

3rd Workshop on Quantum Network Simulations (QNSim 2026) in conjunction with the IEEE International Conference on Quantum Computing and Engineering (QCE26)

Monday, September 14, 2026 - Monday, September 14, 2026

Scientific Program

Session 1 [10:00AM - 11:30AM]:

"Opening Remarks"

Prof. Rodney Van Meter, Keio University, Japan

"SeQUeNCe v1.0"

Joaquin Chung | SeQUeNCe, Argonne National Laboratory, USA

Abstract -- TBD.

Bio:

"Quantum Savory"

Leonardo Bacciottini | UMass Amherst, USA

Abstract -- TBD.

Bio:

"MQNS: A Simulator for Quantum Network Architectures—Design Principles and Engineering Insights"

Amar Abane | NIST, USA

Abstract -- This talk introduces MQNS, a simulator for quantum network architectures, presenting its motivation, architecture-agnostic design, and abstractions. We discuss practical engineering challenges uncovered through simulation, from distributed coordination to resource management, and conclude with ongoing development.

Bio: Amar Abane is a Research Engineer at the National Institute of Standards and Technology (NIST), where he develops quantum networking architectures, entanglement routing protocols, and the Multiverse platform for quantum network management, control, and simulation. His research also contributes to the DC-QNet testbed, and he co-supervises PhD research on digital twins and quantum networking architectures.

"Q2NS"

Angela Sara Cacciapuoti | University of Naples Federico II, Italy

Abstract -- TBD.

Bio:

Session 2 [1:00PM - 2:30PM]:

"Title TBD"

Daniel Kilper | Trinity College Dublin, Ireland

Abstract -- TBD.

Bio:

"Enterprise-scale Emulation of Quantum Secure Communications"

Brian Doolittle | Aliro Quantum, USA

Abstract -- Quantum secure communications, such as entanglement-based key distribution, are

rapidly being developed to secure networks from emerging quantum and classical threats. Engineering these systems requires emulators to replicate the real-time behavior of entanglement-based communications. This talk presents the Aliro Emulation Manager, a software for the real-time generation and delivery of key distribution data at enterprise-scale.

Bio: Dr. Brian Doolittle is a director of engineering and head of simulation at Aliro Quantum. In his work, Brian develops software tools for designing entanglement-based networks, conducts research in quantum information science, and provides consulting services to organizations that include national labs, aerospace companies, and telecommunications infrastructure providers.

"Title TBD"

Diego Lopez | Telefonica, Spain

Blanc Lopez | IMDEA, Spain

Abstract -- TBD.

Bio:

Session 3 [3:00PM - 4:30PM]

"Title TBD"

Janka Memmen | TU Berlin, Germany

Abstract -- TBD.

Bio:

Panel Discussion: All speakers

Moderator: TBD