

## Wednesday, 15<sup>th</sup> October

08:00-09:00 – Badge pickup

09:00-09:20 – Conference welcome

09:20-11:40 – Session I: Quantum Repeater Experiments & Theory – Chair: Sjoerd Loenen

09:20-09:50 – Hugues de Riedmatten (ICFO)

Building quantum repeaters with solid-state quantum memories

09:50-10:10 – Alessandro Laneve (Università di Roma La Sapienza)

Interfacing quantum dots for quantum networking

10:10-10:30 – *Coffee Break*

10:30-10:50 – Saikat Guha (University of Maryland)

Measurement based entanglement distillation and constant-rate quantum repeaters

10:50-11:10 – Victor Krutyanskiy (University of Innsbruck)

Towards deployed quantum networks based on trapped ions

11:10-11:50 – Session II: Quantum Network Software & Simulation – Chair: Ronald Hanson

11:10-11:30 – Rajkumar Kettimuthu (Argonne National Lab)

Extending SeQUeNCe for realistic quantum network simulation:

Hardware models, protocol innovation, and application-driven validation

11:30-11:50 – Soroush Hoseini (UIUC)

Open-source, code agnostic software architecture for accessible quantum networks

11:50-13:00 – Lunch Break

13:00-13:30 – Stephanie Wehner (TU Delft)

Programming the quantum internet

13:30-14:00 – Don Towsley (UMass Amherst)

Quantum Networks: A Classical Perspective

14:00-16:30 – Session III: Quantum Computing Networks – Chair: Conor Bradley

14:00-14:30 – Pieter-Jan Stas (Harvard University)

Distributed blind quantum computing with solid state qubits

14:30-14:50 – Hannah Weaver (QphoX)

On-demand entanglement links enabled by next generation quantum transducers

14:50-15:10 – Justus Bruggenjürggen (University of Innsbruck/IQOQI)

An atom-array cavity-array platform for quantum networks

15:10-15:30 – *Coffee Break*

15:30-16:00 – David Lucas (University of Oxford)

Quantum networking and computing with trapped ions

16:00-16:30 – Aziza Suleymanzade (UC Berkeley)

Quantum networks of heterogeneous platforms with neutral atoms, nanophotonics, and superconducting circuits

**16:40-18:40 – Poster Session (with refreshments)**



## Thursday, 16<sup>th</sup> October

09:00-12:00 – Session IV: Emerging Platforms

Chair: Carlos Errando-Herranz

09:00-09:30 – Jake Covey (UIUC)

Telecom quantum networking with ytterbium atom arrays

09:30-10:00 – Daniel Higginbottom (Simon Fraser University & Photonic Inc.)

Engineering silicon colour centre devices for quantum networks

10:00-10:20 – Christopher Waas (TU Delft)

A quantum network node based on the tin-vacancy center in diamond

*10:20-10:40 – Coffee Break*

10:40-11:00 – Stephan Kucera (LIST)

A silicon carbide semiconductor platform for quantum networks

11:00-11:30 – Sophie Hermans (TU Delft)

The new qubit on the block:

Towards next-generation quantum networks using single rare-earth ions

11:30-12:00 – Adam Gali (Hungarian Academy of Sciences)

Spin-photon interfaces from solid state defect qubits

12:00-13:20 – Lunch Break

13:20-16:00 – Session V: Applications of Quantum Networking

Chair: Anne Broadbent

13:20-13:50 – Liang Jiang (University of Chicago)

Vacuum beam guides and their applications

13:50-14:20 – Mathieu Bozzio (University of Vienna)

Practical challenges in quantum cryptography beyond key distribution

14:20-14:50 – Eleni Diamanti (Sorbonne University & Weling)

Cryptographic applications of quantum networks

*14:50-15:20 – Coffee Break*

15:20-15:40 – Francisco Machado (TU Delft)

Designing fault-tolerant scalable blind quantum computation

15:40-16:00 – Zain Saleem (Argonne National Lab)

Quantum advantage in distributed sensing with noisy quantum networks

16:00-16:20 – Group Photo

16:20-19:00 – Madurodam Exploration & Down Time

19:00-... – Conference Dinner (Restaurant Suus @ De Plesman Hotel)



## Friday, 17<sup>th</sup> October

09:00-11:00 – Session VI: Space-based Quantum Networking Technologies

Chair: Johannes Borregaard

09:00-09:30 – Paul Kwiat (UIUC)

Playing hide and SEAQUE

09:30-10:00 – Makan Mohageg (Boeing)

Quantum networking in space: 2026-2030

10:00-10:20 – Jaya Sagar (University of Bristol)

Ultraviolet microLED QKD: Enabling intersatellite quantum links and compact terminals

*10:20-10:40 – Coffee Break*

10:40-11:00 – Ilektra Karakosta-Amarandtidou (ICFO)

Free-space model for a balloon-based quantum network

11:00-11:40 – Ethical Considerations for Quantum Networking

Chair: Johannes Borregaard

11:00-11:40 – Luca Possati (UTwente)

Quantum technologies: an hermeneutic and ethical approach

11:40-13:00 – Lunch Break

13:00-15:40 – Session VII: Integrated Photonics

Chair: Alexander Stramma

13:00-13:30 – Juan Loredó (Sparrow Quantum)

Deterministic quantum dot based photon-emitter chip technology

13:30-14:00 – Klaus Jöns (Paderborn University)

Deterministic quantum emitter integration

14:00-14:20 – Andreas Gritsch (TU Munich)

Single erbium dopants in nanophotonic silicon resonators

*14:20-14:40 – Coffee Break*

14:40-15:10 – Matteo Pompili (IonQ)

Integrated diamond quantum memories

15:10-15:40 – Lin Jin (TU Delft)

Towards scalable quantum networks: SNSPDs in magnetic fields and their cryo-CMOS readout

15:40-16:00 – Conference Closing



## Thanks to our QuNeW 2025 sponsors



Conference website:

<https://qunew.org>

Organising committee contact address:

[qunew2025-qutech@tudelft.nl](mailto:qunew2025-qutech@tudelft.nl)

Conference venue:

*Madurodam*

*George Maduroplein 1*

*2584 RZ*

*The Hague*

*Netherlands*

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