



QP-TECH.EDU

## Online Workshop Photonic Quantum Technologies for Managers Applications, Science and Markets

For up-to-date information, see

[www.acp.uni-jena.de/qp-tech-edu](http://www.acp.uni-jena.de/qp-tech-edu)

With the 'Workshop on Photonic Quantum Technologies for Managers - Applications, Science and Markets', scientists of the Fraunhofer IOF offer an up-to-date overview of the current issues in photonic quantum technologies via the collaborative platform of the Friedrich Schiller University Jena. The content of the workshop ranges from an insight into the opportunities of a future "quantum" market to the fundamentals of quantum communication, imaging, and computing and their potential applications.

Through the application-oriented research carried out by the speakers in diverse cooperative projects with partners from science and industry, concrete application scenarios and trends can be illustrated in addition to the mediation of technological fundamentals.

Contact Person:  
Franziska Krieg  
[Franziska.Krieg@iof.fraunhofer.de](mailto:Franziska.Krieg@iof.fraunhofer.de)

In cooperation with:

**optonet**  
Photoniknetzwerk Thüringen

**IQBN**

**Fraunhofer** IOF

### June 21st, 2023

Access via Zoom Link  
[uni-jena-de.zoom.us/j/63405617963](https://uni-jena-de.zoom.us/j/63405617963)  
Meeting-ID: **634 0561 7963**  
Password: **QTM2023**

- Free staff training to educate personnel in quantum technologies
- Aimed at managers and leaders
- No prior knowledge about quantum mechanics required
- Quantum Computing, Communication, and Imaging
- Quantum Markets



# Workshop Program

**8:30** Welcome and Introduction

**8:35** Quantum Technologies - A New Market and Future Opportunity?

Dr. Robert Kammel  
Fraunhofer IOF

- Introducing qp-tech.edu
- Quantum technology - new trend or market of the future?

**9:00** Q/A-Session / Speaker Talk

- Overview of technologies, applications, market prognoses

**9:15** Quantum Imaging - Fundamentals and Trends

Prof. Dr. Markus Gräfe  
TU Darmstadt / Fraunhofer IOF

- Quantum light to imaging
- Potential applications and development hurdles

**10:00** Q/A-Session / Speaker Talk

- Applicability of quantum-based imaging
- Entanglement assisted quantum

**10:15** Short Break

**10:30** Fundamentals and Applications of Quantum Communications

Christopher Spiess  
Fraunhofer IOF

- Basic concepts
- Implementing quantum communication
- Quantum key distribution (QKD)
- Entangled photons and quantum hardware on satellites

**11:15** Q/A-Session / Speaker Talk

**11:30** Quantum Computing - An Introduction

Dr. Falk Eilenberger  
FSU Jena / Fraunhofer IOF

- Qubits
- Entanglement in many-body quantum systems
- Quantum computing and quantum computers

**12:15** Q/A-Session / Speaker Talk

**12:30** Closing Session and Opportunity for Questions / Feedback



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