International Conference on Quantum Communications, Networking, and Computing

(QCNC 2024)

1-3 July 2024 (Japan Standard Time)

Conference Program and Information Booklet

Sponsored by

Advanced Program Summary (Japan Standard Time Zone)

1 July 2024 (Monday)	
09:00-09:20	**Opening Ceremony (Room: Emerald)**
09:20-10:20	**Keynote Speech (Room: Emerald)**
10:20-10:30	**Coffee Break**
10:30-12:10	QCNC-1: Quantum Information Networks-1 (Room: Emerald)
12:10-13:00	**Break**
13:00-15:05	QCNC-2: Quantum Computing & Service and Applications (Room: Emerald)
15:05-15:30	**Coffee Break**
15:30-16:30	QCNC-3: [Short Paper] Quantum Information Networks-S (Room: Emerald)
16:30-16:40	**Break**
16:40-18:00	QCNC-4: [Short Paper] Quantum Computing-S (Room: Emerald)
18:00-18:30	**Break**
18:30-20:30	**Reception & Poster Session (Room: Applause)**
2 July 2024 (Tuesday)	
09:00-09:50	QCNC-5: Quantum Hardware and Devices (Room: Emerald)
09:50-10:20	**Coffee Break**
10:20-12:00	QCNC-6: Quantum Information Networks-2 (Room: Emerald)
12:00-13:00	**Break**
13:00-15:05	QCNC-7: Quantum Key Distribution and Quantum Cryptography (Room: Emerald)
15:05-15:30	**Coffee Break**
15:30-16:30	QCNC-8: [Short Paper] Security in the Quantum Age-S (Room: Emerald)
16:30-16:40	**Break**
16:40-18:00	QCNC-9: [Short Paper] Quantum Key Distribution and Quantum Cryptography-S (Room: Emerald)
18:00-18:30	**Break**
18:30-20:30	**Banquet (Room: Applause)**
3 July 2024 (Wednesday)	
09:00-09:50	QCNC-10: Security in the Quantum Age (Room: Emerald)
09:50-10:20	**Coffee Break**
10:20-12:00	Session QCNC-11: Quantum Information Networks-3 (Room: Emerald)
12:00-13:00	**Break**
13:00-14:15	QCNC-12: Invited Papers (Room: Emerald)
14:15-14:40	**Coffee Break**
14:40-16:20	QCNC-13: Quantum Network and Theory (Room: Emerald)
16:20-16:30	**Break**
16:30-17:50	QCNC-14: [Short Paper] Quantum Communications and Network-S (Room: Emerald)
17:50-18:00	**Closing** (Room: Emerald)

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Keynote: 9:20-10:20 1 July 2024 (Monday) (Room: Emerald)

Session Chair: Diego Lopez (Telefonica, Spain)

Keynote Speech

Quantum Networks: from devices to applications

Prof. Kae Nemoto

Okinawa Institute of Science and Technology University, Japan

Abstract

The physical challenge associated with the realization of quantum communication systems is in its distance, whereas quantum computation faces the challenge of the system size. These two challenges are physically different and our approaches to realize them are also different. In quantum communication, we usually require quantum interfaces between light and matter qubits and quantum memories to overcome the communication distance. Although quantum information transfer between light and matter qubits has been experimentally demonstrated, it is still difficult to achieve the efficiency required for quantum communication. In this talk, we review the requirements for quantum devices as the building blocks for quantum communication. Based on these scalable quantum devices, we describe an architecture for quantum communication systems. One of the most feasible applications for quantum communication systems is quantum key distribution, however the essence of quantum communication is the capability to send quantum states over a distance. This allows us to quantum mechanically connect quantum systems in distance and hence to extend our quantum technology in its size as well as the distance. Quantum networking can integrate all quantum technologies as well as classical ICT. Hence quantum networks could serve as a quantum technology platform in the future. At each stage of the development of quantum network technology, we can expect different applications to emerge. In this talk we discuss the step-by-step hardware development required and potential network applications.

Biography

Kae Nemoto is a professor at Okinawa Institute of Science and Technology and the Center Director for OIST Center for Quantum Technologies. She is also a professor at the National Institute of Informatics (NII) in Tokyo, where she serves as the director of the Global Research Center for Quantum Information Science and the co-director of the Japanese-French Laboratory for Informatics (JFLI). Her research is focused around quantum computation and machine learning, architecture for quantum computer and devices, quantum networks, and complex systems. She is a Fellow of both the IoP (UK) and the APS (US).

