



## **Master's Thesis in Optical and Molecular Physics @ Stefan Hell Labs**

The Department of Optical Nanoscopy (Prof. Dr. Stefan W. Hell) invites applications for working towards a **Master's thesis in optical and molecular physics**.

New concepts have brought about a paradigm shift in the physical limits to optical analysis of molecular systems. Imaging resolutions of a few nanometers have been demonstrated, well beyond the Abbe/Rayleigh limits. The recently introduced MINFLUX (Balzarotti et al., Science 2017) and MINSTED (Weber et al., Nature Photonics 2021) concepts outline a path to further improved minimally invasive, low-light-level analysis in principle down to Ångström length scales. This opens up entirely new experimental opportunities in the field of biophysics and dynamic structural biology, but brings along challenging new requirements to setup design and sample stabilization.

The successful candidate will join a small team of researchers developing advanced optical instrumentation and investigating physical imaging conditions and resolution performance. A particular focus will be on developing and implementing an Ångström precision reference coordinate system for microscopic samples to guarantee drift-free MINFLUX recordings of molecular systems at highest resolution over extended measurement times.

Candidates should be highly motivated and prepared to work within a truly multidisciplinary team. They should have (or expect to complete soon) a Bachelor's degree in Physics or Physical Chemistry or a comparable qualification. A willingness to master challenges in optical design, computer-driven experimental control and data analysis and, crucially, in-depth study of a problem by critical thinking are all central to success.

For **further information**, please contact **Prof. Dr. Stefan W. Hell** ([hellassistant@mpibpc.mpg.de](mailto:hellassistant@mpibpc.mpg.de)).

For **general questions**, please contact **Mrs. Höfer-Elfner** ([fabienne.hoefer-elfner@mr.mpg.de](mailto:fabienne.hoefer-elfner@mr.mpg.de)) or **Ms. Sabrina Giacalone** ([sabrina.giacalone@mr.mpg.de](mailto:sabrina.giacalone@mr.mpg.de)) from human resources.

Please submit your application, including a cover letter (explaining background and motivation), your CV and complete transcripts via e-mail as a single PDF file with the above reference preferably until July 31, 2021 (excellent applications will be considered year-round) to [hellassistant@mpibpc.mpg.de](mailto:hellassistant@mpibpc.mpg.de).