

Norbert Lütkenhaus

Associate Professor at the Physics Department of the University of Waterloo and a member of the Institute of Quantum Computing.



Norbert Lütkenhaus studied at the RWTH Aachen and the LMU Munich, from which he graduated with a thesis in general relativity. Then he changed the field to study quantum optics and quantum cryptography under the supervision of Stephen M. Barnett at the University of Strathclyde, Scotland, UK. In 1996 he obtained his PhD. After postdoc positions in Innsbruck (Peter Zoller and Ignacio Cirac) and the Helsinki Institute of Physics (Kalle-Antti Suominen) he worked for MagiQ Technologies (New York) to initiate the project of commercial realisation of quantum key distribution. Returning to academia in 2001, he built up and led an Emmy-Noether Research Group at the University of Erlangen-Nürnberg, during which time he did his habilitation (2004). Currently he is Associate Professor at the Physics Department of the University of Waterloo and a member of the Institute of Quantum Computing.

Research

- The research interests lie in quantum communication and its quantum optical implementations.
- They include:
 - The theory of practical quantum key distribution systems
 - Methods and tools for entanglement verification
 - linear optical quantum logic operation and measurement implementation
 - quantum state detection and estimation theory.

Affiliations

- Universität Erlangen-Nürnberg