PHYSIKALISCHES KOLLOQUIUM

Sommersemester 2026

Das Kolloquium findet (soweit nicht anders angegeben) **jeweils montags um 14:15 Uhr im Röntgen-Hörsaal** des Physikalischen Instituts, Hubland Campus Süd, Universität Würzburg **und online via Zoom statt**.
Zugangsdaten siehe https://www.physik.uni-wuerzburg.de/aktuelles/veranstaltungen-aus-der-physik/physikalisches-kolloquium/

15.06.2026

Antrittsvorlesung Professur für Experimentelle Quantenphotonik
Prof. Dr. Sebastian Klembt
Julius-Maximilians-Universität Würzburg, Experimentelle Physik I

Twisting light and matter: A new perspective on quantum materials, photonics and topology

Abstract

After almost two decades, the Chair of Experimental Physics 1 is finally reinstated. In my talk, I will focus on the vision for a modern experimental physics program at the intersection of quantum materials, photonics, and topology. I will discuss emerging opportunities offered by optical two-dimensional quantum materials and organic quantum emitters, as well as new approaches to controlling matter through coherent interactions between cavity electromagnetic fields and electronic degrees of freedom. These developments open exciting perspectives for tailoring quantum states and functionalities beyond conventional material platforms. Finally, I will highlight recent advances and future directions in topological photonics and topological lasers, where concepts originally developed in condensed-matter physics enable robust light transport and novel photonic devices. Together, these directions illustrate how twisting light and matter can reveal new physical phenomena and pave the way toward future technologies.

Für die Dozentinnen bzw. Dozenten der Fakultät

Prof. Dr. Neuenfeld, Dr. Feichtner, Dr. Ünzelmann, Hr. Plote, Hr Schwarzkopf