

### Education

Ph.D. <i>summa cum laude</i> , Physics, Ludwig Maximilian University (LMU) Munich, DE	2017 – 2020
M.Sc. <i>Distinction</i> , Physics, University College London, UK	2015 – 2016
B.Sc., Physics, Ludwig Maximilian University Munich, DE	2011 – 2015
Erasmus exchange, Universidad Complutense de Madrid, ES	2014 – 2015

### Research Experience

<b>Research Fellow</b> , with G.M. Church and C.-t. Wu, Harvard Medical School & Wyss Institute	2021 – present
▪ Enabled multiplexed visualization of chromatin architecture within cells and tissues at the level of single proteins	
<b>Visiting Scientist</b> , Howard Hughes Medical Institute, Janelia Research Campus, US	2023 – present
<b>Visiting Scientist</b> , Max Delbrück Center (MDC-BIMSB), Berlin, DE	2022 – 2023
<b>Postdoctoral Fellow</b> , with P. Schwille, Max Planck Institute of Biochemistry, DE	2020 – 2021
▪ Developed a DNA-based concept for extended single-particle tracking	
<b>Doctoral student</b> with P. Schwille, Max Planck Institute of Biochemistry, DE	2017 – 2020
▪ Developed localization-based fluorescence correlation spectroscopy	
▪ Advances to the super-resolution microscopy method DNA-PAINT regarding custom-built hardware, implementation and software	
<b>Graduate research</b> with I. Llorente-García, University College London, UK	2014 – 2015
▪ Construction of a custom-built magnetic tweezer setup for 3D particle trapping	

### Awards and Fellowships

<b>Gregorio Weber Prize in Biological Fluorescence</b> , honorable mention	2023
<b>EMBO Postdoctoral Fellowship</b> awarded by the European Molecular Biology Organization	2022
<b>Leopoldina Postdoctoral Fellowship</b> (declined, admission to Leopoldina Alumni Network)	2022
<b>Finalist Nano Innovation Ph.D. Thesis Award</b> by the Center for Nanoscience (CeNS), Munich	2020
<b>CeNS Publication Award</b> , best interdisciplinary publication	2019
<b>Best Talk Award</b> , annual symposium of Graduate School for Quantitative Biosciences Munich	2019
<b>Ph.D. Fellowship</b> awarded by the German Research Foundation & Graduate School for Quantitative Biosciences Munich	2017

### Selected Publications & Pre-Prints

- J. Stein**<sup>o</sup>, M. Ericsson, M. Nofal, L. Magni, S. Aufmkolk, R. B. McMillan, L. Breimann, C. P. Herlihy, S. D. Lee, A. Willemin, J. Wohlmann, L. A.-J., P. Yin, A. Pombo, G. M. Church<sup>o</sup> and C.-t. Wu<sup>o</sup>. Cryosectioning-enabled super-resolution microscopy for studying nuclear architecture at the single protein level. *bioRxiv* (2024) [doi:10.1101/2024.02.05.576943](https://doi.org/10.1101/2024.02.05.576943)
- J. Stein**<sup>\*</sup>, F. Stehr<sup>\*</sup>, R. Jungmann and P. Schwille. Calibration-free counting of low molecular copy numbers in single DNA-PAINT localization clusters. *Biophysical Reports*. 2021, 1 (2)
- F. Stehr<sup>\*</sup>, **J. Stein**<sup>\*</sup>, J. Bauer, C. Niederauer, R. Jungmann, K. Ganzinger and P. Schwille. Tracking Single Particles for Hours via Continuous DNA-mediated Fluorophore Exchange. *Nature Communications*. 2021, 12
- F. Schueder, **J. Stein**, F. Stehr, A. Auer, B. Sperl, M.T. Strauss, P. Schwille and R. Jungmann. An order of magnitude faster DNA-PAINT imaging by optimized sequence design and buffer conditions. *Nature Methods*. 2019, 16
- J. Stein**<sup>\*</sup>, F. Stehr<sup>\*</sup>, P. Schueler, Philipp Blumhardt, F. Schueder, J. Mücksch, R. Jungmann and P. Schwille. Toward absolute molecular numbers in DNA-PAINT. *Nano Letters*. 2019, 19 (11)

F. Stehr\*, **J. Stein\***, F. Schueder, P. Schwille and R. Jungmann. Flat-top TIRF illumination boosts DNA-PAINT imaging and quantification. *Nature Communications*. 2019, 10 (1)

J. Nguyen, D.V. Conca, **J. Stein**, L. Bovo, C.A. Howard and I. Llorente Garcia. Magnetic control of graphitic microparticles in aqueous solutions. *Proceedings of the National Academy of Sciences*. 2019, 116 (7).

P. Blumhardt, **J. Stein**, J. Mücksch, F. Stehr, J. Bauer, R. Jungmann and P. Schwille. Photo-Induced Depletion of Binding Sites in DNA-PAINT Microscopy. *Molecules*. 2018, 23 (12)

\*co-first author / °co-corresponding author

Full publication list at: <https://scholar.google.de/citations?user=Ukhrzs0AAAAJ&hl>

### Selected Presentations and Invitations

Keystone Transposable Elements Symposium, Whistler (CA), poster	2023
Howard Hughes Medical Institute, Janelia Research Campus, Ashburn (USA), invited talk	2022
European Molecular Biology Laboratory, Heidelberg (DE), invited talk	2022
Conference ‘Focus on Microscopy’, Porto (PT), 2 talks (virtual)	2022
Single Molecule Localization Microscopy Symposium, Lausanne (CH), invited talk (postponed COV19)	2020
Quantitative Bioimaging Conference, Oxford (UK), talk	2020
Super Resolution Imaging Developers Symposium, Oxford (UK), invited talk	2019

### Industry Experience and Service

<b>Internship</b> as Management Consultant, Roland Berger, Frankfurt (DE)	2017
<b>Internship</b> Internal Audit, Fresenius Group, Bad Homburg, Germany	2014
<b>Military service</b> at German Armed Forces (“Bundeswehr”), Lüneburg (DE)	2009 – 2011

- Reconnaissance reserve officer track (current rank: First Lieutenant of the Reserves)

Full professional profile at: [www.linkedin.com/in/johannes-stein-9b649b79](http://www.linkedin.com/in/johannes-stein-9b649b79)

### Teaching, Mentorship, Outreach Experience

<b>Mentor in Harvard Medical School Triads Program</b> run by the DEI Genetics Department	2023 - present
<b>Harvard Medical School Teaching Institute 2023</b> , Theory & Practice for college degree level teaching in STEM professions	2023
<b>Quantitative Super-Resolution Microscopy Workshop</b> , University of Calgary (CA), invited guest lecturer	2023
<b>EMBO Lab Leadership Course</b> for postdoctoral researchers, Heidelberg (DE)	2023
<b>Supervision of M.Sc. students</b> JB (‘19 M.Sc. Physics) & PS (‘19 M.Sc. Chemistry), LMU Munich (DE); LM (‘22 M.Sc. Biology), HMS, Boston (US)	2019 – 2023
<b>Elected Spokesperson</b> representing 160 Ph.D. students at Max Planck Institute of Biochemistry, Martinsried (DE)	2018 – 2020
<b>Coordinator Munich Hub</b> for Max Planck PhDnet (11 Max Planck Institutes in Munich, DE)	2018 – 2019
<b>Student tutoring</b> at Ludwig Maximilian University, Munich (DE)	2012 – 2014