Main Conference Day 1 *(Tokyo Time, UTC+9)*

Monday, 1 July 2024

Monday, 1 July 2024 | Room Emerald, 09:00 – 09:20 (Tokyo Time)

Opening Ceremony
Session Chair: Ruidong Li (Kanazawa University, Japan)

Monday, 1 July 2024 | Room Emerald, 09:20 – 10:20 (Tokyo Time)

Keynote Speech: Quantum Networks: from devices to applications
- Prof. Kae Nemoto (Okinawa Institute of Science and Technology University, Japan)
Session Chair: Diego Lopez (Telefonica, Spain)

Monday, 1 July 2024 | Room Emerald, 10:30 – 12:10 (Tokyo Time)

Session QCNC-1: Quantum Information Networks-1
Session Chair: David Elkouss, Okinawa Institute of Science and Technology, Japan

Quantum Transduction Models for Multipartite Entanglement Distribution
Laura D'Avossa, Angela Sara Cacciapuoti and Marcello Caleffi (University of Naples Federico II, Italy)

Efficient Routing Design Based on Entanglement Flow Loss Effect in Quantum Networks
Zhaoying Wang, Jian Li, Zhonghui Li, Lutong Chen, Nenghai Yu, Qibin Sun and Jun Lu (University of Science and Technology of China, China)

On the Trade-off between Fidelity and Latency for the Quantum Link Layer with few Memories and Entanglement Purification
Karim S. Elsayed (University of Duisburg-Essen, Germany), Wasiur R. Khudabukhsh (University of Nottingham, U.K.) and Amr Rizk (University of Duisburg-Essen, Germany)

An Implementation and Analysis of a Practical Quantum Link Architecture Utilizing Entangled Photon Sources
Kento Samuel Soon, Michal Hajdusek (Keio University, Japan), Shota Nagayama (Mercari, Inc., Japan), Naphan Benchasattabuse (Keio University, Japan), Kentaro Teramoto (Mercari, Inc., Japan), Ryosuke Satoh and Rodney Van Meter (Keio University, Japan)

Monday, 1 July 2024 | Room Emerald, 13:00 – 15:05 (Tokyo Time)

Session QCNC-2: Quantum Computing & Service and Applications
Session Chair: Wenxuan Ma, Zhejiang University, China

CDQKL: Consensus-based Distributed Quantum Kernel Learning
Wenxuan Ma (Zhejiang University, China), Mengxiang Liu (The University of Sheffield, U.K.) and Ruilong Deng (Zhejiang University, China)

Feature Map for Quantum Data in Classification
Hyeokjea Kwon, Hojun Lee and Joonwoo Bae (KAIST, South Korea)

Boosting End-to-End Entanglement Fidelity in Quantum Repeater Networks via Hybridized Strategies
Poramet Pathumsoot (Keio University, Japan), Theerapat Tansuwannont (Osaka University, Japan), NaphanBenchasattabuse, Ryosuke Satoh, Michal Hajdusek (Keio University, Japan), Poompong Chaiwongkhot (National Astronomical Research Institute of Thailand, Thailand), Sujin Suwanna (Mahidol University, Thailand) and Rodney Van Meter (Keio University, Japan)

An Overview of Quantum Latin Squares in Quantum Information Theory
Abdul Fatah, Ian McLoughlin, Saim Ghafoor and Iulia Anton (Atlantic Technological University, Ireland)

Quantum Computing Applications for Flight Trajectory Optimization
Henry Makhanov (qBraid Inc. / The University of Texas at Austin, USA), Kanav Setia (qBraid Inc., USA), Junyu Liu (University of Chicago/IBM, USA), Vanesa Gomez-Gonzalez (Acubed Inc., USA) and Guillermo Jenaro-Radaban (A3 by Airbus LLC, USA)

Monday, 1 July 2024 | Room Emerald, 15:30 – 16:30 (Tokyo Time)

Session QCNC-3: [Short Paper] Quantum Information Networks-S
Session Chair: Shota Nagayama, Mercari,Inc/Keio University, Japan

Conditions for Quantum Network Teleportation
Arun Muraleedharan and Shayan Srinivasa Garani (Indian Institute of Science Bangalore, India)

