

## PHYSIKALISCHES KOLLOQUIUM

### Sommersemester 2023

Das Kolloquium findet (soweit nicht anders angegeben) **jeweils montags um 17:15 Uhr in Präsenz im Röntgen-Hörsaal des Physikalischen Instituts, Hubland Campus Süd, Universität Würzburg und online via Zoom statt.**

Link zum Zoom-Raum:

<https://go.uniwue.de/physkolloqzoom>



**24.04.2023**

Prof. Dr. Markus Gräfe  
TU Darmstadt, Institut für Angewandte Physik

**A brief ride through the field of quantum imaging from fundamentals to biomedical application**

#### Abstract

Exploiting the quantum properties of non-classical states of light enables new avenues of imaging, spectroscopy and sensing in general. This talk will focus on quantum imaging using correlated and entangled photon pairs. In addition to the basics such as the generation of photon pairs, an overview of the available techniques in this field will be given. This includes potential fields of application as well as limits of quantum-based technologies. There will also be a focus on quantum imaging with non-detected light. This approach makes it possible to illuminate an object with light that is not detected, while the light that produces the image in the camera has never interacted with the object.

Für die Dozentinnen bzw. Dozenten der Fakultät

PD. Dr. Meyer, Prof. Dr. Klembt, Dr. Fromm, Dr. Feichtner und Hr. Kögel