

ITI QMat – QuanTEdu Scientific Day

June 5th, 2025, IPCMS Strasbourg

Program (morning)

9h00-9h20 Welcome, summary of the ITI QMat scientific objectives, goals of the day (Silviu COLIS, IPCMS)

9h20-9h40 “Manipulation of qubits encoded in Rydberg blockaded arrays of individual atoms” (Tom BIENAIME, ISIS)

9h40-10h00 “Dipole excitations in atomic nuclei: theoretical models and applications” (Kamila SIEJA, IPHC)

10h00-10h20 “3D Nanoscale Studies of Polar Topological Textures” (Salia CHERIFI-HERTEL, IPCMS)

Coffee Break

10h50-11h10 “Optimizing 'entanglement' in open-system dynamic” (Johannes SCHACHENMAYER, ISIS)

11h10-11h30 “Testing quantum loops with invisible particles: searching for $b \rightarrow s \nu \nu$ transitions at Belle II” (Giulio DUJANY, IPHC)

11h30-11h50 “Towards efficient C=C double bond photoisomerization via rational chemical design” (Jérémie LEONARD, IPCMS)

11h50-12h10 “New strategies for quantum error correction with neutral atoms” (Laura PECORARI, ISIS)

Lunch Break

Program (afternoon)

14h00-14h20 “Pixel sensor for single particle tracking with enhanced sensitivity” (Jérôme BAUDOT, IPHC)

14h20-14h40 “The classical challenges of building a fault-tolerant quantum computer” (Asier PINEIRO ORIOLI, QPerfect)

14h40-15h25 **General Seminar** : “Thermal melting of a vortex lattice in a rotating superfluid” (Hélène PERRIN – Laboratoire de physique des lasers, CNRS - Université Sorbonne, Institut Galilée)

Coffee Break

16h00-17h00 General information session (Matthieu BAILLEUL, IPCMS)

17h00-19h00 Poster Session (with Beer & Bretzel)

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