Dr. Ulrike Boehm

Contact Information	Carl Zeiss AG Carl-Zeiss-Strasse 22 73447 Oberkochen, Germany	Phone: +49 (0)151 213-67757 E-mail: ulrike.boehm@zeiss.com Home: ulrikeboehm.org
Summary	Physicist, optical scientist & data scientist with a passion fo reach, and teaching: I have over ten years of experience des optical systems, analyzing (microscopy) data, and developin flows. Furthermore, I have been highly engaged in communi- teaching activities focusing on community service, women, optics/microscopy for more than 15 years.	or community building/engagement, out- signing, building, and running advanced ng (image) acquisition & analysis work- nity building/engagement, outreach, and /diversity in science, open science, and
Research Interests	 Optics and photonics, particularly involving imaging, m Instrument design, development, and application across life sciences to the physical sciences) Development of image and data processing and analysis Machine learning and its application in (microscopic) in Statistical methods for large datasets Open software and hardware tools for imaging, microscopic) 	icroscopy, and optical metrology s a wide range of applications (from the s tools mage and data analysis opy, and optical metrology
Positions	 Optical Scientist & Project Team Lead Corporate Research & Technology, Carl Zeiss AG, Oberkood Project team lead of a development team within the Consection at Carl Zeiss AG, working on new tools for image Review and unlock the latest optical trends in imaging, Strong collaboration with internal and external partners Design and construction of early optical demonstrators/ and analysis schemes 	2022 - present chen, Germany orporate Research & Technology (CRT) ging, microscopy, & optical metrology microscopy, & optical metrology s /prototypes and their respective control
	 Research Specialist Janelia Research Campus, Ashburn, VA, USA Design, construction, modification, and troubleshooting Lattice Light Sheet Microscope, SiMView Light Sheet M focal Microscope, MOSAIC, FIB-SEM, cryo-SIM, etc.) Support of (inter)national scientists with their imaging and during their data acquisition at the instruments of Ja and Janelia's Light Microscopy Core, and at various oth Troubleshooting of sample preparation Development and implementation of new image and data users from around the world Review of proposal drafts and proposals submitted to th Design and realization of microscopy and data analysis 	2019 - 2021 g of advanced optical systems (iPALM, Aicroscope, Aberration Corrected Multi- experiments via technical consultations anelia's Advanced Imaging Center (AIC) her imaging modalities on campus ata analysis strategies for Janelians and he Advanced Imaging Center workshops, symposia, and conferences
	 Postdoctoral Research Fellow National Institutes of Health, National Cancer Institute, Be Design and construction of a microscope for live-cell 5-col in eukaryotic cells at high resolution in time and space to Development of advanced fluorescence labeling strategies FISH) Computational modeling and data analysis of 4D genometers 	2017 - 2018 ethesda, MD, USA lor single-molecule transcription imaging o capture promoter-enhancer interactions is for the genome based on dCas9 (CAS- ne data

• System/sample testing and optimization

Advisor: Prof. Dr. Stefan W. Hell

isoSTED microscope

Master's Student

Ph.D. Student

Max Planck Institute of Biochemistry, Martinsried/Munich, Germany

Max Planck Institute for Biophysical Chemistry, Göttingen, Germany

Department of NanoBiophotonics (Prof. Dr. Stefan W. Hell)

Dissertation title: "4Pi-RESOLFT nanoscopy"

cluding acquisition and data analysis software

Department of Molecular Structural Biology (Prof. Dr. Wolfgang Baumeister)

Dissertation title: "Correlative microscopy at liquid nitrogen temperature"

Advisors: Dr. Jürgen M. Plitzko, Prof. Dr. Wolfgang Baumeister

• Development and testing of a cryo transfer shuttle (CryoStage²) for the transfer of amorphous frozen-hydrated samples from a fluorescence to an electron microscope for correlative microscopy

• Running of various imaging experiments (samples: block copolymers, synaptic vesicles) on an

