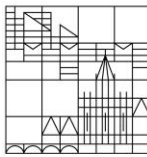


Physikalisches Kolloquium

Universität
Konstanz



Fr 11.06.21
15:15 Uhr

Zoom-Meeting:

[https://zoom.us/j/93722696310
?pwd=ZVdpOUpVUmpsbk45b0
pKbnpweTdZdz09](https://zoom.us/j/93722696310?pwd=ZVdpOUpVUmpsbk45b0pKbnpweTdZdz09)



Dr. Birgit Stiller
MPI for the Science of Light, Erlangen

Coherent light-sound interactions in waveguide structures

Despite their different nature, optical waves and acoustic vibrations can couple efficiently through the effects of electrostriction, photo-elastic effect and radiation pressure. These phenomena enable the creation and annihilation of sound waves and have a wide range of application from passive mode-locking, narrow-linewidth lasers, agile radiofrequency filters, distributed sensing to versatile signal processing. The latter includes calculus operations, signal amplification and storage of light information. I will give an overview on our research projects with a focus on different aspects of light storage via sound waves, manipulation of the limit of the acoustic decay time and optoacoustics in more exotic optical fibers such as CS₂-filled capillaries and twisted multi-core photonic crystal fibers.