Using ALTO Protocol to Address SD-QKD Federation in Multi-domain Scenarios
Alejandro Muñiz Da Costa, Rafael Cantó Palancar, Luis Miguel Contreras Murillo, Diego López, Jesús Folgueira Chavarria, Antonio Pastor Perales, Juan Morales Saez (Telefónica Innovación Digital, Spain), Juan P. Brito, Rubén B. Méndez, Jesús Ballesta, Vicente Martin (Universidad Politécnica de Madrid, Spain), Pietro Piscione, Pietro Giardina and Ahmed KhalilAbdulwahed (Nextworks, Italy)

Enhancing Quantum Network Establishment through Multi-objective Genetic Algorithm
Poramat Chianvichai (Mahidol University, Thailand), Poramet Pathumsoot (Keio University, Japan) and Sujin Suwanna (Mahidol University, Thailand)

Monday, 1 July 2024 | Room Emerald, 16:40 – 18:00 (Tokyo Time)

Session QCNC-4: [Short Paper] Quantum Computing-S
Session Chair: Jian Li, University of Science and Technology of China, China

Selective Qubit Utilization for Optimizing Quantum Data Compression based on Quantum State Error
Agi Prasetiadi and Masahiro Mambo (Kanazawa University, Japan)

Parity-based Amplitude Embedding for Rational Quantum Dataset Preprocessing
Agi Prasetiadi and Masahiro Mambo (Kanazawa University, Japan)

Resource Allocation Optimization in 5G Networks using Variational Quantum Regressor
Param Pathak, Vidhi Oad (Gujarat Technological University, India), Aditya Prajapati (Dhirubhai Ambani Institute of Information and Communication Technology, India) and Nouhaila Innan (Hassan II University of Casablanca, Morocco)

Quantum Walks Advantage on the Dihedral Group for Uniform Sampling Problem

Shyam Dhamapurkar, Yuhang Dang (Shenzhen Institute for Quantum Science and Engineering, China), Saniya Wagh (Tata Institute of Fundamental Research, India) and Xiu-Hao Deng (Shenzhen Institute for Quantum Science and Engineering, China)

Monday, 1 July 2024 | Room Applause, 18:30 – 20:30 (Tokyo Time)

Poster Session
Session Chair: Dong Pan, Beijing Academy of Quantum Information Sciences, China

Quantum Key Distribution with Single Qubit Transmission
Tasdiqul Islam (University of Texas at Arlington) and Engin Arslan (University of Texas at Arlington, USA)

An Architecture for Integrating QKD into Terrestrial Networks
Noel Farrugia, Christian Galea, Aaron Abela, Ryan Debono, Trevor Spiteri, André Xuereb and Johann A. Briffa (University of Malta, Malta)

Main Conference Day 2 *(Time zone: Tokyo Time, UTC+9)*

Tuesday, 2 July 2024

Tuesday, 2 July 2024 | Room Emerald, 09:00 – 09:50 (Tokyo Time)

Session QCNC-5: Quantum Hardware and Devices
Session Chair: Xiu-Hao Deng, Southern University of Science and Technology, China

Weaving Complex Graph on Simple Low-Dimensional Qubit Lattices
Yu-Hang Dang, Shyam Dhamapurkar, Xiao-Long Zhu, Hao-Yu Guan and Xiu-Hao Deng (Shenzhen Institute for Quantum Science and Engineering, China)

Quantum Gate Control with State Representation for Deep Reinforcement Learning
Yuanjing Zhang, Tao Shang, Chenyi Zhang (Beihang University, China) and Xueyi Guo (Beijing Academy of Quantum Information Sciences, China)

Tuesday, 2 July 2024 | Room Emerald, 10:20 – 12:00 (Tokyo Time)

Session QCNC-6: Quantum Information Networks-2
Session Chair: Siddhartha Santra, Indian Institute of Technology Bombay, India

QuantumLAN: On-Demand Network Topology via Two-colorable Graph States
Francesco Mazza, Marcello Caleffi and Angela Sara Cacciapuoti (University of Naples Federico II, Italy)

Reinforcement Learning Based Proactive Entanglement Swapping for Quantum Networking
Tasdiqul Islam (University of Texas at Arlington, USA), Md Arifuzzaman (Missouri University of Science and Technology, USA) and Engin Arslan (University of Texas at Arlington, USA)

Entanglement Percolation in Noisy Quantum Networks
Soo Min Oh (Massachusetts Institute of Technology, USA), Stefano Marano (University of Salerno, Italy), Hyundong Shin (Kyung Hee University, South Korea), Andrea Conti (University of Ferrara, Italy) and Moe Win (Massachusetts Institute of Technology, USA)