• Design and construction of a two-color STED microscope and a 4Pi-RESOLFT nanoscope, in-

• Further development and testing of the software based on scale-invariant feature transform (SIFT) for the correlative microscopy approach

Undergraduate Researcher	- various re	search as	ssistant positions	2005 - 2008
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- Evaluation of the mechanical properties of actin filaments in combination with different actinbinding proteins at the Physics Department of the Technical University of Munich, Germany -Prof Andreas Bausch (2008)
- Study of HEK cells with FLIC-microscopy at the Max Planck Institute of Biochemistry, Martinsried, Germany - Prof Peter Fromherz (2008)
- Analysis of Multi-SANS data (with MIRA) and data of Cytochrome C (with the Neutron Spin Echo RESEDA) at the Research Neutron Source Heinz Maier-Leibnitz (FRM II), Munich, Germany Dr. Robert Georgii and Prof Peter Böni (2007)
- Study of surfaces and DNA with an AFM at the Physics Department of the Technical University of Munich, Germany Prof Thorsten Hugel (2006)
- Performance evaluation of an animal PET scanner at the university hospital "Rechts der Isar", Munich, Germany - Prof Sibylle Ziegler (2006)
- Data analysis of water levels of the Baltic Sea at the Leibnitz Institute for Baltic Sea Research, Warnemünde, Germany - Dr. Torsten Seifert (2005)

Education	MicroMasters in Statistics and Data Science Massachusetts Institute of Technology / MITx, Cambridge, MA, USA	
	Ph.D. in Physics Heidelberg University, Heidelberg, Germany	2010 - 2015
	Diploma in Physics Technical University of Munich, Munich, Germany	2004 - 2009
Honors &	Leadership Academy Fellowship, German Scholars Organization e.V., Fellow	2023
Awards	Helmsley Fellowship, Helmsley Charitable Trust, Fellow	2017
	66th Lindau Nobel Laureate Meeting, Participant	2016
	Excellence Award, Max Planck Society, Fellow	2010
	Oskar Karl Forster Scholarship, Technical University of Munich, Grantee	2009
	Study Career Scholarship, Technical University of Munich, Fellow	2008

