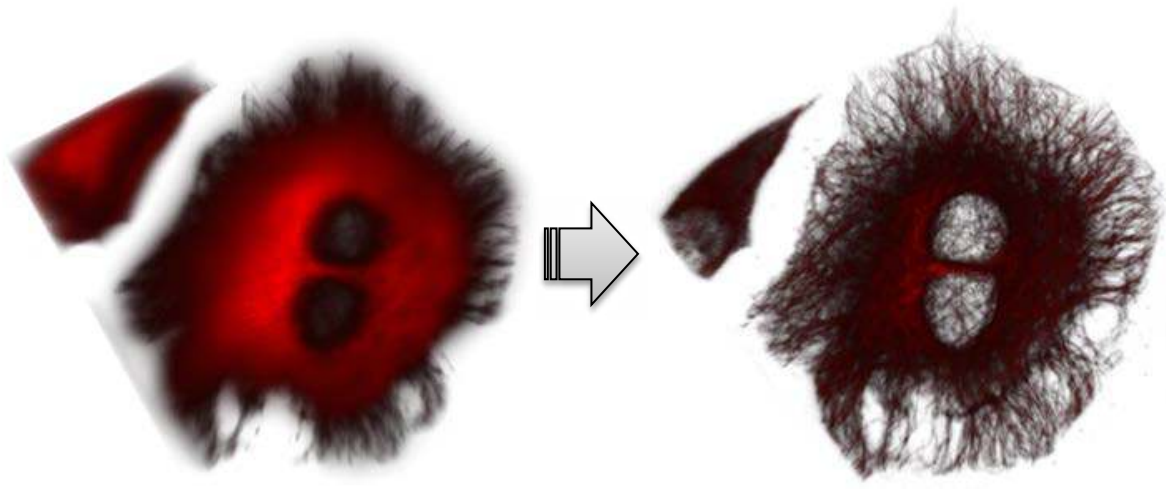


2 PhD positions in super-resolution fluorescence microscopy

Recent years have seen the development of a great variety of new and powerful superresolution microscopy techniques which allow for resolving structural details much the classical resolution limit of light microscopy. These techniques have allowed for a completely new insight into the life and functioning of biological cells and tissues. One of the most original new methods is **Super-resolution Optical Fluctuation Imaging** or **SOFI**, which converts in a very clever way temporal intensity fluctuations of fluorescent labels into an enhanced spatial resolution of imaging. In our group, we plan to combine SOFI with **multi-plane imaging**, allowing for simultaneous **three-dimensional** microscopy with highest spatial and temporal resolution of live cells.



Conventional wide-field multi-plane
image of a cell's tubulin network

SOFI image of the same cell's
tubulin network

We are seeking enthusiastic candidates for **2 PhD positions**; the candidates will work jointly on **multi-plane live-cell Super-resolution Optical Fluctuation Imaging (SOFI) microscopy**.

The **first candidate** will be responsible for **building a new 3D-imaging wide-field fluorescence microscope based on a brand-new custom-developed eight-fold beam-splitter**. The candidate should have a profound background in experimental physics or physics-optical engineering.

The **second candidate** will be responsible for the **development of new and powerful de-convolution and image processing algorithms adapted for processing 3D-images in super-resolution microscopy**. The candidate should have a profound background in theoretical physics, mathematics, and/or informatics.

Both candidates will be immersed in a team of physicists, chemists, engineers, and software experts, and biologists which are working together in the field of single-molecule spectroscopy, nano-optics, and super-resolution microscopy.

Applications should be sent by email to:

Prof. Jörg Enderlein, 3rd Institute of Physics, Georg-August-University Göttingen, Germany

Email: jenderl@gwdg.de

Html: www.joerg-enderlein.de