

MC21-22: Quantum Computers and Quantum Simulators for strongly-correlated condensed-matter problems / Quantum Gases and Condensed Matter

Organisateurs : T. Roscilde, F. Werner, A. Perrin, A. Rançon, T. Ayrat, B. Vermersch

Mardi 23 août – 15h00- 18h15

15:00 – 15:30 **Observation of Universal Hall Response in Strongly Interacting Fermions**
Invité **Michele Filippone**, Tianwei Zhou, Daniele Tusi, Lorenzo Franchi, Giacomo Cappellini, Jacopo Parravicini, Jacopo Catani, Sebastian Greschner, Cécile Repellin, Thierry Giamarchi, Leonardo Fallani.
MC21/22-1 *CEA Grenoble*

15:30 - 15:45 **Characterization of correlations in a large ensemble of dipolar spin-3 atoms trapped in a 3D optical lattice**
MC21/22-2 **Youssef Aziz Alaoui**, Laurent Vernac , Bruno Laburthe Tolra
Université Sorbonne Paris Nord, Laboratoire de Physique des Lasers, CNRS

15:45 - 16:00 **Entangled states of dipolar magnetic atoms in multimode traps**
MC21/22-3 **Youssef Trifa** and Tommaso Roscilde
Laboratoire de Physique, ENS de Lyon

16:00 - 16:15 **Aubry transition in a chain of trapped ions**
MC21/22-4 **Raphaël Menu** , Jorge Yago Malo , Maria Luisa Chiofalo , et Giovanna Morigi
Theoretische Physik, Universität des Saarlandes, D-66123 Saarbrücken, Germany
Dipartimento di Fisica Enrico Fermi, Università di Pisa and INFN, Largo B. Pontecorvo 3, I-56127 Pisa, Italy.

16:15 - 16:30 **CRYST3: Emergent Physics With Cold Atoms in a Hollow-Core Photonic Crystal Fiber**
MC21/22-5 **Luisa Fernanda Lorança Cruz** , Andrea Bertoldi
Laboratoire Photonique, Numérique et Nanosciences (L2PN) – Univ. Bordeaux - CNRS – Institut d'Optique Graduate School – France

<p>17:00 - 17:15</p> <p>MC21/22-6</p>	<p>Spin entanglement of a thermal atomic pair in an optical tweezer</p> <p>L. Sanchez, P. Ruksasakchai , S. Parkins , M. Weyland , S.S. Szigeti & M. F. Andersen</p> <p><i>Department of Physics, University of Otago, Dunedin 9054, New Zealand</i></p>
<p>17:15 - 17:30</p> <p>MC21/22-7</p>	<p>Are steady-state topological invariants in open quantum systems useful?</p> <p>Kyrylo Snizhko, Igor Gornyi, and Yuval Gefen</p> <p><i>Univ. Grenoble Alpes, CEA, Grenoble INP, IRIG, PHELIQS, 38000 Grenoble, France</i></p>
<p>17:30 – 17:45</p> <p>MC21/22-8</p>	<p>Enhancement of entanglement at a dissipative phase transition</p> <p>Dolf Huybrechts and Tommaso Roscilde</p> <p><i>Univ Lyon, Ens de Lyon, CNRS, Laboratoire de Physique, F-69342 Lyon, France</i></p>
<p>17:45 - 18:00</p> <p>MC21/22-9</p>	<p>Wave-mediated hydrodynamic superradiance</p> <p>Konstantinos Papatryfonos, Mélanie Ruelle, Corentin Bourdiol, André Nachbin, Louis Vervoort, Valeri Frumkin, John W. M. Bush, Matthieu Labousse</p> <p><i>Gulliver UMR CNRS 7083, ESPCI Paris, Université PSL, 75005 Paris, France & Department of Mathematics, MIT, 77 Massachusetts Ave., Cambridge MA 02139, USA</i></p>
<p>18:00 - 18:15</p> <p>MC21/22-10</p>	<p>Circuit QED implementation of the non-perturbative boundary sine-Gordon model</p> <p>Théo Sépulcre, Sébastien Léger, Dorian Fraudet, Serge Florens, Izak Snyman, Denis Basko and Nicolas Roch</p> <p><i>Chalmers university of technology, WACQT, 412 96 Gothenburg, Sweden</i></p>