2009

- PUBLICATIONS
- 29. Galbraith C., English B., **Boehm U.**, Galbriath J., *Cytoplasmic trade winds at the front of the cell push actin to the leading edge*. Nature (2023). submitted
- Nogueira, A.T., Herron J.C., O'Shaughnessy E.C., Boehm U. et al., Resolving protein conformation in iPALM. Biophysical Journal (2023). submitted
- Schmied C., ..., Boehm U. et al., "Community-developed checklists for publishing images and image analysis. Nature Methods (2023). DOI:10.1038/s41592-023-01987-9
- Gaudreault N., ..., Boehm U. et al., Illumination Power, Stability, and Linearity Measurements for Confocal and Widefield Microscopes V.2. protocol.io (2023). DOI:10.17504/protocols.io.5jyl853ndl2w/v2
- Schmied C., ..., Boehm U. et al., "Community-developed checklists for publishing images and image analysis. zenodo (2023). DOI:10.5281/zenodo.7642560
- Schmied C., ..., Boehm U. et al., "Community-developed checklists for publishing images and image analysis. arXiv (2023). DOI:10.48550/arXiv.2302.07005
- Reiche, M.A., Aaron J., Boehm U. et al., When light meets biology how the specimen affects quantitative microscopy. J. Cell Sci. (2022). DOI:10.1242/jcs.259656
- Gaudreault N., ..., Boehm U. et al., Illumination Power and Illumination Stability. protocol.io (2022). DOI:10.17504/protocols.io.bzp8p5rw
- Boehm U. Janelia+EMBL BioImaging Seminar Series: How We Started a Successful Seminar Series during the Pandemic. FocalPlane, p1 (2022). DOI:https:10.1242/focalplane.6011
- Rigano A., ..., Boehm U. et al., Micro-Meta App: an interactive tool for collecting microscopy metadata based on community specifications. Nature Methods 18, p1489–1495 (2021). DOI:10.1038/s41592-021-01315-z
- Hammer M., Huisman M., Rigano A., Boehm U. et al., Towards community-driven metadata standards for light microscopy: tiered specifications extending the OME model. Nature Methods 18, p1427–1440 (2021). DOI:10.1038/s41592-021-01327-9
- Boehm U.*, Nelson G.* et al., QUAREP-LiMi: A community-driven initiative to establish guidelines for quality assessment and reproducibility for instruments and images in light microscopy. Journal of Microscopy, p1-18 (2021). DOI:10.1111/jmi.13041
- Boehm U., Galbraith C. Extending the performance capabilities of isoSTED. Biophysical Journal, p3237-3239 (2021). doi:https://doi.org/10.1016/j.bpj.2021.07.005
- Rigano A., ..., Boehm U. et al., Micro-Meta App: an interactive software tool to facilitate the collection of microscopy metadata based on community-driven specifications. bioRxiv, p1-23 (2021). DOI:10.1101/2021.05.31.446382
- Boehm U.*, Nelson G.* et al., QUAREP-LiMi: a community endeavor to advance quality assessment and reproducibility in light microscopy. Nature Methods, p1-4 (2021). DOI:10.1038/s41592-021-01162-y
- Huisman M., Hammer M., Rigano A., Boehm U. et al., A perspective on Microscopy Metadata: data provenance and quality control. arXiv, p1-15 (2021). DOI:https://arxiv.org/abs/1910.11370
- Hammer M., Huisman M., Rigano A., Boehm U. et al., Towards community-driven metadata standards for light microscopy: tiered specifications extending the OME model. bioRxiv, p1-27 (2021). DOI:110.1101/2021.04.25.441198
- Rigano A., Boehm U. et al., WU-BIMAC/NBOMicroscopyMetadataSpecs: 4DN-BINA-OME (NBO) Microscopy Metadata Specifications. zenodo, (2021). DOI:10.5281/zenodo.4710731
- Boehm U.*, Nelson G.* et al., QUAREP-LiMi: A community-driven initiative to establish guidelines for quality assessment and reproducibility for instruments and images in light microscopy. arXiv, p1-17 (2021). DOI:https://arxiv.org/abs/2101.09153

- Galbraith J., Aaron J., Boehm U., Chew T.-L. and Galbraith C., Resolving the 3D Nanoarchitecture of the Actin Cytoskeleton. Microscopy and Microanalysis, p1 (2020). DOI:10.1017/ S1431927620016736
- Brown-Harding H., Cordelieres F., Poujol C., Boehm U., Collinson L., A 'lockdown post' from facility managers across the world. FocalPlane, p1 (2020). DOI:10.1242/focalplane.1244
- Boehm U., Hell S.W., Schmidt, R., 4Pi-RESOLFT nanoscopy. Nature Comm. 7 (10504), p1-8 (2016). DOI:10.1038/ncomms10504
- Boehm U., 4Pi-RESOLFT nanoscopy. PhD Thesis, Heidelberg University (2016) DOI: 10.11 588/HEIDOK.00020200
- Boehm U., Schmidt R., Hell S.W., *Live-cell 4pi nanoscopy*. European Biophysics Journal with Biophysics Letters 2015 Jul 1 (Vol. 44, pp. S75-S75). 233 SPRING ST, NEW YORK, NY 10013 USA: SPRINGER.
- Ullal C.K., Primpke S., Schmidt R., Boehm, U., Egner A., Vana P, Hell S.W., Flexible Microdomain Specific Staining of Block Copolymers for 3D Optical Nanoscopy. Macromolecules, 44, p7508–7510 (2011). DOI: 10.1021/ma201504f
- Ullal C., Schmidt R., Boehm U., Primpke S., Vana P, Hell W.S., STED Microscopy as a Characterization Tool for Three Dimensionally Nanostructured Block Copolymer Thin Films. APS. 2011 Mar;2011:A43-002.
- Rigort A., Bäuerlein F.J., Leis A., Gruska M., Hoffmann C., Laugks T., Boehm U., Eibauer M., Gnaegi H., Baumeister W. and Plitzko J.M., *Micromachining tools and correlative approaches* for cellular cryo-electron tomography. J. Struct. Biol. 172, p169–179 (2010). DOI:10.1016/j.jsb.2010.02.011
- Rigort A., Mathisen C., Boehm U., Leis A., Lich B., Hayles M., Laugks T., Baumeister W. and Plitzko J.M., *Integrative Cryo-Correlative Microscopy Approaches*. Microscopy and Microanalysis. Vol 16(S2), p186–187 (2010). DOI:10.1017/S1431927610058216
- 1. **Boehm U.**, *Korrelative Mikroskopie bei Flüssigstickstoff-Temperatur*. Diploma Thesis, Technical University of Munich (2010)