Minimal Protocols for Entanglement Distribution with Finite Memory Coherence Time
Shahrooz Pouryousef (University of Massachusetts Amherst, USA), Hassan Shapourian (Cisco Research, USA) and Don Towsley (University of Massachusetts Amherst, USA)

Tuesday, 2 July 2024 | Room Emerald, 13:00 – 15:05 (Tokyo Time)

Session QCNC-7: Quantum Key Distribution and Quantum Cryptography
Session Chair: Momtchil Peev, Huawei Technologies Duesseldorf GmbH, Germany

Quantum-Amplified Simultaneous Quantum-Classical Communications
Nicholas Zaunders, Ziqing Wang (University of New South Wales, Australia), Timothy C. Ralph (University of Queensland, Australia), Ryan Aguinaldo (Northrop Grumman Corporation, USA) and Robert Malaney (University of New South Wales, Australia)

SDN-Based Hybrid Quantum-Safe Domain Intercommunication within MadQCI
Ruben B. Méndez, Jaime S. Buruaga, Rafael J. Vicente, Luis Mengual (Universidad Politécnica de Madrid, Spain), Momtchil Peev, Chi-Hang Fred Fung (Huawei Technologies Duesseldorf GmbH, Germany), Antonio Pastor Perales, Alejandro Muñiz, Juan Morales, Rafael Cantó Palancar, Jesús Luis FolgueiraChavarria, Diego R. López (Telefónica Innovación Digital / Telefónica gCTIO, Spain), Vicente Martin and Juan P. Brito (Universidad Politécnica de Madrid, Spain)

Establishing Shared Secret Keys on Quantum Line Networks: Protocol and Security
Lucas Hanouz (Sorbonne University & Veriqloud, France), Mina Doosti (University of Edinburgh, U.K.), Anne Marin (Veriqloud, France), Elham Kashefi (University of Edinburgh, U.K.) and Marc Kaplan (Veriqloud, France)

C-Band Coexistence Demonstration of Polarization-Based QKD and Classical Signals across a 50-km Deployed Fiber Link
Nicolas M. Linale, Ignacio H. López Grande, Lorenzo Castelvero and Valerio Pruneri (The Barcelona Institute of Science and Technology, Spain)

Simulations of Selected Quantum Key Distribution Network Use-Cases
Emir Dervisevic, Merima Fehric, Dzana Pivac (University of Sarajevo, Bosnia), Peppino Fazio (University of Venice, Italy), MiroslavVoznak and Miralem Mehic (Technical University of Ostrava, Czechia)

Tuesday, 2 July 2024 | Room Emerald, 15:30 – 16:30 (Tokyo Time)

Session QCNC-8: [Short Paper] Security in the Quantum Age-S
Session Chair: Abdul Fatah, Atlantic Technological University, Ireland

Modular Blockchain Architecture: Securing Data with Quantum-Safe Encryption
Taminder Pabla and Ajmery Sultana (Algoma University, Canada)

Privacy Preserving Quantum Search Mechanism Using Grover's Algorithm

Keyi Ju, Xiaoqi Qin (Beijing University of Posts and Telecommunications, China), Hui Zhong (University of Houston, USA), Xinyue Zhang (Kennesaw State University, USA), Miao Pan (University of Houston, USA) and Baoling Liu (Beijing University of Posts and Telecommunications, China)

Quantum-Enhanced Zero Trust Security: Evolution, Implementation, and Application
Jun Lin, Zihao Lin, Qiu Jiang (Guangzhou University, China), Xiaojiang Du (Stevens Institute of Technology, USA) and Weiyong Zhang (Guangzhou University, China)

Tuesday, 2 July 2024 | Room Emerald, 16:40 – 18:00 (Tokyo Time)

Session QCNC-9: [Short Paper] Quantum Key Distribution and Quantum Cryptography-S

Session Chair: Juan Pedro Brito, Universidad Politécnica de Madrid, Spain

Unleashing Flexibility and Interoperability in QKD Networks: The Power of Softwarized Architectures
Blanca Lopez (IMDEA Networks, Spain), Ivan Vidal, Francisco Valera (Universidad Carlos III de Madrid, Spain), Diego R. Lopez and AntonioPastor.

