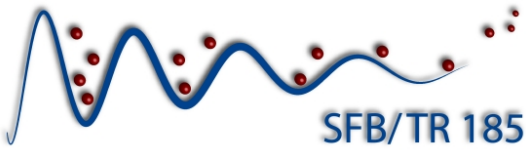
OSCAR IWeek
Kaiserslautern, Germany
August 19-23, 2024



Phase Transitions in Atomic and Photonic Matter

Monday, August 19

09:00-10:00	Maria Daghofer (Stuttgart, Germany):
	General properties of thermal phase transitions
10:00-10:30	Coffee Break
10:30-11:30	Julian Léonard (Vienna, Austria):
	Quantum phase transitions in optical lattices
11:30-13:00	Lunch
13:00-14:00	Sebastian Klembt (Würzburg, Germany):
	Topological physics with light:
	Topological edge and corner modes in polariton lattices
14:00-14:30	Coffee Break
14:30-16:00	Group Work
16:00-16:30	Coffee Break
16:30-18:00	Group Work
19:00-22:00	IWeek Dinner at Restaurant TwentyOne
	Willy-Brandt-Platz 1, 67657 Kaiserslautern

Tuesday, August 20

09:00-10:00	Maria Daghofer (Stuttgart, Germany):
	Tricky aspects of thermal phase transitions
10:00-10:30	Coffee Break
10:30-11:30	Julian Léonard (Vienna, Austria):
	Quantum phase transitions in optical lattices
11:30-13:00	Lunch

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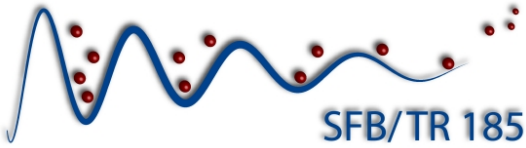

13:00-14:00	Sebastian Klembt (Würzburg, Germany):
	Topological physics with light:
	Topological edge and corner modes in polariton lattices
14:00-14:30	Coffee Break
14:30-16:00	Group Work
16:00-16:30	Coffee Break
16:30-18:00	Group Work

Wednesday, August 21

09:00-10:00	Carlos Sá de Melo (Atlanta, USA):
	From BCS to Bose superfluidity in 2D Fermi gases: Renormaliza--
	tion group and tighter upper bounds for the critical temperature
10:30-11:30	Ednilson Santos (São Carlos, Brazil):
	Mathematical methods for quantum phase transitions
	in optical lattices
11:30-13:00	Lunch
13:00-14:00	Milan Radonjić (Hamburg, Germany):
	Nonequilibrium quantum phase transitions
	in atom-optomechanical systems
14:00-14:30	Coffee Break
14:30-16:00	Group Work
16:00-16:30	Coffee Break
16:30-18:00	Group Work

Thursday, August 22

09:00-10:00	Carlos Sá de Melo (Atlanta, USA):
	From BCS to Bose superfluidity in 2D Fermi gases: Renormaliza--
	tion group and tighter upper bounds for the critical temperature

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10:00-10:30	Coffee Break
10:30-11:30	Ednilson Santos (São Carlos, Brazil): *Mathematical methods for quantum phase transitions in optical lattices*
11:30-13:00	Lunch
13:00-14:00	Milan Radonjić (Hamburg, Germany): *Nonequilibrium quantum phase transitions in atom-optomechanical systems*
14:00-14:30	Coffee Break
14:30-16:00	Group Work
16:00-16:30	Coffee Break
16:30-18:00	Group Work

Friday, August 23

09:00-09:30 Kibble Zurek Physics

1) Daniil Zhitov (Cambridge, UK):

Topological defecs

2) Amanda Green-Salinas (Oxford, Uk):

Basic ideas and heuristics

3) Larissa Schwarz (Kaiserslautern, Germany):

Simlations for 2D Ising model

09:30-09:50 BKT Physics – Part I

1) Sejung Yong (Kaiserslautern, Germany):

Physical principles

2) Alice Bellettini (Torino, Italy):

XY model

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09:50-10:20 Coffee Break

10:20-10:40 BKT Physics – Part II

3) Nikolai Kaschewski (Kaiserslautern, Germany):

Bose gas

4) Anna Sidorenko (Bonn, Germany):

Experimental detection

10:40-11:20 KPZ Physics

1) Joshua Krauß (Kaiserslautern, Germany):

Examples in nature and mathematical description

2) Daniel Ehrmanntraut (Bonn, Germany):

Critical exponents and scaling laws

3) Aya Abouelela (Bonn, Germany):

Mean-field equations for exciton-polariton condensates

4) Sven Enns (Kaiserslautern, Germany):

Experimental realization of one-dimensional polariton condensate