

Program

Sunday, April 15, 2018

11:00 – 21:00	Registration	
12:30 – 14:00	LUNCH	
14:30 – 14:40	Scientific organizers	Welcome words
<u>Session I:</u>	<u>Non-equilibrium & dynamics</u>	
14:40 – 15:40	Christian Gross	Microscopic studies of many-body localization in two dimensions
15:40 – 16:10	Zala Lenarčič	Time-dependent generalized Gibbs ensembles in open quantum systems
16:10 – 16:40	COFFEE BREAK	
16:40 – 17:10	Jean-Sébastien Bernier	Propagation of correlations in dissipative systems: ballistic, diffusive, rare event and aging dynamics
17:10-17:40	Russell Bisset	Dynamics and interactions of quantum vortices in Bose-Einstein condensates
17:40 – 18:10	Jean-Loup Ville	Sound propagation in a superfluid two-dimensional Bose gas
18:10 – 18:20	Conference Photo (in the front of the lecture hall)	
19:00	DINNER	

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Monday, April 16, 2018

08:00 *BREAKFAST*

Session II: *From few to many-body physics*

09:00 – 10:00 Frank Pollmann **Efficient simulation of quantum thermalization dynamics**

10:00 – 10:30 Nicola Wurz **Coherent manipulation of spin correlations in the 2D Fermi Hubbard model**

10:30 – 11:00 *COFFEE BREAK*

11:00 – 11:30 Tommaso Comparin **Itinerant ferromagnetism for two-dimensional dipolar fermions**

11:30 – 12:00 Francesco Scazza **Time-resolved probing of repulsive many-body states in ultracold Fermi gases**

12:00 – 12:30 Markus Heyl **Dynamical quantum phase transitions**

12:30 *LUNCH*

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Session III: Gauge fields & topology

14:30 – 15:30	Klaus Sengstock	Topology in floquet engineered optical lattices
15:30 – 16:00	Samuel Lellouch	Parametric instabilities in shaken atomic gases
16:00 – 16:30	COFFEE BREAK	
16:30 – 17:00	Alexandre Dauphin	Topological characterization of chiral models through their long time dynamics
17:00 – 17:30	Leonardo Mazza	Laughlin-like states in bobonic flux ladders
17:30 – 18:00	Giacomo Cappellini	Engineering synthetic gauge fields with ultracold two-electron atoms
19:00	DINNER	
20:30 – 21:30	Cristiane de Morais-Smith	Colloquium: There is plenty of room at the bottom... but even more in a fractal

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Tuesday, April 17, 2018

08:00 *BREAKFAST*

Session IV: Strongly correlated systems

09:00 – 10:00 Leticia Tarruell **Quantum liquid droplets in a mixture of Bose-Einstein condensates**

10 :00 – 10:30 Andrea Bergschneider **Detection of entanglement in a Fermi-Hubbard dimer**

10:30 – 11:00 *COFFEE BREAK*

11:00 – 11:30 Cecile Repellin **Creating a bosonic fractional quantum Hall state by pairing fermions**

11:30 – 12:00 Jean Decamp **Correlations and symmetries in one-dimensional quantum gases**

12:00 – 12:30 Guillame Salomon **Direct observation of incommensurate spin correlations in Hubbard chains**

12:30 *LUNCH*

14:30 – 18:00 **Poster session with 2-minute presentations off the posters and**

16:00 *COFFEE BREAK*

19:00 *HERAEUS DINNER*
(social event with cold & warm buffet with complimentary drinks)

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Wednesday, April 18, 2018

08:00 *BREAKFAST*

Session V: Quantum technologies & cold atoms

09:00 – 10 :00 Giovanna Morigi **Collective dynamics of atomic ensembles confined within high-finesse optical cavities**

10 :00 – 10:30 Benoit Vermersch **Measuring entanglement and scrambling via random unitaries**

10:30 – 11:00 *COFFEE BREAK*

11:00 – 11:30 Philipp Hauke **Many-body entanglement witnessed through the quantum Fisher information**

11:30– 12:00 Irénée Frérot **Probing quantum superpositions in equilibrium many-body systems close to quantum and thermal critical points**

12:00 – 12:30 Daniel Barredo **Quantum simulation of spin models with individual Rydberg atoms in arbitrary geometries**

12:30 – 12:45 Scientific organizers **Closing words**

12:45 *LUNCH*

End of the seminar and departure

NO DINNER for participants leaving on Thursday morning