

Wednesday, September 29

11:00 - 12:45 REGISTRATION

12:45 - 13:00 **Rainer Erdmann, Berlin, Germany**
Opening Remarks

Session: Super-resolution microscopy 1

Chair: Rainer Erdmann

13:00 - 13:30 **Philip Tinnefeld, Munich, Germany (Invited Talk)**
Single-molecule biophysics and superresolution with Graphene Energy Transfer

13:30 - 13:50 **Oleksii Nevskiy, Göttingen, Germany**
Confocal fluorescence-lifetime single-molecule localization microscopy for multiplexing and environment sensing

13:50 - 14:10 **N.T.M. van der Voort, Düsseldorf, Germany (Student Award)**
FRET-nanoscopy: a correlative approach with Ångström resolution.

14:10 - 14:30 **Jan Christoph Thiele, Göttingen, Germany**
MIET-STORM: dual-colour, isotropic 3D-super-resolution by lifetime-resolved SMLM with Metal-Induced Energy Transfer

14:30 - 14:50 **Jonas Zähringer, München, Germany (Student Award)**
Exploiting Fluorescence Lifetime in Pulsed Interleaved MINFLUX

14:50 - 15:10 **Nazar Oleksiievets, Göttingen, Germany**
Fluorescence Lifetime DNA-PAINT for Multiplexed Imaging of Cells

15:10 - 15:45 COFFEE BREAK and PRODUCT EXHIBITION

Session: FRET & FLIM

Chair: Philip Tinnefeld

15:45 - 16:15 **Eitan Lerner, Jerusalem, Israel (Invited Talk)**
The structure-function relationship of an unstructured protein: the α -synuclein case

16:15 - 16:35 **Monique Honsa, Munich, Germany (Student Award)**
The dynamic force awakens in the DNA force clamp.

16:35 - 16:55 **Julian Folz, Düsseldorf, Germany (Student Award)**
FRET measurements resolving structures, dynamics and transitions of various biomolecules

- 16:55 - 17:15 **Richard Börner, Mittweida, Germany**
FRET-assisted structural modeling of RNA ensembles
- 17:15 - 17:35 **Ivan Maslov, Dolgoprudny, Russian Federation (Student Award)**
Single-molecule FRET measurements of the conformational dynamics in adenosine receptor A2A
- 17:35 VOTING STUDENT AWARD
- 17:35 - 18:50 POSTER SESSION (odd numbered posters) with COFFEE & COOKIES and PRODUCT EXHIBITION
- 19:30 - 22:00 WELCOME RECEPTION

Thursday, September 30

08:30 - 09:00 DAILY REGISTRATION

Session: Biological Applications 1

Chair: Christian Eggeling

- 09:00 - 09:35 **Nynke Dekker, Delft, Netherlands (Invited Talk, virtual)**
Adventures in DNA replication using single-molecule biophysics
- 09:35 - 09:55 **Christian Franke, Jena, Germany**
Endosomal escape of delivered mRNA from endosomal recycling tubules visualized at the nanoscale by multi-colour SMLM
- 09:55 - 10:15 **Lennart Grabenhorst, München, Germany (Student Award)**
A DNA origami based scaffold as model system for multivalent ligand binding and biosensing
- 10:15 - 10:35 **Derya Emin, Cambridge, United Kingdom (Student Award)**
Studying soluble aggregates extracted from post-mortem brain tissue using single-molecule imaging techniques reveal structural differences between Parkinson's patients and healthy controls
- 10:35 - 11:10 COFFEE BREAK and PRODUCT EXHIBITION

Session: Super-resolution microscopy 2

Chair: Felix Koberling

- 11:10 - 11:40 **Gail McConnell**, Glasgow, United Kingdom (Invited Talk, virtual)
Mesoscopic optical imaging with the Mesolens
- 11:40 - 12:10 **Christian Eggeling**, Jena, Germany (Invited Talk)
Cytosolic super-resolution STED-FCS - aberration correction and applications
- 12:10 - 12:30 **Maria Loidolt-Krüger**, Berlin, Germany
Triple-Color STED Nanoscopy: Sampling Absorption Spectra Differences for Efficient Linear Species Unmixing
- 12:30 - 12:50 **Michael Scheckenbach**, München, Germany (Student Award)
Self-Regeneration and Self-Healing in DNA Origami brightness reference structures and super-resolution nanorulers
- 12:50 - 13:00 GROUP PICTURE
- 13:00 - 14:10 LUNCH BREAK

