

# Physikalisches Kolloquium



**Thursday, 12.04.2018, 16:15, HS 100**  
**Reception with coffee & cookies 15:45**  
 (For university staff: please bring your own cup for sustainability reasons)

**Prof. Dr. Jörg Enderlein, Georg-August-Universität, Göttingen:**

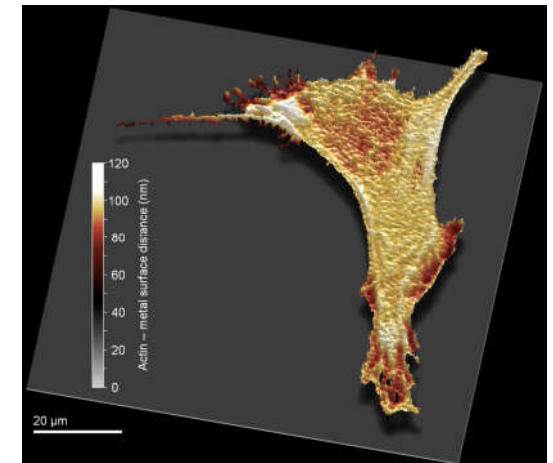
## ***Image Scanning Microscopy and Metal Induced Energy Transfer: Enhancing Microscopy Resolution in All Directions***

### **Abstract**

Classical fluorescence microscopy is limited in resolution by the wavelength of light (diffraction limit) restricting lateral resolution to ca. 200 nm, and axial resolution to ca. 500 nm (at typical excitation and emission wavelengths around 500 nm). However, recent years have seen a tremendous development in high- and super-resolution techniques of fluorescence microscopy, pushing spatial resolution to its diffraction-dictated limits and much beyond.

After giving a short introduction into the field of super-resolution microscopy, the presentation will focus on two recent advances: Image Scanning Microscopy (a particular form of Structured Illumination Microscopy), and Metal-Induced Energy Transfer Imaging. Both methods apply fundamental physical ideas to microscopic optical imaging in unexpected ways.

The lecture will start with explaining the physical principles and will end with presenting various life-science applications of the techniques.



All of you interested in physics are cordially invited!