Quantum Internet: Vision or Fiction? Gerhard Rempe, Max Planck Institute of Quantum Optics

Abstract:

Quantum physics allows for applications not possible within classical physics. A prominent example is the quantum computer that, once realized, needs a quantum communication environment — a quantum internet. With this in mind, the talk will discuss a unique toolbox for distributed quantum computation and quantum communication by means of photonic qubits that propagate between atomic quantum memories localized in optical resonators as quantum interfaces.