

PHYSIKALISCHES KOLLOQUIUM

Wintersemester 2022/23

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>



23.01.2023

Prof. Dr. Christian Wolff
University of Southern Denmark

Nonlocal effects in optics: From Friedel oscillations to ultrasonic waves

Abstract

Nonlocality in optics refers to the effect that an electric stimulus at one place causes a polarization current at a different point. Naturally, this is not some spooky action at a distance, but the result of collective excitations of the medium travelling between the two points. Depending on the type of collective excitations involved, this can manifest at different length scales, can be broadband or narrowband in frequency, and manifest in the linear or nonlinear response.

In this presentation, I will introduce the concept of nonlocal optical effects, discuss some approaches to describe them theoretically, some implications and (potential) use cases, and will give examples from our recent research.

Für die Dozentinnen bzw. Dozenten der Fakultät

PD. Dr. Meyer, Prof. Dr. Assaad, Dr. Feichtner und Hr. Kögel