CLP DAY

Quantum Networks

Tuesday April 25, 2023

Speakers

Gustav Kalbe
Acting Director of DG Connect C "Digital Excellence and Science Infrastructure"

Dr. Gustav Kalbe studied Applied Physics at the Université Catholique de Louvain, Belgium. In 1991 he studied Applied Optics at the Imperial College of Science in London. In 1995 he completed his studies and earned a PhD in Physics, Molecular Spectroscopy, at the Université Catholique de Louvain, Belgium.He started his professional career as a project manager in photonic networks at the incumbent telecom operator in Belgium. He was R&D manager when he left the company. In 1998 he joined the Directorate General Information Society & Media of the European Commission where he started working as Project Officer managing research projects of the European Framework Programs for Research. Over the years he had several assignments in quantum technologies, photonics, and cybersecurity. In 2014 Gustav Kalbe became HoU for Administration & Finance in the European Commission, in Directorate General Communications Networks, Content and Technology. In 2016 he was appointed HoU of the newly created High Performance Computing and Quantum Technology unit in DG Communications Networks, Content and Technology. In 2018 he became responsible for the establishment and operation of the European High Performance Computing Joint Undertaking. He occupied the post of Interim Executive Director of the JU until its autonomy by the end of 2020. In January 2021, he was appointed Deputy to the Director of DG Connect C "Digital Excellence and Science Infrastructure". Since May 2022 Gustav is the Acting Director of DG Connect C "Digital Excellence and Science Infrastructure".

Johanna Sepúlveda
Airbus Expert on Quantum-Secure Technologies

Johanna received her M.Sc. and Ph.D. degrees in Electrical Engineering – Microelectronics by the University of São Paulo, Brazil. She was a Senior Researcher in the area of security and emerging technologies at the University of South Brittany (France), INRIA (France) and at the Technical University of Munich (Germany). Currently she holds a position as the Airbus Expert on Quantum-Secure Technologies, being Chief Engineer of different European quantum initiatives such as the European Quantum Communication Infrastructure (EuroQCI). Also she is a member of the Strategic Advisory Board of Quantum Technologies for the European Commission and leader of the Strategic Industry Roadmap at the Quantum Industry Consortium (QuIC). She has more than 15 years of experience in R&T and R&D in the area of security, networked systems, HPC and quantum technologies.

Valerio Pruneri
ICFO group leader and QSNP coordinator

Valerio is an ICREA Professor, Corning chair and Group leader at ICFO. He in inventor in more than 60 patent families. The research from his group has contributed to the development of the quantum technologies now commercialised by Quside and Luxquanta. He is the coordinator of QSNP and was of CIVIQ.

Eleni Diamanti
CNRS and co-founder, WeLinkQ

Eleni is CNRS Eleni Diamanti is CNRS research director at the LIP6 laboratory of Sorbonne University in Paris and coordinator of the Paris Centre for Quantum Technologies. She received her PhD in Electrical Engineering from Stanford University in 2006 and then worked as a Marie Curie postdoctoral researcher at the Institute of Optics Graduate School in Palaiseau, France before joining the CNRS in 2009. She is a recipient of an ERC Starting Grant and is also co-founder and scientific advisor of the spin-off company Welinq. Her research focuses on experimental quantum cryptography and communication, and on the development of photonic resources for quantum networks.

Romain Alléaume
Telecom Paris

Romain earned his PhD from Sorbonne University in 2004, on quantum cryptography with single photons sources. He is also a graduate from ENS Paris (Quantum Physics) and Télécom Paris (Information Technologies). In parallel to an academic career at Telecom Paris, he co-founded the start-up SeQureNet which successfully developed and commercialized the first continuously variable quantum key distribution system (CV-QKD) in 2013. Romain Alléaume is actively involved in the European Quantum Technology Flagship, the EuroQCI program, as well as in French Plan Quantique. He conducts research on quantum and classical cryptography, quantum communications and photonic quantum information processing. He has created and leads since January 2023 a new joint research team between Inria and Institut Polytechnique de Paris: QURIOSITY.

Antonio Pastor
Security Expert, Telefónica

Antonio Pastor holds a Ph.D. in computer science from the Universidad Politécnica de Madrid. He joined Telefónica I+D in 2000 and since 2006, he has been working as an expert in network security. As part of Telefonica CTIO unit, he leads innovation activities around network security based on network programmability, quantum communications, and AI where he has produced several patents and scientific papers. Additionally, he holds several security certifications, and keep active collaboration in standardization bodies.

Hugues de Riedmatten
ICFO group leader

Hugues de Riedmatten (PhD 2003, University of Geneva) is ICREA professor and head of the Quantum Photonics group at ICFO since 2010. His group´s research focuses on building experimental hardware for quantum networks and quantum repeaters, including quantum memories for light, quantum light sources, quantum network nodes and quantum frequency conversion. He contributed to key milestones in quantum repeater technology, including the first demonstrations of long distance quantum teleportation, and of quantum repeater links using cold atoms and solid-state quantum memories. Hugues is a member of the executive team of the European Quantum Internet Alliance.

Stephan Ritter
Director Applications Quantum Technologies, Toptica

Stephan obtained his PhD degree in physics from ETH Zurich. He then joined the Max-Planck-Institute of Quantum Optics to develop single atoms in high-finesse optical resonators into universal nodes of an elementary quantum network. After 15 years in academia, Stephan joined TOPTICA Photonics, a leading manufacturer of high-tech laser systems for scientific and industrial applications, where he is currently leading the application team for quantum technologies. Stephan is a member of the Executive Team of the European Quantum Internet Alliance and of the Advisory Board of the German joint quantum-repeater-link project QR.X.