* These authors contributed equally to this work

Peer Review	Angewandte Chemie (International ed.)		
	Biophysical Journal		
	Biophysical Reports		
	Frontiers in Bioinformatics		
	Journal of Cell Science		
	Journal of Microscopy		
	Nature Methods		
	Review Commons		
	STAR Protocols		
Presentations	8th Max Planck Symposium for Alumni and Early Career Researchers (invited) Harnack House, Berlin, Germany	2023	
	Open, reproducible hardware for microscopy <i>(invited)</i> Royal Society Meeting, Glasgow, United Kingdom	2023	
	Physiker:innen im Beruf <i>(invited)</i> Physikzentrum Bad Honnef, Bad Honnef, Germany	2023	
	International Women's Day - Keynote about gender equality <i>(invited)</i> ZEISS Innovation Center, Dublin, CA, Unites States of America	2023	

7th Max Planck Symposium for Alumni and Early Career Researchers <i>(invited)</i> Harnack House, Berlin, Germany	2022
5th Annual Postdoc Symposium <i>(invited)</i> Yale University, New Haven, CN, United States of America	2022
Chan Zuckerberg Initiative (CZI) Imaging 2022 Annual Meeting <i>(invited)</i> San Francisco, CA, United States of America	2022
Second Joint Meeting of the Irish Microscopy Society and the Scottish Microscopy Society (invited) National University of Ireland Galway, Galway, Ireland	2022
Advanced Imaging Methods Workshop 2022 (invited) UC Berkeley, Berkeley, CA, United States of America	2022
Chromatin Imaging/Nuclear Architecture SubGroup (invited) Harvard & MIT, Boston, MA, United States of America	2021
Janelia Advisory Committee Meeting Better Science through Open Science and Collaborative Teams (invited) Janelia Research Campus, Ashburn, VA, United States of America	2021
Junior Scientist Workshop on Biological Optical Microscopy (invited) Janelia Research Campus, Ashburn, VA, United States of America	2019
Transcription Seminar <i>(invited)</i> Albert Einstein College of Medicine, New York, NY, United States of America	2019
Microscopy Seminar (invited) Havard Medical School, Boston, MA, United States of America	2019
Microscopy Lunch Seminar (invited) UMass Medical School, Worcester, MA, United States of America	2019
Single Biomolecules Meeting Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, United States of America	2018
NIH Light Microscopy Interest Group Seminar (invited) NIH, Bethesda, MD, United States of America	2018
Chan Zuckerberg Initiative (CZI) Imaging Workshop (invited) CZ Biohub, San Francisco, CA, United States of America	2017
Chesapeake Bay Area Single Molecule Biology Meeting Johns Hopkins University, Baltimore, MD, United States of America	2017
Frontiers in Imaging Science Conference Janelia Research Campus, Ashburn, VA, United States of America	2017
Single Molecule Biophysics Conference Aspen Center for Physics, Aspen, CO, United States of America	2017
Labeling and Nanoscopy Conference DKFZ, Heidelberg, Germany	2016
MPIbpc Campus Seminar <i>(invited)</i> Max Planck Institute for Biophysical Chemistry, Göttingen, Germany	2016
NCI Departmental Seminar <i>(invited)</i> NIH, Bethesda, MD, United States of America	2016
Departmental Seminar <i>(invited)</i> Wyss Institute at Havard University, Boston, MA, United States of America	2016

