

Registration

Deadline for registration: 1. October 2019
kai.mueller@wsi.tum.de
Participation is free of charge

Organization

Kai Müller is professor for quantum electronics and computer engineering at Technical University of Munich and since 2017 member of the Young Academy of the Bavarian Academy of Sciences and Humanities.

jungeskolleg.badw.de

BAdW

Recent Advances in Photonic Quantum Science and Technology

WORKSHOP

9/10/19

10.00 A.M. – 6.00 P.M.

BAVARIAN ACADEMY OF SCIENCES AND HUMANITIES

Alfons-Goppel-Straße 11 (Residenz)
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Junges Kolleg



Bayerische
Akademie der Wissenschaften

Program

- 10.00 Uhr **Photonic Quantum Science and Technology**
KAI MÜLLER
(Technical University of Munich)
- 10.40 Uhr **Quantum sensing with NV centers – towards a magnetic resonance microscope and beyond**
FRIEDEMANN REINHARD
(Technical University of Munich)
- 11.20 Uhr **Site-selective quantum emitters in 2D materials**
ALEXANDER HOLLEITER
(Technical University of Munich)
- 12.00 Uhr **Lunch break**
- 13.30 Uhr **Exciton-Polaritons in Structured Microcavities: A low-cost, high-temperature platform for on-chip simulators**
CHRISTIAN SCHNEIDER
(University of Würzburg)
- 14.10 Uhr **Quantum Dot Optomechanics**
HUBERT KRENNER
(University of Augsburg)
- 14.50 Uhr **Quantum dots as non-classical light sources and spin qubits**
JONATHAN FINLEY
(Technical University of Munich)
- 15.30 Uhr **Coffee break**

Recent Advances in Photonic Quantum Science and Technology

Since quantum mechanics was proposed many landmark experiments have been performed to confirm that its peculiar predictions such as coherence and entanglement really exist. Thereby, a wealth of different physical systems has been investigated. The field quantum technologies aims at exploiting these peculiar properties for novel applications, such as quantum communication, quantum computation, quantum simulation and quantum sensing. In this workshop, experts in the field of quantum science and technology present recent breakthroughs.

- 16.00 Uhr **Hybrid Quantum Photonic Devices**
KLAUS JÖNS
(KTH Stockholm)
- 16.40 Uhr **Nanophotonic Spin Systems for Quantum Communication**
TIM SCHRÖDER
(HU Berlin)
- 17.20 Uhr **Optimisation of Entanglement Transfer Between Remote Nodes in Photonic Quantum Communication**
JOSEPH MUNNS
(HU Berlin)