

DOUBLE APPLICATION PANEL - PART II  
**OPTICAL QUANTUM TECHNOLOGIES**

Program application panel - part II  
**QUANTUM IMAGING & COMMUNICATION**  
Forum Hall B3

Wednesday, June 26, 2019 (3:15 p.m. - 5:40 p.m.)

Photons are, apart from being quantum objects, also the central carrier of information in imaging and communication. This session will exemplify the disruptive potential as well as the challenges associated with entangled photon pair sources in the context of newly arising technological applications: Imaging and detection in new spectral ranges as well as principally eavesdrop-proof communication are currently being adopted by both companies and research institutions alike.

Chairmen:



Prof. Dr. Andreas Tünnermann  
Fraunhofer IOF



Dr. Jürgen Stuhler  
TOPTICA Photonics AG



JUNE 26, 2019, MESSE MÜNCHEN, FORUM HALL B3

**APPLICATION PANELS ON  
OPTICAL QUANTUM  
TECHNOLOGIES**

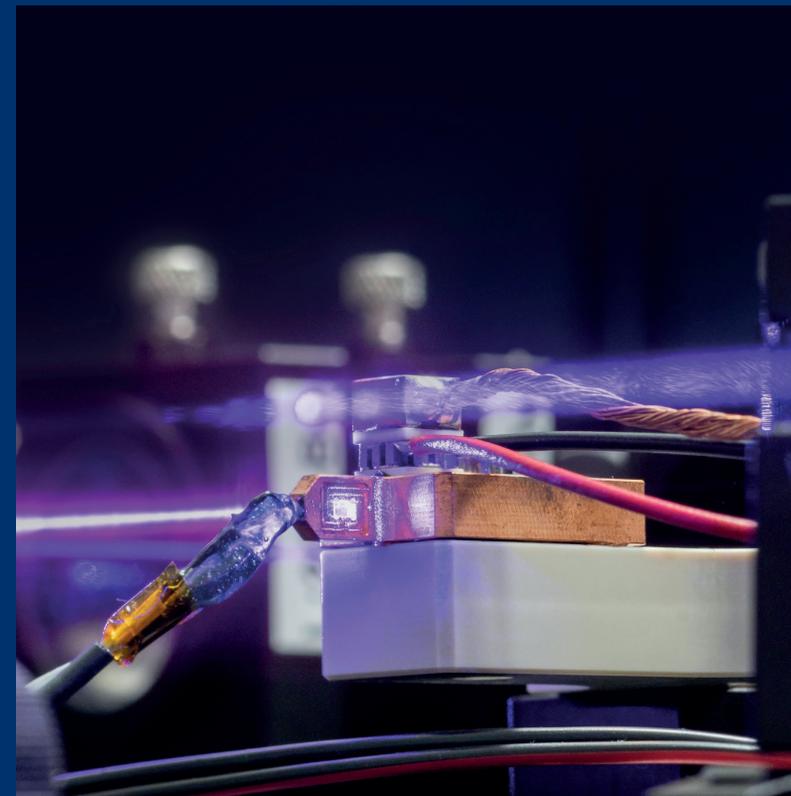
**LOCATION**  
LASER World of Photonics  
Munich Trade Fair Center  
Forum Hall B3

**ADMISSION**  
Attending the application panels is free of charge. You must purchase an admission ticket to LASER World of PHOTONICS 2019 to gain admission to the halls. The fair is the perfect opportunity to combine expanding your knowledge with making business contacts.

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**LASER** World of **PHOTONICS**

DOUBLE APPLICATION PANEL - PART I  
**OPTICAL QUANTUM TECHNOLOGIES**

Program application panel - part I  
**SENSING & COMPUTING/SIMULATION**  
Forum Hall B3

Wednesday, June 26, 2019 (1:00 p.m. - 3:15 p.m.)

Quantum technology 2.0 utilizes the special features of the atomic world for new sensors and ways to process information. Photonics play a key role in that. Not only will the attainable levels of sensitivity and absolute precision be significantly increased, but also novel concepts such as quantum computers will become possible. Supported by strong fundamental research, sweeping breakthroughs are expected within the next few years, incentivizing companies to invest already today. This session provides information on the research strategies in Germany as well as contributions from companies on their cutting-edge developments on quantum sensors and quantum computers.

Chairmen:



Dr. Wilhelm Kaenders  
TOPTICA Photonics AG



Prof. Dr. Karsten Buse  
Fraunhofer IPM

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Program application panel - part I  
**SENSING & COMPUTING/SIMULATION**  
Forum Hall B3

Wednesday, June 26, 2019

- 1:00 p.m. Dr. Wilhelm Kaenders & Prof. Dr. Karsten Buse  
Welcome and Opening
- 1:05 p.m. Dr. Frank Schlie, BMBF  
Preparing quantum for application –  
the German strategy
- 1:25 p.m. Dr. Svenja A. Knappe, FieldLine Inc.  
Magnetic sensing and imaging with micro-  
fabricated optically-pumped magnetometers
- 1:45 p.m. Dr. Tino Fuchs, Robert Bosch GmbH  
Quantum sensors at Bosch – from proof of  
concepts to market
- 2:05 p.m. Dr. Bruno Desruelle, Muquans  
Quantum gravity sensors, from the laboratory  
to volcano monitoring

- 2:25 p.m. Dr. Dana Z. Anderson, ColdQuanta Inc.  
Quantum Computing with Atoms and Light  
from a Technology Standpoint
- 2:45 p.m. Dr. Stefan Brakhane, TOPTICA Photonics AG  
Opticlock: Towards a transportable and  
user-friendly optical single-ion clock
- 3:05 p.m. Speakers Corner

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Wednesday, June 26, 2019

- 3:15 p.m. Prof. Dr. Andreas Tünnermann &  
Dr. Jürgen Stuhler  
Welcome and Opening
- 3:20 p.m. Dr. Jürgen Mlynek, European QT Flagship  
Ramping Up the European Quantum  
Flagship
- 3:40 p.m. Dr. Jörg-Peter Elbers,  
ADVA Optical Networking  
Quantum-safe data center  
interconnects – a practitioner's guide
- 4:00 p.m. Dr. Markus Gräfe, Fraunhofer IOF  
Quantum-enhanced imaging
- 4:20 p.m. Dr. Nils Trautmann, Carl Zeiss AG  
An industry perspective on Quantum-  
Enhanced Imaging & Sensing
- 4:40 p.m. Dr. Manfred Lochter, BSI  
QKD in the wild
- 5:00 p.m. Dr. Christian Reitberger, btov Partners I  
Industrial Tech Fund  
Quantum Ventures – a brief state of the  
union of VC investments in quantum  
technologies
- 5:20 p.m. Speakers Corner