	Lunch Talk (invited) Havard University, Cambridge, MA, United States of America	2016
	Biophysical Society Annual Meeting Los Angeles, CA, United States of America	2016
	Seeing Is Believing Symposium EMBL, Heidelberg, Germany	2015
	Deutsche Physikerinnen Tagung <i>(invited)</i> University of Göttingen, Göttingen, Germany	2015
	Annual meeting of the European Light Microscopy Initiative (ELMI) Sitges, Spain	2015
	Focus on Microscopy (FOM) Göttingen, Germany	2015
	PROSPECTS. First Plenary Meeting Punta Negra, Majorca/Spain	2010
Teaching	"Widening the Lens" Program - Fall Term (virtual lecture) Lecturer, Vanderbilt University School of Engineering Nashville, TN, United States of America	2023
	Lattice light-sheet microscopy: Pushing Long-Term Volumetric Imaging of Living Cells (virtual lecture) Lecturer, DGaO lecture series, Aalen, Germany	2023
	"Widening the Lens" Program - Fall Term (virtual lecture) Lecturer, Vanderbilt University School of Engineering Nashville, TN, United States of America	2022
	7th Max Planck Symposium for Alumni and Early Career Researchers Lecturer, Max Planck Society, Berlin, Germany	2022
	"Women in Imaging" Bootcamp (virtual workshop) Lecturer, University of California, Berkeley Berkeley, CA, United States of America	2022
	"Widening the Lens" Program - Spring Term (virtual lecture) Lecturer, Vanderbilt University School of Engineering Nashville, TN, United States of America	2022
	NIH FAES Imaging - From IF & FISH to Automated & Confocal Microsc (virtual workshop), Instructor of the Image Analysis Bootcamp, National Institutes of Health, Bethesda, United States of America	ору 2021
	Fiji Image Processing and Analysis Workshop (virtual workshop) Instructor of the Superresolution Data Handling Module, Turku Bioscience Centre, Turku, Finland	2021
	NIH FAES Super Resolution Workshop (virtual workshop) Instructor, Foundation for Advanced Education in the Sciences (FAES) Bethesda, United States of America	2021 - 2022
	Fiji Macros Programming (virtual workshop) Instructor, Janelia Research Campus, Ashburn, United States of America	2020
	DECODE for Single Molecule Localization Microscopy (virtual workshop) at the <i>From Image to Knowledge with ImageJ & Friends</i> conference Instructor, Janelia Research Campus, Ashburn, United States of America	2020
	NIH FAES Image Processing and Analysis workshop (virtual workshop) Instructor, National Institutes of Health, Bethesda, United States of America	2019 - 2021