Session: Super-resolution microscopy 3

Chair: Eitan Lerner

- 14:10 - 14:40 **Jennifer Lippincott-Schwartz**, Ashburn, United States (Invited Talk, virtual)
Emerging imaging technologies to study cell architecture, dynamics and function
- 14:40 - 15:00 **Gregor J. Gentsch**, Jena, Germany (Student Award)
Nanotexture enabled multiplexing of monochromatic SMLM
- 15:00 - 15:20 **Anežka Vacková**, Praha, Czech Republic (Student Award)
Spatiotemporal effect of incorporated NPs on radiation-induced DSB damage and repair kinetics
- 15:20 - 15:40 **Anoushka Handa**, Cambridge, United Kingdom (Student Award)
3D Super-Resolution Imaging of Mouse Hippocampus Reveals Postsynaptic Density Protein Distributions
- 15:40 - 16:00 **Yu P. Zhang**, Cambridge, United Kingdom (Student Award)
Characterisation of Alpha-synuclein and Abeta protein aggregates from Parkinson's patients and healthy controls via single-molecule pull down
- 16:00 - 16:35 COFFEE BREAK and PRODUCT EXHIBITION

Session: Biological Applications 2

Chair: tba

- 16:35 - 16:55 **Andres Manuel Vera**, *München, Germany*
smFRET and the cohesin-dockerin interaction: binding heterogeneity and regulation by isomerization of a single proline
- 16:55 - 17:15 **Prithu Roy**, *Marseille, France (Student Award)*
Label-Free study of Single-Proteins using Deep-UV Plasmonic Horn Antennas
- 17:15 - 17:35 **Kay-Eberhard Gottschalk**, *Ulm, Germany*
Super-Resolution Imaging of the Third: Dimension: Metal-Induced Energy Transfer reveals effect of Force on the Actin Cytoskeleton
- 17:35 VOTING STUDENT AWARD
- 17:35 - 18:50 POSTER SESSION (even numbered posters) with BEER & PRETZELS and PRODUCT EXHIBITION

Friday, October 1

08:30 - 09:00 DAILY REGISTRATION

Session: Sensors and Labels

Chair: Philip Tinnefeld

- 9:00 - 09:35 **Petra Schwille**, *Martinsried, Germany (Invited Talk, virtual)*
Quantitative fluorescence microscopy below the diffraction limit. Next generation tools for FCS and single particle tracking
- 09:35 - 09:55 **Viktorija Glembockyte**, *Munich, Germany*
Addressable Nanoantennas with Cleared Hotspots for Single-Molecule Detection on the Smartphone Camera
- 09:55 - 10:15 **Julian Bauer**, *Munich, Germany (Student Award)*
Detection and characterization of single DNA base modification with DNA-PAINT kinetics
- 10:15 - 10:35 **Jonas Schütte**, *Münster, Germany (Student Award)*
Broadband Superconducting Single-Photon Detectors for Microscopy Imaging
- 10:35 - 11:10 COFFEE BREAK and PRODUCT EXHIBITION

Session: Correlation Methods

Chair: Thorben Cordes

- 11:10 - 11:30 **Tim Schröder**, *Munich, Germany*
Microtime gating for fluorescence correlation spectroscopy yields equilibrium constants and distinguishes photophysics from structural dynamics
- 11:30 - 11:50 **Eli Slenders**, *Genova, Italy*
Fluorescence lifetime fluctuation spectroscopy with a SPAD array detector
- 11:50 - 12:10 **Mark Nüesch**, *Zurich, Switzerland (Student Award)*
Enhancing the single molecule detection of ultrafast biomolecular dynamics with nanophotonics
- 12:10 - 12:30 **Xiongfei Luo**, *Krefeld, Germany (Student Award)*
Sustainable Carbon Nanodots: New interesting emissive materials for several applications
- 12:30 - 12:50 **Alessandro Rossetta**, *Genova, Italy (Student Award)*
The Brighteyes-TTM: An Open-Source Time-Tagging Module For Single-Photon Microscopy Applications
- 12:50 VOTING STUDENT AWARD

Session: Labels & Material Sciences

Chair: Rainer Erdmann

- 14:00 - 14:30 **Luke D. Lavis**, *Ashburn, Virginia, United States (Invited Talk, virtual)*
Building brighter dyes for advanced fluorescence microscopy
- 14:30 - 14:50 **Thorben Cordes**, *Planegg, Germany*
Self-healing organic fluorophores – keeping the promise?
- 14:50 - 15:10 **Dominik Wöll**, *Aachen, Germany*
Super-resolution fluorescence imaging in microgels and polymer systems
- 15:10 - 15:30 **Francesco Reina**, *Jena, Germany*
Accurate and Comparative Analysis Methods for Single Molecule Diffusion Measurements on Lipid Membranes
- 15:30 - 15:40 STUDENT AWARD CEREMONY
- 15:40 END OF WORKSHOP