ICQOM Program

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,
Quantum routing in multipartite complex network
15:05 – 15:25  Raja Yehia,
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, NIST (Invited)*
Advances in superconducting nanowire single photon detector and related applications
16:45 – 17:05  M. Meunier,
Integrated photonic for room-temperature single photon emitters in Gallium Nitride:
from telecom to visible wavelengths
17:05 – 17:25  Amit Raj Dhawan,
Nonlinear emission and giant absorption cross section
of single Cse/CdS nanocrystal patch antenna
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 Mazzoncinini,
QKD attack rating: prioritizing is the key to practical security
10:20 – 10:40  Patrik Caspar,
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,
Adaptive optics for satellite DV and CV-QKD
15:05 – 15:25  Nilesh Vyas,
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  O. Golami,
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
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,
Explicit asymptotic secret key rate of continuous -variable quantum key distribution with an arbitrary modulation
10:20 – 10:40 François Roumestan,
High-rate continuous variable quantum key distribution based on probabilistically shaped 64 and 256-QM

10:40 – 11:00 Coffee break

11:00 – 12:25 Session II

11:00 – 11:45 Hughes de Riedmatten, ICFO, Barcelona (Invited)
Linking quantum repeater nodes
11:45 – 12:05 Felix Hoffet,
Efficient transfer of entanglement between light and cold-atom quantum memories
12:05 – 12:25 Paul Hilaire,
Quantum networking with all-photonic repeaters

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,
Entanglement-assisted communication with stored entanglement
15:05 – 15:25 Federico Centrone,
Practical quantum electronic voting

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,
QEnclave - A practical solution for secure quantum cloud computing

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  Iris Agresti,
Experimental robust self-testing of the state generated by a quantum network
10:20 – 10:40  Maxime Jacquet,
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,
Flexible entanglement-distribution network with an AlGaAs chip for secure communications
12:05 – 12:25  Damien Simonit,
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,
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,
Hybrid teleportation protocols for heterogeneous quantum networks
10:20 – 10:40  F. Sansavini,
Continuous-variable quantum networks via single-pass femtosecond parametric process

10:40 – 11:00  Coffee break

11:00 – 12:25  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,
Squeezing-enhanced atmospheric quantum communication
12:05 – 12:25  Angeles Vasquez-Castro,
Quantum keyless private communication vs. quantum key distribution for space links

* speaker on videoconferencing