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QUANTUM TECHNOLOGIES OVERVIEW COURSE





Content

The one-day on-site QL3 overview course 'Quantum Technologies' introduces quantum sensing, quantum communication, quantum simulation, and quantum computation technologies. Guided by real-world use cases, the basic intuition behind these technologies is presented, focusing on a qualitative understanding. Participants will review, in particular, the potential and limitations of quantum technologies and discuss the state of quantum technology today and the prospects for the next three to five years. Based on these insights, participants will be able to distinguish between hype and reality of quantum applications and can realistically judge their present and future potential.

Requirements for entry

Participants do not need prior knowledge of quantum technologies nor expertise in mathematics or physics.

Academic Responsibility

Prof. Dr. Alexander Holleitner

Walter Schottky Institut and Physics Department, Chair of Nanotechnology and Nanomaterials, Technical University of Munich

Prof. Dr. Jan von Delft

Chair of Theoretical Solid State Physics, Department of Physics, Ludwig-Maximilians-Universität München

Why this program?

Quantum technologies are a firmly established and strongly growing scientific research field with great application potential for the industry. The current challenge facing Germany and Europe is to transfer the knowledge and technological expertise on quantum systems from university laboratories and research institutes to the private sector. Experts and executives in high-tech industry will play a key role, as they must recognize and implement the specific potential of quantum technologies for their respective companies. The main benefits of this program:

- Participants get an overview of the quantum technology landscape with a focus on potentials and limitations.
- ► The program gives evidence-based and practical input.
- ► The program uses the newest EdTech methods.
- ▶ Participants can broaden their network, establishing contacts with experts from the Munich universities.

Target Group

This program is designed for those who would like to get a first overview of the quantum technologies landscape without having a profound understanding of mathematics or physics. Participants should hold a role in which it would be beneficial for them to understand the potential of quantum technologies for their organizations and industries, such as a department head or division manager.

Contact and further information





About the TUM Institute for LifeLong Learning

The TUM Institute for LifeLong Learning supports international experts and leaders from science, business and society to meet the challenges of the 21st century.

Therefore, the Institute offers innovative continuing education courses and thus facilitates scientifically-based and technology-supported professional and leadership development.