

Young TherMiQ: Thermodynamics of Mesoscopic Quantum Systems

14th-17th of December 2016
Universitat Autònoma de Barcelona



	Wednesday 14th	Thursday 15th	Friday 16th	Saturday 17th
10:00-10:15	—	Welcome	—	—
10:15-10:45	—	<i>Michael Konopik</i> Nonequilibrium Landauer principle	<i>Sam McMillen</i> Quantum-limited estimation of continuous spontaneous localisation	—
10:45-11:15	—	<i>Matteo Brunelli</i> Irreversibility and correlations in quantum optomechanical systems	<i>Cormac Browne</i> Organic molecule fluorescence as an experimental test-bed for quantum jumps in thermodynamics	—
11:15-11:45	—	Coffee break	Coffee break	—
11:45-12:15	Arrival	<i>Karen Hovhannisyan</i> Impossibility of estimating cold temperatures	<i>Julian Leonard</i> Supersolid formation in a quantum gas	Departure
12:15-12:45	—	<i>Jose Alonso</i> Thermodynamics of weakly measured quantum systems	<i>Markus Rademacher</i> Experimental investigation of the Williams-Searles-Evans equality	—
12:45-15:00	—	Lunch	Lunch	—

	Wednesday 14th	Thursday 15th	Friday 16th	Saturday 17th
15:00-15:30	—	<i>Alex Friedenberger</i> When is a quantum heat engine quantum?	—	—
15:30-16:00	—	<i>Brendan Reid</i> A quantum thermal machine powered by finite heat baths	—	—
16:00-16:30	—	<i>Nadia Milazzo</i> The emergence of Quantum Darwinism in open quantum system dynamics	—	—
16:30-17:00	Arrival	Coffee break	Discussion-Poster	Departure
17:00-17:30	—	<i>Senaida Hernandez</i> Decay of correlations in long-range interacting systems at non-zero temperature	—	—
17:30-18:00	—	<i>Katrine Kroeger</i> Quantum phases emerging from competing short- and long-range interactions in an optical lattice	—	—
18:00-19:00	—	Poster	—	—
19:00-21:00	—	—	—	—
21:00-23:00	Dinner at hotel	Dinner at hotel	—	—

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Posters

- *Christine Cartwright* (Queens University of Belfast): Bose-Hubbard Model in a 1-D Flatband Lattice
- *Kenneth McAlpine* (Queens University of Belfast): Disordered Spin-1 Chains
- *Luis A. Correa* (University of Nottingham): Low Temperature Quantum Thermometry Enhanced by Dissipation
- *Mohammad Mehboudi* (UAB, Barcelona): Beating the Shot-Noise Limit at Finite Temperatures Using Many-Body Systems
- *Abel Yuste Roca* (UAB, Barcelona): Exact diagonalization study of a spin-1/2 system in a triangular lattice with random boundary conditions

Talks

- *Sam McMillen* (Queens University of Belfast): Quantum-limited estimation of continuous spontaneous localisation
- *Julian Leonard* (ETH Zurich): Supersolid formation in a quantum gas
- *Cormac Browne* (Oxford): Organic molecule fluorescence as an experimental test-bed for quantum jumps in thermodynamics
- *Markus Rademacher* (University of Vienna): Experimental investigation of the Williams-Searles-Evans equality
- *Katrine Kroeger* (ETH Zurich): Quantum phases emerging from competing short- and long-range interactions in an optical lattice
- *Karen Hovhannisyan* (ICFO, Barcelona): Impossibility of estimating cold temperatures

- *Nadia Milazzo* (University of Palermo): The emergence of Quantum Darwinism in open quantum system dynamics
- *Brendan Reid* (Queens University of Belfast): A quantum thermal machine powered by finite heat baths
- *Alexander Friedenberger* (Universität Erlangen-Nürnberg): When is a quantum heat engine quantum?
- *Matteo Brunelli* (Queens University of Belfast): Irreversibility and correlations in quantum optomechanical systems
- *Jose Alonso* (Universität Erlangen-Nürnberg): Thermodynamics of weakly measured quantum systems
- *Senaida Hernandez* (ICFO, Barcelona): Decay of correlations in long-range interacting systems at non-zero temperature
- *Michael Konopik* (Universität Erlangen-Nürnberg): Nonequilibrium Landauer principle

organizers

Mohammad Mehboudi
Michalis Skotiniotis
Anna Sanpera