortex light	
10:20-10:45	Valeria Bobkova, Light-driven nonlinear dynamics of a colloidal suspension in a single feedback system	

10:45-11:30	Coffee table discussion	
11:30-12:10	Robin Kaiser , Cooperative effects in atom-light interactions	<i>Chairperson: Nicola Piovella</i>
12:10-12:50	Igor Ferrier-Barbut , Superradiance and subradiance of two level atoms on the edge of Dicke's regime	
12:50-14:30	LUNCH	
14:30-15:10	Gordon Robb , Supersolid formation via diffractive coupling	<i>Chairperson: Peter Kirton</i>
15:10-15:50	Michael Drewsen , Controlling the normal modes of ion Coulomb crystals through application of optically induced dipole potentials	
15:50-16:15	Coffee table discussion	
16:15-16:40	Jamir Marino, Correlation engineering via non-local dissipation	<i>Chairperson: Thorsten Ackemann</i>
16:40-17:05	Gabriel Landi, Quantum phase-space thermodynamics in driven-dissipative transitions	
17:05-17:45	Oliver Steinbock , Non equilibrium pattern formation in biology and materials science	
17:45-18:00	Closing remarks and poster prize	