

# Physikalisches Kolloquium

Donnerstag, 20.12.2018, 16:30 Uhr – Hörsaal 5J

## Manipulating particles with light – The Nobel Prize in Physics 2018

Prof. Dr. Stefan U. Egelhaaf (Heinrich-Heine-Universität)

Arthur Ashkin was awarded (a share of) the Nobel Prize in Physics 2018 'for the optical tweezers and their application to biological systems'. I will explain why optical means, so-called optical tweezers, can be used to manipulate small objects, in the range from nanometers to micrometers. This is particularly appealing because the objects can be manipulated without directly interfering with the sample. Optical tweezers are nowadays applied to a broad range of objects, including colloids, biomolecules and living cells. The diversity of systems and questions which can be addressed using optical tweezers will be illustrated with examples. This includes experiments performed in our lab, which are based on optical tweezers but also take this concept a step further.

**Ab 16:00 Uhr Kaffee, Tee und Gebäck im Foyer vor dem Dekanat der Math.-Nat.-Fakultät  
(Gebäude 25.31. Ebene 00)**

**Für die Dozenten der Physik  
Prof. Dr. J. Horbach**