

## Invitation to the Symposium

**“20 Years Anniversary of MST: From Classical to Quantum Measurement Systems – IYQ”**

**TU Dresden, Chair of Measurement and Sensor Systems (MST) / Czarske Lab  
Spacetime: TOE/317H, Toepler-Bau, TU Dresden (TUD), Mommsenstr. 12, 01069 Dresden /  
Friday, 04<sup>th</sup> April 2025**

### Agenda

- 13:00 – 13:05** Greeting by the dean of the Faculty of Electrical and Computer Engineering, TUD,  
**Andreas Richter**
- 13:05 – 13:25** **Juergen Czarske**, “20<sup>th</sup> anniversary MST: history, present and future”
- Session 1: Biomedical & Fiber Systems and Metrology**, Session Chair: Wolfgang Osten
- 13:25 – 13:50** **Wolfgang Osten**, Universität Stuttgart, “The wide scale of optical sensing and metrology”
- 13:50 – 14:00** **Lars Büttner**, MST, “Advancements for Metrology and Optogenetics by Adaptive Optics towards BIOLAS” - BIOLAS: Biomedical Computational Laser Systems Competence Center
- 14:00 – 14:20** **Caroline Murawski**, Professur für biomedizinische Sensorik, TUD, “Bright Ideas: Organic Optoelectronics for Bioimaging and Optogenetics”
- 14:20 – 14:30** **Jakob Dremel**, MST, “Advancements for Medicine by Fiber Endoscopy towards BIOLAS and EKfZ” - EKfZ: Else Kröner Fresenius Center for Digital Medicine
- 14:30 – 14:50** **Stefan Rothe**, Yale University, USA, “High-power single-frequency multimode fiber amplifier with tailored output profile”
- 14:50 – 15:10** **Filipe Marques Ferreira**, University College London, UK, “Pushing the Limits of High Speed Data Transmission: Unlocking Capacity in Graded-Index Multimode Fibres”
- 15:10 – 15:40** Coffee Break
- Session 2: Quantum Technology of 2<sup>nd</sup> Generation - IYQ**, Session Chair: Juergen Czarske
- 15:40 – 16:00** **Markus Gräfe**, TU Darmstadt, Institute for Applied Physics, „Quantum sensing with undetected light - IYQ“ - IYQ: The 2025 International Year of Quantum Science and Technology (IYQ) of UNESCO recognizes 100 years since the initial development of quantum mechanics.
- 16:00 - 16:15** **Kambiz Jamshidi**, Chair of Radio Frequency and Photonics Engineering, TUD, “CMOS compatible Photonics for Non-classical Applications towards Quantum Sensing, Computing and Communication - IYQ”
- 16:15 – 16:30** **Riccardo Bassoli**, Deutsche Telekom Chair of Communication Networks and Head of the Quantum Communication Networks Research Group, TUD, “6G-quantum communication networks: communication, sensing, and computing - IYQ”
- 16:30 – 16:45** **Kay-Uwe Giering**, Fraunhofer-Institut für Integrierte Schaltungen IIS, Institutsteil Entwicklung Adaptiver Systeme EAS, “Quantum communication systems for specialized applications - IYQ”
- 16:45 Transfer to MST, BAR 17
- 17:00 – 21:00** **Reception, Labtour and get-together**

Everyone is welcome!

We look forward to your participation at our celebration of 20<sup>th</sup> anniversary of MST and IYQ 2025

Prof Juergen Czarske

Status: 6<sup>th</sup> March 2025