

Fakultät 1  
Institut für Physik

## ***Invitation to Physics Colloquium***

Lecturer:

***Dr. Shanti Bhattacharya  
Indian Institute of Technology Madras***

Topic:

***"Manipulated Bessel Beams and their applications"***

Bessel beams are well known for their diffraction-free and self-healing nature. These properties make them useful in a variety of applications. Bessel beams do however, have some characteristics that impact performance, such as a variation of the intensity of the beam along the axis and the presence of strong sidelobes. In this talk, a brief introduction to Bessel beams will be made. This will be followed by a discussion on how phase elements can be used to overcome these problems. While spatial light modulators are useful tools for creating such phase variations, in our group we study ways to design and fabricate suitable diffractive and meta-optical elements for this and other purposes. Imaging of biological samples, obtained using multiplexed Bessel beams, will be presented.

**Date:** Thursday, 05.06.2025

**Time:** 03:30 p.m.

**Location:** ZHG, room SR1

*Im Auftrag von Prof. Flege - Stefanie Jannasch*

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