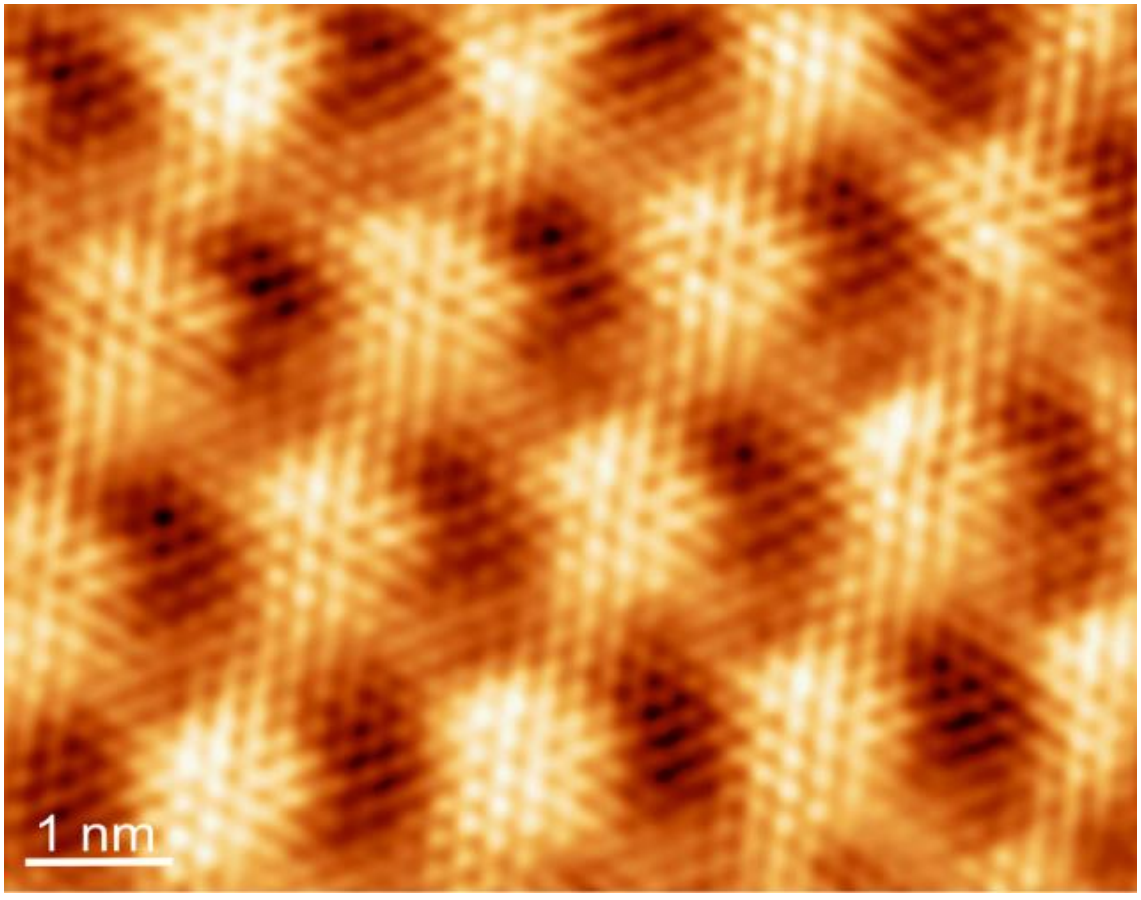
GDR PHYSIQUE QUANTIQUE MESOSCOPIQUE

SESSION PLENIERE 2019

2-5 December 2019 Aussois, France



Scanning Tunneling Micrograph of a Moiré pattern created by graphene on Rhenium, courtesy of C. Tonnoir

Programme :

lundi 2 décembre 2019

HEURES	ÉVÉNEMENT
12:30 - 13:30	Déjeuner
14:00 - 16:00	Supraconductivité et Topologie
14:00 - 14:35	› Real-Space Visualization of Majorana Edge Modes on the Nano-Scale Magnet-Superconductor Hybrid System - *Alexandra Palacio Morales, Université Paris Sud*
14:35 - 15:00	› Two-terminal conductance measurements in Selective Area Grown nanowires - *Gerbold Ménard, Service de physique de l'état condensé, Center for Quantum Devices and Station Q Copenhagen*
15:00 - 15:35	› Spin-Orbit induced phase-shift in Bi2Se3 Josephson junctions - *herve aubin, Centre de Nanosciences et Nanotechnologies*
15:35 - 16:00	› Engineering topological superconductivity with magnetic skyrmions - *Maxime Garnier, Laboratoire de Physique des Solides*
16:00 - 16:30	Pause café
16:30 - 18:20	Contrôle et Information quantique
16:30 - 16:55	› Quantum rifling: protecting a qubit from measurement back-action - *Daniel Szombati, ENS Lyon, University of Queensland*
16:55 - 17:30	› Exponential suppression of bit-flips in a qubit encoded in an oscillator - *Zaki Leghtas, LPENS*
17:30 - 17:55	› Multiplexed photon number measurement of a cavity using the fluorescence of a coupled qubit. - *Antoine Essig, Laboratoire de Physique*
17:55 - 18:20	› Photon detector resolving photon number in a microwave propagating mode - *Rémy Dassonneville, Laboratoire de Physique de lÉNS Lyon*
19:30 - 20:30	Dîner
21:00 - 23:00	Session poster