	Open Science in Imaging and Microscopy (breakout session during a workshop) Instructor, Janelia Research Campus, Ashburn, United States of America	2019
	Advanced Imaging Techniques in Biomedical Sciences (summer intern journal cl Instructor, National Institutes of Health, Bethesda, United States of America	ub) 2018
	Introduction to microscopy (graduate course) Teaching assistant, University of Massachusetts Medical School, Worcester, United States of America	2017
	Optical Microscopy & Imaging in the Biomedical Sciences (summer intern journal club) Instructor, National Institutes of Health, Bethesda, United States of America	2017
	 Advanced physics laboratory course for physics students (undergraduate course Teaching assistant, Heidelberg University, Germany Experimental Physics III: Optics (undergraduate course) Teaching assistant, University of Göttingen, Germany) 2011 2011
	Experimental Physics IV: Quantum, atomic and molecular physics (undergraduate course), Teaching assistant, University of Göttingen, Germany	2010
	Theoretical Physics I: Theoretical Mechanics (undergraduate course) Teaching assistant, Technical University of Munich, Germany	2009
	Theoretical Physics II: Electrodynamics (undergraduate course) Teaching assistant, Technical University of Munich, Germany	2008
Mentoring	Mentoring of Ph.D. and Master's Students202Focus: Navigating an industry career & general career mentoring202Technical University of Munich, Munich, Germany202	23 - present
	Mentoring of Ph.D. and Master's Students202Focus: Navigating an industry career, how to work in an optics laboratory & in-depth support of individual research projects Carl Zeiss AG, Oberkochen, Germany202	22 - present
	Janelia Buddy Program for International Scientists2Focus: Facilitating the transition of international scientists to Janelia in partnership5with Janelia's Human Resource Department5Janelia Research Campus, Ashburn, United States of America	2020 - 2021
	Mentoring of Postbac Students Focus: Navigating a scientific career Janelia Research Campus, Ashburn, United States of America	2020 - 2021
	Mentoring of Ph.D., College, and High School Students 5 Focus: Navigating a scientific career, how to work in an optics laboratory & in-depth support with individual research projects National Institutes of Health, Bethesda, United States of America	2017 - 2018
	Mentoring of Ph.D. and Master's Students 55 Focus: Navigating a scientific career, how to work in an optics laboratory & in-depth support of individual research projects Max Planck Institute for Biophysical Chemistry, Göttingen, Germany	2010 - 2016
Conference Organization	AKC Annual Meeting & 25th Anniversary , Organizer DPG Conference Center, Bad Honnef, Germany	2023
-	iCademy (onboarding event for corporate research and technology (CRT)), Organizer Carl Zeiss AG, Jena, Germany	2023

RWTH Aachen, Aachen, Germany	2023
DGaO Panel Discussion , Organizer and moderator Topic: Navigating a career in optics and photonics TU Berlin, Berlin, Germany	2023
iCademy (onboarding event for corporate research and technology (CRT)), Organizer Carl Zeiss AG, Oberkochen, Germany	r 2022
Advanced Imaging Methods Workshop 2022, Organizer UC Berkeley, Berkeley, CA, United States of America	2022
OIG-ABG Educational Lectures, Organizer Ashburn, VA, United States of America	2021 - 2022
Janelia+EMBL BioImaging Seminar Series, Organizer & advisor2Ashburn, VA, United States of America2	2020 - present
Optical Interest Group , Organizer Ashburn, VA, United States of America	2020 - 2022
Imaging Africa Microscopy Club , Organizer Ashburn, VA, United States of America	2020
Frontiers in Imaging Science Conference, Organizer Ashburn, VA, United States of America	2019
Labeling and Nanoscopy Conference 2018, Website and social media support Heidelberg, Germany	2018
International Opportunities EXPO, Organizer National Institutes of Health, Bethesda, MD, United States of America	2018
Division of International Services Immigration Symposium , Organizer National Institutes of Health, Bethesda, MD, United States of America	2017 - 2018
I, Scientist Conference, Organizer Berlin, Germany	2017
Labeling and Nanoscopy Conference 2016, Organizer Heidelberg, Germany	2016
Focus on Microscopy (FOM), Social media support	2015 - 2019
PhDnet General Meeting , Organizer Bonn, Germany	2011
BioImaging North America, Committee member2of the "Diversity, Equity & Inclusion" working group2Madison, Wisconsin, United States of America2	2022 - present
Global BioImaging, Committee member 2 of the "Training Core Facility Imaging Scientists" working group 2 Heidelberg, Germany 2	2021 - present
Wiley Analytical Science Magazine, Editorial board member 2 Weinheim, Germany 2	2021 - present
CZI Expanding Global Access to Bioimaging, Grant reviewer San Francisco, United States of America	2021
QUAREP-LiMi, Chair of the "White Paper" working group 2 Freiburg, Germany	020 - present
Frontiers in Bioinformatics, Review Editor for Computational BioImaging 2 Lausanne, Switzerland	020 - present
CZI Imaging Scientists Round 2, Grant reviewer	2020

