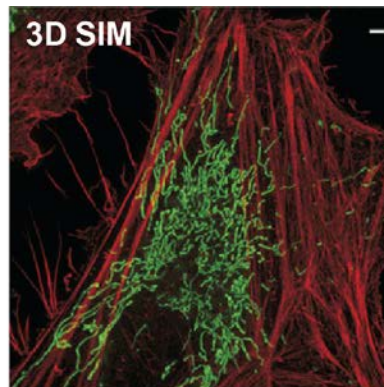
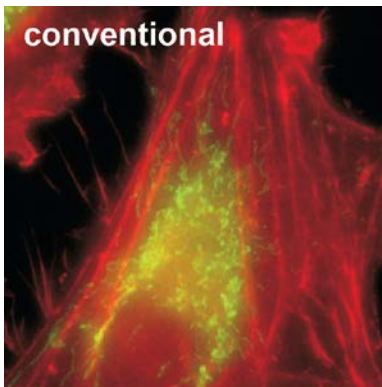


Master thesis:

Simultaneous super-resolution imaging by structured illumination microscopy and single molecule tracking in live cells



Fiolka, PNAS 2012

Cellular structures are typically smaller than the diffraction-based resolution limit of conventional microscopy. This limit can be surpassed using modern techniques such as single-molecule fluorescence super-resolution microscopy (e.g. STORM) or structured illumination microscopy (SIM).

In this master thesis, you will join our recent effort of building a lattice light sheet microscope and establish SIM on this state-of-the-art instrument. In addition, you will combine SIM and single molecule tracking to observe the dynamic interaction of individual molecules with cellular structures.

Main parts of the work contain microscope setup construction and maintenance, sample preparation, measurements as well as computational data analysis.

If you are interested or have any questions, please contact
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Timo Kuhn (timo.kuhn@uni-ulm.de).