Composably Secure Delegated Quantum Computation for Clients Using Weak Coherent Pulses and Decoy States
Maxime Garnier, Dominik Leichtle, Luka Music and Harold Ollivier (Telefonica I+D, Spain)

Comparative Evaluation of Quantum-Resistant Digital Signatures
Marta Irene Garcia Cid, Rodrigo Martin Sanchez-Ledesma, David Domingo Martin (Indra Sistemas, Spain), Laura Ortiz and Vicente Martin (Universidad Politécnica de Madrid, Spain)

A Security Plane Architecture for Ultra-low-energy, High-capacity Optical Transport Networks
José Manuel Rivas-Moscoso, Antonio Melgar (Telefónica Digital Innovation, Spain), Luca Potì (CNIT, Italy), Konstantinos Krilakis (Eulambia Advanced Technologies, Greece), Luis Velasco (Universitat Politècnica de Catalunya, Spain), Sima Bahrani (University of Bristol, U.K.), Michela Svaluto Moreolo (CTTC/CERCA, Spain), IdelfonsoTafur Monroy (Eindhoven University of Technology, Netherlands), Philippe Nguyen (Secure-IC, France), Marc Ruiz (Universitat Politècnica de Catalunya, Spain), Dimitris K. Syvridis, Aikaterini Mandilara (Eulambia Advanced Technologies, Greece), Annachiara Pagano (Telecom Italia, Italy), Juan Morales, Antonio Pastor (Telefónica Digital Innovation, Spain), Reza Nejabati (University of Bristol, U.K.), Pantea Nadimi Goki (Scuola Superiore Sant'Anna, Italy), Alfonso Sánchez-Macián (Universidad Carlos III de Madrid, Italy), Stella Civelli (CNR, Italy), Simon Rommel, Carlos Rubio García (Eindhoven University of Technology, Netherlands), Masab Iqbal (CTTC/CERCA, Spain), Romerson Oliveira (University of Bristol, U.K.), Juan Carlos Hernández-Hernández, David Larrabeiti (Universidad Carlos III de Madrid, Spain) and Jesús Folgueira (Telefónica Digital Innovation, Spain)

Main Conference Day 3 *(Time zone: Tokyo Time, UTC+9)*

Wednesday, 3 July 2024

Wednesday, 3 July 2024 | Room Emerald, 09:00 – 09:50 (Tokyo Time)

Session QCNC-10: Security in the Quantum Age
Session Chair: Masahiro Mambo, Kanazawa University, Japan

Differential Privacy Preserving Quantum Computing via Projection Operator Measurements
Yuqing Li, Yusheng Zhao (University of Science and Technology of China, China), Xinyue Zhang (Kennesaw State University, USA), Zhong Hui, Pan Miao (University of Houston, USA) and Chi Zhang (University of Science and Technology of China, China)

IOSHA - An Enhanced Hash Function for Secure and Efficient Key Generation in CRYSTALS-Dilithium for IoT
Rownak Borhan, Md Delwar Hossain, Yuzo Taenaka and Youki Kadobayashi (Nara Institute of Science and Technology, Japan)

Wednesday, 3 July 2024 | Room Emerald, 10:20 – 12:00 (Tokyo Time)

Session QCNC-11: Quantum Information Networks-3
Session Chair: Qian Chen, University of California Santa Cruz, USA

Counterfactual Long-Distance Quantum Communication
Saw Nang Paing (Kyung Hee University, South Korea), Trung Q. Duong (Memorial University of Newfoundland, Canada) and Hyundong Shin (Kyung Hee University, South Korea)

Artificial Neural Networks for Quantum Sensing: Metrologically Resourceful State Detection
Uman Khalid (Kyung Hee University, South Korea), Trung Q. Duong (Memorial University of Newfoundland, Canada) and Hyundong Shin (Kyung Hee University, South Korea)

A Simulation Study of Quantum Clock Synchronization Using Teleportation
Dipak Ghosal, Eric Yu (University of California, Davis, USA), Anastasiia Butko (Lawrence Berkeley Laboratory, USA), Mariam Kiran and Nageswara Rao (Oakridge National Laboratory, USA)

Parallel Segment Entanglement Swapping
Binjie He (Fuzhou University, China and Deakin University, Australia), Seng W. Loke (Deakin University, Australia) and Dong Zhang (Fuzhou University, China)

Wednesday, 3 July 2024 | Room Emerald, 13:00 – 14:15 (Tokyo Time)

Session QCNC-12: Invited Papers
Session Chair: Uman Khalid, Kyung Hee University, South Korea

Optimizing Satellite-based Entanglement Distribution in Quantum Networks via Quantum-Assisted Approaches
Xinliang Wei (Temple University, USA), Lei Fan (University of Houston, USA), Yuanxiong Guo (University of Texas at San Antonio, USA), Zhu Han (University of Houston, USA) and Yu Wang (Temple University, USA)