Professional Services

	San Francisco, United States of America	
	QUAREP-LiMi , Vice-chair of the "Image Quality" working group Freiburg, Germany	2020 - present
	German BioImaging, Committee member of the working groups for (1) Training and Knowledge Transfer and (2) Image Data Analysis & Management Konstanz, Germany	2020 - present
	BioImaging North America , Committee member of the "Quality Control and Data Management" working group Madison, Wisconsin, United States of America	2020 - present
	Janelia's Optical Interest Group, Coordinator & advisor Ashburn, Virginia, United States of America	2020 - present
	GSO German Scholars Organization e.V., Coordinator for Local Chapter of German Scientists, Ashburn	2020 - 2021
	Accelerating Science and Publication in Biology (ASAPbio), Ambassador	2018 - 2019
	eLife Early-Career Advisory Group, Ambassador	2017 - 2019
	NIH Laser Safety Advisory Committee , Committee member for the NCI National Institutes of Health, Bethesda, United States of America	2018
	NIH Visiting Fellows Committee, Chair National Institutes of Health, Bethesda, United States of America	2017 - 2018
	NIH Light Microscopy Interest Group, Coordinator & advisor National Institutes of Health, Bethesda, United States of America	2016 - 2021
	DPG Arbeitskreis für Changengleichheit, Board member & deputy spokesperson, Bad Honnef, Germany	2016 - present
	Lindau Nobel Laureate Meeting, Freelance writer Lindau, Germany	2016 - present
	66th Lindau Nobel Laureate Meeting, "Women in Science"-correspondent Lindau, Germany	2016
	Lise Meitner Gesellschaft e.V., Co-founder and board member Berlin, Germany	2011
	Max Planck PhDnet, Steering group 2011 member & deputy spokesperson Max Planck Society, Munich, Germany	2011
	PhD/Postdoc Community, PhD/Postdoc representative Max Planck Institute for Biophysical Chemistry, Göttingen, Germany	2011 - 2014
Certificates & Training	HBS Design Thinking and Innovation Design Thinking and Innovation is an 7-week online certificate program from Harvard ness School Online. It teaches current & aspiring managers, entrepreneurs and devel how to leverage fundamental design thinking principles and innovative problem-so tools to address business challenges and build products, strategies, teams, and env ments for optimal use and performance.	2023 Busi- opers lving riron-
	HBS Strategy Execution Strategy Execution is an 8-week online certificate program from Harvard Business St Online. It equips current & aspiring managers with the tools, skills, and framewor allocate resources, measure performance, manage risk, & successfully implement stra	2023 chool ks to utegy.
	HBS Disruptive Strategy Disruptive Strategy is a 6-week, 30-hour online certificate program from Harvard Bus School Online. It helps students become fluent in disruption theory, gain confidence is ticulating complex viewpoints, apply strategic frameworks to assess new opportunities	2022 siness in ar- s and