Vanesa Díaz
CEO, LuxQuanta

Vanesa is a seasoned telecommunications industry leader with over 20 years of experience in various commercial and technical roles. As CEO at LuxQuanta, Diaz leads the company's business development, strategic partnerships, and investor relationships. She graduated with honours from the University of Cantabria, with a Master's Engineering Degree in Telecommunications and holds a Master of Business and Marketing from Griffith University, Australia.

Domenico Tulli
Co-founder and CTO, Quside

Domenico leads the technology strategy, chip integration and space and defense initiatives. He has a PhD in Photonics from ICFO and brings 15+ years' experience at the forefront of photonic and space innovation. Prior to joining Quside, Domenico was a post-doc at UC Davis and UC Berkeley and then team leader at DAS Photonics, where he led the development of advanced integrated photonic components for space and defence clients.

Remon Berrevoets
Co-founder and Director Research Development, Q*Bird

Remon is one of the co-founders of Q*Bird, a startup from QuTech (from Delft University of Technology). Q*Bird's mission is to provide equipment for the current, and future quantum internet. Remon Berrevoets has a masters degree in Applied Physics and has previously worked at QuTech as a quantum optics engineer, where he worked on various projects to develop and demonstrate quantum networking technology.

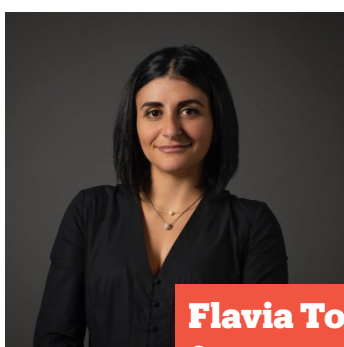**Olivier Tonneau**
Partner, Quantonation

A graduate from ESSEC business school, Olivier is partner at Quantonation. Previous experiences include 10 years as management consultant at Kearney, before joining French entrepreneur Charles Beigbeder as deputy CEO at his holding company, Gravitation. Olivier is a board member at Multiverse Computing, Qnami, KETS Quantum Security, EvolutionQ, ItsQ, Kipu & Cryptonext Security.

Stuart Nicol
Chief Investment Officer, Quantum Exponential

Stuart is the Chief Investment Officer of Quantum Exponential Group Plc. Quantum Exponential is a UK venture whose strategy is to invest in quantum tech from pre-seed to series A globally. Stuart has overall responsibility for investments & has been in VC for over 20 years with companies such as Octopus, and Crowdcube. Before VC Stuart studied at London Business School and was an Army officer in a Scottish Highland Regiment. He lives in "The English Riviera" in South West England with his family & their golden retriever.
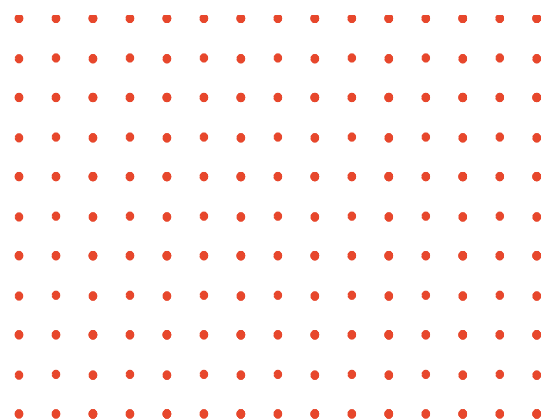
Flavia Tomarchio
Constructor Capital

Flavia is the Head Innovation Deployment at Constructor Group. Flavia has recently also joined Constructor Capital, VC fund of the Constructor ecosystem focused on physics, life engineering, machine learning, B2B software and ed tech. She directly following deals in the vertical of quantum tech and advanced materials. She holds a PhD in physics and Engineering from the University of Cambridge, Cambridge Graphene Centre.

Program

9:00-9:20	**Welcome coffee and registration**
9:20-9:30	**CLP Welcome** Lluís Torner, ICFO Director
9:30-10:15	**Quantum Communications in EU** Gustav Kalbe, Acting Director - Digital Excellence and Scientific Infrastructures, European Commission
10:15-10:40	**European Quantum Communications Infrastructure (EUROQCI)** Johanna Sepúlveda, Airbus
10:40-11:10	**SGA: Quantum Security Networks Partnership (QSNP)** Overview – Valerio Pruneri, ICFO Pillar 1 – Eleni Diamanti, CNRS Pillar 2 – Romain Alléaume, Telecom Paris Pillar 3 – Antonio Pastor Perales, Telefonica I+D
11:10-11:30	**Coffee Break**
11:30-12:00	**SGA: Quantum Internet Alliance** Hugues de Riedmatten, ICFO Stephan Ritter, Toptica
12:00-12:40	**Quantum spin-offs panel** Vanesa Díaz, LuxQuanta Domenico Tulli, Quside Eleni Diamanti, WeLinQ Remon Berrevoets, Q*Bird
12:40-13:30	**Quantum investors panel** Olivier Tonneau, Quantonation Stuart Nicol, Quantum Exponencial Flavia Tomarchio, Constructor Capital
13:30-14:30	**Networking Lunch**