Towards QoS-aware Quantum Networks

Ruilin Zhou, Yuhang Gan, Yi Liu, Katia Obraczka and Chen Qian (University of California, Santa Cruz, USA)

Estimation of Energy Expenditure in Wearable Healthcare Technology by Quantum-Based LSTM Modeling
Bao-Nhi Dang Tran (Memorial University, Canada), Muhammad Fahim (Queen's University Belfast, U.K.), Adnan Ahmad Cheema (Ulster University, U.K.), Stephen Czarnuch, Bradley D. E. McNiven, Octavia A. Dobre and Trung Q. Duong (Memorial University, Canada)

Wednesday, 3 July 2024 | Room Emerald, 14:40 – 16:20 (Tokyo Time)

Session QCNC-13: Quantum Network and Theory

Session Chair: Benjamin (Binjie) He, Fuzhou University, China and Deakin University, Australia

Quantum-Classical-Quantum Workflow in Quantum-HPC Middleware with GPU Acceleration
Kuan-Cheng Chen, Xiaotian Xu (Imperial College London, U.K.), Henry Makhanov (The University of Texas at Austin, USA), Hui-Hsuan Chung (Max Planck Institute for Radio Astronomy, Germany) and Chen-Yu Liu (National Taiwan University, Taiwan)

Multipath Entanglement Purification Strategies for Quantum Networks
Md Sohel Mondal and Siddhartha Santra (Indian Institute of Technology Bombay, India)

Quantum Key Distribution Network Architectures
Momtchil Peev (Huawei Technologies Duesseldorf GmbH, Germany), Vicente Martin, Juan Pedro Brito, Laura Ortíz (U. Politécnica de Madrid, Spain), Chi-HangFred Fung (Huawei Technologies Duesseldorf GmbH, Germany), Ruben Brito Mendez, Jaime S. Buruaga, Rafael J. Vicente, Alberto Sebastian-Lombraña, Julio Setien, Carmen Escribano, PedroSalas, Javier Faba (U. Politécnica de Madrid, Spain), Rafael Canto, Antonio Pastor-Perales, Juan Morales,Jesus Folgueira and Diego Lopez (Telefónica gCTIO/I+D, Spain)

A General Purification Protocol with an Imperfect State Preparation
Golshan Lirabi, Faedi Loulidi and David Elkouss (Okinawa Institute of Science and Technology, Japan)

Wednesday, 3 July 2024 | Room Emerald, 16:30 – 17:50 (Tokyo Time)

Session QCNC-14: [Short Paper] Quantum Communications and Network-S

Session Chair: Siddhartha Santra, Indian Institute of Technology Bombay, India

European Quantum ecOsystems – Preparing the Industry for the Quantum Security and Communications Revolution
Noel Farrugia, Daniel Bonanno, Nicholas Frendo, André Xuereb (Merqury Cybersecurity, Malta), Evangelos Kosmatos, Alexandros Stavdas (OpenLightComm Europe, Czech), Marco Russo, Bartolomeo Montrucchio (Politecnico di Torino, Italy), Marco Menchetti, Davide Bacco (QTI s.r.l., Italy), Silvia Marigonda (Sparkle, Italy), Francesco Stocco, Guglielmo Morgari (Telsy S.p.A., Italy) and Antonio Manzalini (TIM, Italy)

Current Status, Gaps, and Future Directions in Quantum Key Distribution Standards: Implications for Industry
Juan Morales Sáez, Rafael Cantó Palancar, Jesús Luis Folgueira Chavarria, Diego R. López, Antonio Pastor Perales (Telefónica Innovación Digital / Telefónica gCTIO, Spain), Juan Pedro Brito Mendez and Vicente Martin Ayuso (Universidad Politécnica de Madrid, Spain)

Quantum Secure Anonymous Communication Networks

Stephen DiAdamo (Cisco Systems, USA), Mohammad Saidur Rahman (Cisco Quantum Lab, USA), Miralem Mehic (University of Sarajevo, Bosnia) and Charles Fleming (Cisco Systems, USA)

Purification and Fidelity Enhancement from Quantum Mixedness
Sudhir Sahoo, Ankur Raina (IISER, India) and Shayan Garani (IISc, India)

Wednesday, 3 July 2024 | Room Emerald, 17:50 – 18:00 (Tokyo Time)

Closing Session

Session Chair: Ruidong Li (Kanazawa University, Japan)