potential threats and acquire executive-level strategy formulation and team management techniques.	
Fundamentals of Statistics An 18-week in-depth introduction course by MITx to develop and understand fundamen- tal statistical principles on firm mathematical grounds starting from the construction of estimators and tests, as well as an analysis of their asymptotic performance.	2021
Leadership Principles for Scientists, Engineers, and Researchers A four-month and four-course online program from MIT that empowers engineers, scien- tists, and researchers with the leadership insight needed to solve problems, innovate, and drive change.	2021
Machine Learning with Python: From Linear Models to Deep Learning A 15-week in-depth introduction course by MITx to the field of machine learning, from lin- ear models to deep learning and reinforcement learning, through hands-on Python projects.	2021
Data Analysis for Social Scientists An 11-week course by MITx to learn methods for harnessing and analyzing data to answer questions of cultural, social, economic, and policy interest.	2020
Probability - The Science of Uncertainty and Data A 16-week course by MITx to build foundational knowledge of data science with an intro- duction to probabilistic models, including random processes and the essential elements of statistical inference.	2020
Fierce Conversations program A 6-week course offered by Howard Hughes Medical Institute about Feedback, Confronta- tion, Team, Delegation, Coaching, and Accountability.	2020
LabVIEW Core 2 A certificate course offered by National Instruments about the LabVIEW basics.	2020
LabVIEW Core 1 A certificate course offered by National Instruments about the LabVIEW basics.	2020
HBS Entrepreneurship Essentials Entrepreneurship Essentials is a 4-week, 30-hour online certificate program from Har- vard Business School. Entrepreneurship Essentials introduces participants to the en- trepreneurial journey from finding an idea to gaining traction in the marketplace to raising capital for a venture. Participants learn an overarching framework - People, Opportunity, Context, Deal - to evaluate opportunities to manage start-ups and finance ventures.	2020
HBS Management Essentials Management Essentials is an 8-week, 35-hour online certificate program from Harvard Business School. Management Essentials takes a distinctive, hands-on approach to man- agement. Participants in this course learn to identify, understand, design, and shape critical organizational and managerial processes to get the work done.	2019
HBS CORe (Credential of Readiness) CORe (Credential of Readiness) is a 150-hour certificate program on business fundamen- tals from Harvard Business School. The CORe is comprised of three courses - Business Analytics, Economics for Managers, and Financial Accounting - developed by leading Har- vard Business School faculty and delivered in an active learning environment based on the HBS signature case-based learning model.	2019
Scientists Teaching Science at the Office of Intramural Training and Education (OITE) at the National Institutes of Health, Bethesda, United States of America (9-week online pedagogy course)	2018
Research Mentor Training at the Office of Intramural Training and Education (OITE) at the National Institutes of Health, Bethesda, United States of America	2018

	Business of Science for Scientists by SciPhD at the National Cancer Institute in Shady Grove, United States of America	2018
	Chromatin, Epigenetics and Gene Expression Course at the Cold Spring Harbor Laboratory (CSHL) in Cold Spring Harbor, NY, United States of America, Course instructors: Prof Karen Adelman, Dr. Luciano Di Croce, Prof Geeta Narlikar, Prof Ali Shilatifard	2018
	BioTech2: Recombinant DNA Methodology at the Foundation for Advanced Education in the Sciences at the NIH (FAES), Bethesda, United States of America	2017
	Management Bootcamp for Postdocs at the Office of Intramural Training and Education (OITE) at the National Institutes of Health, Bethesda, United States of America	2017
	Ethics in Research Training for Postdocs at the Office of Intramural Training and Education (OITE) at the National Institutes of Health, Bethesda, United States of America	2017
	Workplace Dynamic Series about Self-Awareness, Conflict & Feedback, Team Skills, and Diversity In A Multicul- tural Society at the Office of Intramural Training and Education (OITE) at the National Institutes of Health, Bethesda, United States of America	2016
Computer Skills	Languages: Python, MATLAB, LabVIEW, R Software: Inventor (CAD), Zemax, Imaris, Fiji, ImageJ	
PROFESSIONAL AFFILIATION	American Physical Society, German Physical Society (DPG), BioImaging North America (Berman BioImaging Society (GerBI), Deutsche Gesellschaft für angewandte Optik (DGaO), national society for optics and photonics (SPIE)	INA), Inter-
Languages	German - native language English - fluent, spoken and written French - basic knowledge	
References	Available upon request	