mardi 3 décembre 2019

HEURES	ÉVÉNEMENT
09:00 - 10:35	Contrôle et Information quantique
09:00 - 09:35	› Phonon-mediated quantum state transfer between remote superconducting qubits and phonon interferometry - *Audrey Bienfait, University of Chicago, Laboratoire de Physique de lÉNS Lyon*
09:35 - 10:10	› Understanding the electrical manipulation of hole spins in silicon - *Yann-Michel Niquet, Interdisciplinary Research Institute of Grenoble, Modeling and Exploration of Materials Laboratory*
10:10 - 10:35	Electronique quantique
10:10 - 10:35	› Single-photon emission mediated by single-electron tunneling in plasmonic nanojunction - *Quentin Schaeverbeke, Donostia International Physics Center - DIPC (SPAIN), Laboratoire Ondes et Matière d'Aquitaine*
10:35 - 11:05	Pause café
11:05 - 12:20	Electronique quantique
11:05 - 11:30	› Transmitting the quantum state of electrons across a metallic island with Coulomb interaction - *Hadrien Duprez, Centre de Nanosciences et de Nanotechnologies*
11:30 - 11:55	› The electron radar - *Pascal Degiovanni, Laboratoire de Physique*
11:55 - 12:20	› Measure of the absorption and emission noises of a non-linear out-of-equilibrium quantum conductor - *Iftikhar Zubair, CEA SPEC*
12:30 - 13:30	Déjeuner
15:00 - 15:35	Electronique quantique
15:00 - 15:35	› Tunneling time probed by quantum shot noise - *Julien Gabelli, Laboratoire de Physique des Solides*
15:35 - 17:00	Graphène
15:35 - 16:00	› Coherent manipulation of the valley in graphene - *Paul Brasseur, CEA saclay/spec*
16:00 - 16:25	› Strain tuning and mobility enhancement by reduction of random strain fluctuations - *Simon Zihlmann, Department of Physics and Astronomy [Basel]*
16:25 - 17:00	› Helical quantum Hall phase in graphene on SrTiO3 - *Benjamin Sacépé, Institut Néel*
17:00 - 17:20	Pause café
17:20 - 19:00	Matière topologique
17:20 - 17:55	› A hydrogen atom reveals the Berry phase of graphene - *C. Dutreix, Université Bordeaux, CNRS, LOMA, UMR 5798, F-33405 Talence, France*
17:55 - 18:20	› Topological pumping: from the Quantized Hall Effect to circuit QED - *David Carpentier, CNRS - Laboratoire de Physique de l'ENS de Lyon*
18:20 - 18:55	› Dynamical conductivity of the Fermi arc and the Volkov-Pankratov states on the surface of Weyl semimetals - *Dibya Mukherjee, Systèmes élastiques : du désordre à la plasticité*
19:30 - 20:30	Dîner
21:00 - 23:00	Posters session

mercredi 4 décembre 2019

HEURES	ÉVÉNEMENT
09:00 - 10:00	Graphène
09:00 - 09:35	› Imaging work and dissipation in the quantum Hall state of graphene - *Arthur Marguerite, Weizmann Institute of Science*
09:35 - 10:00	› Imaging Ballistic and Topological Transport in Graphene/Hexagon Boron Nitride Heterostructures - *Ziwei Dou, Laboratoire de Physique des Solides*
10:00 - 10:30	Pause café
10:30 - 11:30	Supraconductivité mésoscopique
10:30 - 11:05	› Nonadiabatic dynamics in strongly driven diffusive Josephson junctions - *Julien Basset, Laboratoire de Physique des Solides*
11:05 - 11:30	› Dynamically induced 0-Pi transition in a carbon nanotube-based Josephson junction - *diana watfa, Laboratoire de Physique des Solides*
11:30 - 12:20	Matière topologique
11:30 - 11:55	› Topological phases of polaritons in a cavity waveguide - *Guillaume Weick, Institut de Physique et Chimie des Matériaux de Strasbourg*
11:55 - 12:20	› Quantised Fermi-arc-mediated transport in Weyl semimetal nanowires - *Vardan Kaladzhyan, Royal Institute of Technology [Stockholm]*
12:30 - 13:30	Déjeuner
14:30 - 16:20	Supraconductivité mésoscopique
14:30 - 15:05	› Multi-gap superconductivity in LaAlO3/SrTiO3 interfaces - *Nicolas Bergeal, Laboratoire de Physique et dÉtude des Matériaux*
15:05 - 15:30	› Superconductor-insulator transition in Josephson junction chains by Quantum Monte-Carlo - *Denis Basko, Laboratoire de physique et modélisation des milieux condensés*
15:30 - 15:55	› Modulation of superconducting nanowires critical current driven by tunneling quasiparticle injection - *Thomas Jalabert, CEA-IRIG-PHELIQS*
15:55 - 16:20	› Photonic heat flow modulation using charge quantization - *Olivier Maillet, PICO group, Low Temperature Laboratory, Aalto University*