

Program of the Colloquium

Monday, November 17, 2014

TIME	EVENT
9:30 am - 10:00 am	Opening of the conference - Opening of the conference
10:00 am - 10:30 am	New types of qubits - NQD (Amphithéâtre Mérieux)
10:00 - 10:30	› Electrical manipulation of a single nuclear spin using a single molecular magnet based transistor - <i>Franck Balestro, Institut NEEL, CNRS, University of Grenoble Alpes</i>
10:30 am - 11:00 am	Coffee break (Atrium)
11:00 am - 12:00 pm	Quantum annealing and quantum simulation (Amphithéâtre Mérieux) - Prof. Dr. Mathias Troyer (Inst. for Theoretische Physik, ETH Zürich)
12:00 pm - 1:30 pm	Lunch (Atrium)
1:30 pm - 2:00 pm	Quantum Information Storage - QIS (Amphithéâtre Mérieux)
13:30 - 14:00	› Quantum memory for cylindrical vector beams - <i>Christophe Arnold, Laboratoire Kastler Brossel</i>
2:00 pm - 3:00 pm	Coherent manipulation of qubits - CMQ (Amphithéâtre Mérieux)
14:00 - 14:30	› Correlations of microwave photons emitted by inelastic Cooper pair tunneling - <i>Alexander Grimm, Laboratoire de Transport Electronique Quantique et Supraconductivité</i>
14:30 - 15:00	› Long coherence times for Rydberg qubits on a superconducting atom chip - <i>Thanh Long NGUYEN, Laboratoire Kastler Brossel</i>
3:00 pm - 3:30 pm	Coffee break (Atrium)
3:30 pm - 4:30 pm	Electron and nuclear spin qubits using donors in silicon. (Amphithéâtre Mérieux) - Prof. John Morton (University College London & London center for Nanotechnology)
4:30 pm - 6:00 pm	Poster session - Poster session in the Atrium
6:00 pm - 8:00 pm	Quantum simulation and information processing - QSP (Amphithéâtre Mérieux)
18:10 - 19:10	› Les gaz ultra-froids : un monde quantique entre physique atomique et matière condensée - <i>Jean Dalibard, Laboratoire Kastler Brossel, Collège de France</i>
8:00 pm - 8:30 pm	Cocktail (Amphithéâtre Mérieux)

Tuesday, November 18, 2014

TIME	EVENT
9:00 am - 10:00 am	Quantum walks with neutral atoms. (Amphithéâtre Mérieux) - Prof. Dr. Dieter Meschede (Bonn University)
10:00 am - 11:00 am	Quantum simulation and information processing - QSP (Amphithéâtre Mérieux)

10:00 - 10:30	› Hong-Ou-Mandel effect with matter waves - <i>Denis Boiron, (Institut d'Optique)</i>
10:30 - 11:00	› Suppression and Revival of Weak Localization through Manipulation of Time-Reversal Symmetry - <i>Valentin Volchkov, Laboratoire Charles Fabry</i>
11:00 am - 11:30 am	Coffee break (Atrium)
11:30 am - 12:30 pm	Quantum simulation and information processing - QSP (Amphithéâtre Mérieux)
11:30 - 12:00	› Creation and tomography of entangled states in an atomic ensemble using an optical cavity - <i>Jérôme Estève, Laboratoire Kastler Brossel</i>
12:00 - 12:30	› Generation of squeezing and entanglement in external degrees of freedom with a BEC in double wells - <i>Marie Bonneau, Atominstut, Vienna University of Technology</i>
12:30 pm - 2:00 pm	Lunch (Atrium)
2:00 pm - 3:00 pm	Magnetism without magnetism: Physics with ultracold quantum gases (Amphithéâtre Mérieux) - Prof. Dr. Klaus Sengstock (Hamburg University)
3:00 pm - 4:00 pm	Quantum simulation and information processing - QSP (Amphithéâtre Mérieux)
15:00 - 15:30	› A Dipolar Quantum Gas to simulate Quantum Magnetism - <i>Laurent Vernac, Laboratoire de Physique des Lasers</i>
15:30 - 16:00	› Quantum simulation of dynamical lattice gauge models - <i>Enrique Rico Ortega, IPCMS (UMR 7504) and ISIS (UMR 7006)</i>
4:00 pm - 4:30 pm	Coffee break (Atrium)
4:30 pm - 5:30 pm	Using the Wigner function to calculate expectation values (Amphithéâtre Mérieux) - Pr. Dr. Gerd Leuchs (University of Erlangen & Mac Planck Institute for the Science of Light)
5:30 pm - 7:00 pm	Poster session - Poster session in the Atrium
8:30 pm - 11:00 pm	Dinner

Wednesday, November 19, 2014

TIME	EVENT
9:00 am - 10:00 am	Causal relations in a quantum world. (Amphithéâtre Mérieux) - Cyril Branciard (Institut Neel, Grenoble)
10:00 am - 10:30 am	Foundational aspects - FOUND (Amphithéâtre Mérieux)
10:00 - 10:30	› 1D-atoms applied to Fundamental Quantum Mechanics - <i>Marcelo Santos, Universidade Federal de Minas Gerais</i>
10:30 am - 11:00 am	Coffee break (Atrium)
11:00 am - 12:30 pm	Quantum communication - QCOM (Amphithéâtre Mérieux)
11:00 -	› Time-division demultiplexing for polarization-entangled photons - <i>Jonathan Lavoie, GAP</i>

11:30 *Quantique - University of Geneva*

11:30 - › Self-testing quantum random number generator - *Anthony Martin, Group of Applied Physics,*
12:00 *Université de Genève - Nicolas Brunner, Institute for Theoretical Physics, Geneva*

12:00 - › Electrically Tunable Bright Sources of Indistinguishable Single Photons - *Niccolo Somaschi,*
12:30 *Laboratoire des Photonique et de Nanostructure-CNRS*

12:30 pm - Lunch (Atrium)
2:00 pm

2:00 pm - Electron quantum optics (Amphithéâtre Mérieux) - *Gwendal Fève (Laboratoire Pierre Aigrain,*
3:00 pm *ENS Paris)*

3:00 pm - New types of qubits - NQD (Amphithéâtre Mérieux)
3:30 pm

15:00 - › Experimental boson sampling with integrated photonics - *Fabio Sciarrino, Dipartimento di Fisica*
15:30 *[Rome]*

3:30 pm - Coherent manipulation of qubits - CMQ (Amphithéâtre Mérieux)
4:00 pm

15:30 - › Multiplexed control and single-shot readout of transmon qubits - *Vivien Schmitt, Qnantronics*
16:00 *Group*
