

## PHYSIKALISCHES KOLLOQUIUM

**Sommersemester 2024**

Das Kolloquium findet (soweit nicht anders angegeben) **jeweils montags um 16:15 Uhr in Präsenz im Röntgen-Hörsaal** des Physikalischen Instituts, Hubland Campus Süd, Universität Würzburg **und online via Zoom statt**. (Der jeweilige Link wird noch zur Verfügung gestellt.)

**17.06.2024**

### **Abschlussvortrag im Rahmen des Habilitationsverfahrens**

Prof. Dr. Sebastian Klembt  
Universität Würzburg, Lehrstuhl für Technische Physik

### **Coupled optical resonators for strong light-matter coupling, novel optoelectronic devices and topological photonics**

#### **Abstract**

In my talk I will shed light, summarize and provide an outlook to the subjects studied in the course of my Habilitation in Würzburg dealing with fundamental and applied aspects of the interaction between light and matter. These includes (i) exciton-polaritons in lattices, (ii) topological photonics, (iii) electrical operation and control of coupled lasers, (iv) optical lattices based on hemispheric cavities for the study of novel emitter materials and finally (v) quantum fluids of light in coupled waveguides. In addition, topological lasers, their time-resolved study and dynamics will be discussed. In order to provide more context to this research field, I will show novel and exciting research directions that emerge from this work and studies that are made possible due to experimental techniques developed therein.

Für die Dozentinnen bzw. Dozenten der Fakultät

Prof. Dr. Hinkov, Prof. Dr. Hinrichsen, Prof. Dr. Porod, Dr. Ünzelmann und Hr. Kuhr