



Colloquium on Quantum Technologies in Electrical and Computer Engineering

Quantum technologies harness quantum physical phenomena, for example quantum superposition, entanglement or tunneling, to obtain novel functionalities or performance improvement in practical applications such as information and communication technology, metrology and sensing. The importance of this field is emphasized by highly funded national and international research programs, as well as multiple investments by large companies.

In this colloquium, experts will introduce and discuss state of the art and future developments of this innovative research field at TUM and beyond, with an emphasis on research activities related to electrical and computer engineering.

Date and Venue: Tuesday, July 18th, 2017, Room [N1135](#)

at the Technical University of Munich (TUM), Building N1, Theresienstr. 90, 80333 München.

Schedule:

Session 1	
12:30 p.m. - 12:35 p.m.	<i>Opening remarks</i>
12:35 p.m. - 1:05 p.m.	<i>TBA</i> Holger Boche, Department of Electrical and Computer Engineering, TUM
1:05 p.m. – 1:35 p.m.	<i>TBA</i> Markus-Christian Amann, Department of Electrical and Computer Engineering, TUM
1:35 p.m. – 2:05 p.m.	<i>The nextnano software as an enabler for quantum devices</i> Stefan Birner, Nextnano GmbH, Garching
2:05 p.m. – 2:30 p.m.	Coffee Break
Session 2	
2:30 p.m. – 3:00 p.m.	<i>Quantum coherence effects in quantum cascade lasers</i> Christian Jirauschek, Department of Electrical and Computer Engineering, TUM
3:00 p.m. – 3:30 p.m.	<i>Nanoelectronic Josephson devices and quantum circuits</i> Peter Russer, Department of Electrical and Computer Engineering, TUM
3:30 p.m. – 4:00 p.m.	<i>TBA</i> Rudolf Gross, Walther-Meißner-Institute and Department of Physics, TUM
4:00 p.m. – 4:30 p.m.	Coffee Break
Session 3	
4:30 p.m. – 5:00 p.m.	<i>Dissipation in molecular junctions</i> Alessio Gagliardi, Department of Electrical and Computer Engineering, TUM
5:00 p.m. – 5:30 p.m.	<i>Semiconductor based quantum technologies</i> Jonathan Finley, Department of Physics, TUM

For further questions, please contact Christian Jirauschek, jirauschek@tum.de