

## Workshop on Quantum Information Theory and Thermodynamics at the Nanoscale

2 - 6 March 2020, Al-Hoceima, Morocco

### REVISED PRELIMINARY PROGRAMME

	MONDAY 2 MARCH *	TUESDAY 3 MARCH	WEDNESDAY 4 MARCH	THURSDAY 5 MARCH	
09:00 - 9:45	8:45 <b>Bus</b> leaving hotel to University 9:00 to 9:30 <b>REGISTRATION</b> (at the University) 9:45 <b>Opening ceremony</b> at the University	Eric LUTZ Efficiency fluctuations of a quantum Otto engine	Daniel BRAUN Dynamics as a Resource in Quantum Metrology: From Quantum Chaotic Sensors to Machine Learning	Stefano MANCINI Entanglement classification	
9:45 - 10:30		Robert WHITNEY Non-equilibrium System as a Demon	Daniel Manzano Quantum transport in non-equilibrium lattices.	Gonzalo MANZANO PAULE Quantum Martingale Theory for Entropy Production	
10:30 - 11:00	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>	
11:00 - 11:45	Dariusz CHRUSCINSKI Universal spectra of random Lindblad operators	Gabriele DE CHIARA Thermodynamics of quantum collisional models	Karol ZYCKOWSKI Decoherence in the space of quantum operations	4 Junior Talks 20 Minutes each	
11:45 - 12:30	Andreas BUCHLEITNER	Nikolay KIESEL Thermodynamics with levitated nanospheres	Gian Luca GIORGI Synchronization and exceptional points in open quantum systems		
12:30 - 13:30	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>	
14:00 - 14:45	Bassano VACCHINI Quantum renewal processes	Mark Mitchison A spin heat engine coupled to a harmonic- oscillator flywheel	Koen BERTELS (Skype Talk 14:30 - 15:30)		
14:45 - 15:30	Adil Belhaj On Black Holes and Quantum Information	Mohammed AZZOUZ Magnetic Transport in Quantum Antiferromagnets and Potential Applications in Spintronics			
15:30 - 16:00	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>		
16:00 - 16:20	Junior Talk	Junior Talk	POSTER Session		
16:20 - 16:40	Junior Talk	Junior Talk			
16:40 - 17:00	Junior Talk	Junior Talk			
<p style="color: red; font-weight: bold;">* Note: The first day of the Workshop will take place at the university (including lunch)</p>					28.02.2020