

TeQ#1 - 1st colloquium of the GdR Quantum Technologies

	Wednesday Nov. 22nd 2023	Thursday Nov. 23rd 2023	Friday Nov. 24th 2024
08:30	Welcome session	Tutorial FQA - Géraldine Haack (Univ. Geneva, CH) "Quantum thermal machines"	
09:00	Quantum GDR overview		Tutorial QPAC - Simone Gasparinetti (Univ. Chalmers, SE) "Quantum computing with superconducting bosonic modes: states, gates, tomography"
09:30	Tutorial QSIM - Iacopo Carusotto (Pitaevskii BEC Center, Trento, IT) "Quantum fluids of light as quantum simulators for condensed matter and gravitational problem"	FQA - Carlos Lopetegui (LKB, FR) "Metrological witness for non-Gaussian quantum entanglement"	
10:00		Coffee break	QPAC- Kyrylo Gerashchenko (LKB,FR) "Towards quantum control of an ultracoherent mechanical resonator with a fluxonium qubit"
10:30	Coffee break	Invited talk FQA - Ludovico Lami (Univ. Amsterdam & QuSof, NL) "On the (ir)reversibility of entanglement manipulation"	Coffee break
11:00	Invited talk QSIM - Jean-Philippe Brantut (EPFL, CH) "Photon-induced density-wave order in strongly correlated matter"	FQA - Valeria Vento (EPFL, CH) "Measurement-induced collective vibrational quantum coherence under spontaneous Raman scattering in a liquid"	QPAC-Hugo Perrin (KIT,DE) "Mitigating crosstalk errors by randomized compiling: Simulation of the BCS model on a superconducting quantum computer"
11:30	QSIM - Martin Guillot (C2N, FR) "All-optical measurement of the eigenstate structure in polariton lattices"	FQA - Adrien Bensemhoun (INPHYNI, FR) "Multipartite entanglement in bright frequency combs out of microresonators"	QPAC - Bruno Senjean (ICGM, FR) "Quantum Density Functional Theory on Qudit-based device"
12:00	QSIM - Nicolas Ombredane (LCAR, FR) "Floquet operator engineering for quantum state stroboscopic stabilization"	Lunch	Invited talk TEM - Dafei Jin (Univ. ND,USA) "Single electrons on solid neon – a long-coherence high-fidelity qubit platform"
12:30	Lunch		Lunch
13:00			
13:30		Tutorial QCOM - Val Zwiller (KTH, SE) "Generation, manipulation and detection of single photons"	
14:00	Tutorial QMET - Sébastien Merlet (LNE-SYRTE, FR) "Cold atom gravimetry"		TEM - Fabio Pistolesi (LOMA, FR) "Carbon Nanotube Oscillator as a Nanomechanical Qubit"
14:30		QCOM - Manon Huguenot (Exail, LIP6, FR) "Development of industrial continuous-variable quantum key distribution systems"	TEM/QSIM - Romain Long (LKB, FR) "From cavity-protected atomic ensemble to single atom array in a microcavity"
15:00	QMET - Jaime Travesedo (SPEC, FR) "Single electron-spin-resonance detection by microwave photon counting"	Coffee break	TEM - Valentin Magro (JEIP, FR) "Deterministic freely propagating photonic qubits with negative Wigner functions"
15:30	Coffee break	Invited talk QCOM - Constanza Toninelli (CNR-INO, LENS, IT) "Single molecules in photonic quantum technologies"	Closing session
16:00	Invited talk QMET - Nicolas Roch (Institut Néel, FR) "Josephson waveguide: near quantum-limited amplifiers and beyond"	QCOM - Thomas Van Himbeek (IP-Paris, FR) "A tight and general finite-size security proof of quantum key distribution"	
16:30	QMET - Eleonora Capocasa (APC, FR) "Squeezed-vacuum techniques for quantum noise reduction in interferometric gravitational-wave detectors"	QCOM - Louis Nicolas (Univ. Geneva, CH) "Towards large bandwidth spin-wave AFC storage in $171\text{Yb}^{3+}:\text{Y}_2\text{SiO}_5$ "	
17:00	QMET - Nicolas Fabre (IP-Paris, FR) "Time-frequency quantum metrology"	Poster session 2 QMET, FQA	
17:30	Poster session 1 QCOM, QPAC, TEM, QSIM		
18:00		Banquet	
18:30			
19:00			
19:30			



UNIVERSITÉ DE MONTPELLIER

