Karlsruher Institut für Technologie

KIT-Fakultät für Physik

Einladung zum Physikalischen Kolloquium

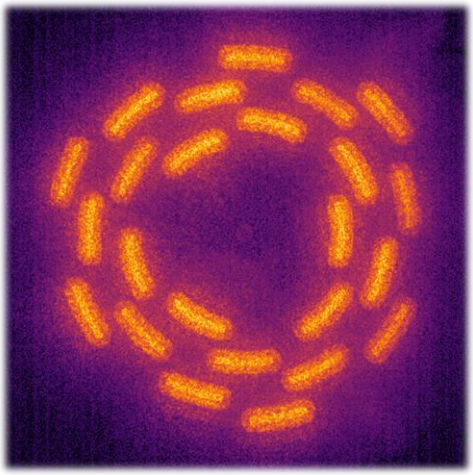
27.11.2026 Abraham Levitan, Karlsruher Institut für Technologie

»How to take movies in only a few femtoseconds using a free electron laser.«

Einführung: M. Weber

How would you take a video of something which happens over a few femtoseconds - a window of time so short that light itself can only move a few micrometers? The answers lie in the fascinating world of ultrafast photography. Yet ultrafast photography, which uses optical light, is running into fundamental, wavelength-dependent physical limitations. To keep improving, researchers need to move to shorter wavelengths, looking to the worlds of extreme ultraviolet and X-ray based microscopy.

In this colloquium talk, I will explore the physics behind a new method which uses the light from a free electron laser to capture single-shot ultrafast videos at extreme ultraviolet wavelengths. As part of this exploration, we will take a detour through the connected world of coherent diffractive imaging. There, we will learn about related X-ray imaging techniques, which use the properties of coherent light to make this kind of experiment – and many others – possible.



Der Vortrag findet **am Freitag, den 27. November 2026 um 15:45 Uhr im Otto-Lehmann-Hörsaal**, Physik-Flachbau (Geb. 30.22), KIT-Campus Süd statt.

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