ICQOM Program

The conference will be held in hybrid format, and the webinar is accessible via Zoom at the following address:

https://us02web.zoom.us/j/2485033966

Monday, the 18th

14:00 – 15:25 Session I

13:45 – 14:00 Welcome

14:00 – 14:45 **Stefanie Barz**, University of Stuttgart (Invited)*
Graph states for quantum communication and computation
14:45 – 15:05 **David Fainsin**, Laboratoire Kastler Brossel, Paris
Quantum routing in multipartite complex network
15:05 – 15:25 **Raja Yehia**, LIP6, Paris
A near-term photonic metropolitan quantum network architecture towards a quantum internet

15:25 – 16:00 Coffee break

16:00 – 17:25 Session II

16:00 – 16:45 **Boris Korzh**, Jet Propulsion Laboratory, California Institute of Technology (Invited)*
Advances in superconducting nanowire single photon detector and related applications
16:45 – 17:05 **Federico Centrone**, LIP6 – IRIF, Paris
Practical quantum electronic voting

Tuesday, the 19th

09:15 – 10:40 Session I

09:15 – 10:00 **Nicolas Sangouard**, CEA Paris-Saclay (Invited)
Device independent quantum key distribution
10:00 – 10:20 **Francesco Mazzoncini,** Telecom Paris – LTCI, Palaiseau
QKD attack rating: prioritizing is the key to practical security
10:20 – 10:40 **Patrik Caspar**, University of Geneva, Geneva
Local and scalable detection of genuine multipartite single-photon path entanglement

10:40 – 11:00 Coffee break

11:00 – 12:30 ROUND TABLE 1 : Quantum Tech

14:00 – 15:25 Session II

14:00 – 14:45 **Andrew Shields**, Toshiba UK (Invited)*
Extending the range of quantum communications
14:45 – 15:05 **Matteo Schiavon**, LIP6, Paris
Adaptive optics for satellite DV and CV-QKD
15:05 – 15:25 **Nilesh Vyas**, Télecom Paris LTCI, Palaiseau
Everlasting secure key agreement from the quantum computational timelock

15:25 – 16:00 Coffee break

16:00 – 17:05 Session III

16:00 – 16:45 **Denis Sukachev**, Harvard University (Invited)*
Silicon-Vacancy centers in diamond as a platform for quantum networking
16:45 – 17:05 **Omid Golami**, IQST, Calgary
Ab initio and group theoretical study of properties of carbon trimer defect in h-BN

19:45 – 21:30 Projection of the dance show « Quantumotion » and discussion with the artists

Public conference « Des photons intriqués aux communications quantiques »
by Philippe Grangier

https://www.sirteq.org/event/conference-et-soiree-grand-public/

The conference will be given in French.

Wednesday, the 20th

09:15 – 10:40 Session I

09:15 – 10:00 **Yang Liu**, Jinan Institut of Quantum Technology (Invited)*
Quantum Key Distribution over 511 km optical fibre linking two distant cities
10:00 – 10:20 **Aurélie Denys**, INRIA, Paris
Explicit asymptotic secret key rate of continuous -variable quantum key distribution with an arbitrary modulation
10:20 – 10:40 **François Roumestan**, Nokia Bell Labs, Nozay
High-rate continuous variable quantum key distribution based on probabilistically shaped 64 and 256-QM

10:40 – 11:00 Coffee break

11:00 – 12:05 Session II

11:00 – 11:45 **Hugues de Riedmatten**, ICFO, Barcelona (Invited)
Linking quantum repeater nodes
11:45 – 12:05 **Felix Hoffet**, Laboratoire Kastler Brossel, Paris
Efficient transfer of entanglement between light and cold-atom quantum memories

14:00 – 15:25 Session III

14:00 – 14:45 **Ben Lanyon**, University of Innsbruck (Invited)*
A telecom quantum repeater node
14:45 – 15:05 **Stephen DiAdamo**, TU München, Munich
Entanglement-assisted communication with stored entanglement
15:05 – 15:25 **Agnès Maître**, INSP – University of Oxford, Paris
Nonlinear emission and giant absorption cross section of single Cse/CdS nanocrystal patch antenna

15:25 – 16:00 Coffee break

16:00 – 17:05 Session IV

16:00 – 16:45 **Dave Touchette**, Sherbrooke University (Invited)*
Optical Quantum Communication Complexity
16:45 – 17:05 **Yao Ma**, LIP6 – VeriQloud, Paris
QEnclave - A practical solution for secure quantum cloud comptuing
19:30 – 23:00 Conference Dinner – Le Train Bleu

Thursday, the 21st

09:15 – 10:40 Session I

09:15 – 10:00 **Jacqueline Romero**, University of Queensland (Invited)*
Hiding ignorance and finding knowledge: adventures using the shape of light
10:00 – 10:20 **Beatrice Polacchi**, Sapienza Università di Roma, Roma*
Experimental robust self-testing of the state generated by a quantum network
10:20 – 10:40 **Maxime Jacquet**, Laboratoire Kastler Brossel, Paris
Photonic Maxwell's Demon: Feed-forward methods for information processing tasks

10:40 – 11:00 Coffee break

11:00 – 12:25 Session II

11:00 – 11:45 **Matteo Pompili**, Qutech, Delft (Invited)
A multi-node entanglement-based quantum network of solid-state qubits
11:45 – 12:05 **Félicien Appas**, Laboratoire Matériaux et Phénomènes Quantiques, Paris
Flexible entanglement-distribution network with an AlGaAs chip for secure communications
12:05 – 12:25 **Damien Simonit**, INSP, Paris
Determination of the band offset between CdSe and CdS from the fluorescence emission of CdSe/CdS core shell nanocrystals

14:00 – 15:05 Session III

14:00 – 14:45 **Tobias Gehring**, DTU (Invited)
Continuous Variable Quantum Key Distribution with Digital Signal Processing
14:45 – 15:05 **Stefano Chessa**, NEST, Pisa
Partially coherent direct sum channels and multilevel amplitude damping channels, quantum capacity analysis

15:05 – 15:30 Coffee break

15:30 – 17:00 ROUND TABLE 2 : National Quantum Initiatives

Friday, the 22th

09:15 – 10:40 Session I

09:15 – 10:00 **Virginia D'Auria**, Université Côte d'Azur, Nice (Invited)*
Guided-wave solutions for squeezing generation and manipulation
10:00 – 10:20 **Tom Darras**, Laboratoire Kastler Brossel, Paris
Hybrid teleportation protocols for heterogeneous quantum networks
10:20 – 10:40 **Francesca Sansavini**, Laboratoire Kastler Brossel, Paris
Continuous-variable quantum networks via single-pass femtosecond parametric process

10:40 – 11:00 Coffee break

11:00 – 12:50 Session II

11:00 – 11:45 **Daniele Dequal**, Italian Space Agency, Matera (Invited)
Satellite QKD: status and perspectives toward a global network
11:45 – 12:05 **Vladyslav Usenko**, Palacky University, Olomouc
Squeezing-enhanced atmospheric quantum communication
12:05 – 12:25 **Davide Rusca**, University of Geneva, Geneva
Quantum keyless private communication vs. quantum key distribution for space links
12:25 – 12:50 **Paul Hilaire**, Virginia Tech, Blacksburg
Quantum networking with all-photonic repeaters

** speaker on videoconferencing*