Dr. Ulrike Boehm Curriculum Vitae

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Home: ulrikeboehm.org

SUMMARY

Physicist, optical scientist & data scientist with a passion for community building/engagement, outreach, and teaching: I have over ten years of experience designing, building, and running advanced optical systems, analyzing microscopy data, and developing image acquisition & analysis workflows. Furthermore, I have been highly engaged in community building/engagement, outreach, and teaching activities focusing on community service, women/diversity in science, open science, and optics/microscopy for more than 15 years.

RESEARCH INTERESTS

- Optics, particularly involving imaging, metrology, lithography, quantum technology, and digitalization
- Microscope design, development, and application across a wide range of biological models
- Development of image and data processing and analysis tools
- Machine learning and its application in microscopic image analysis
- Statistical methods for large datasets
- Open software and hardware tools for imaging and microscopy

Positions

# **Optical Scientist**

2022 - present

Carl Zeiss AG

Corporate Research & Technology, Oberkochen, Germany

- Review and unlock the latest optical trends in imaging, metrology, lithography, quantum technology, and digitalization
- Strong collaboration with internal (SBUs) and external partners at Zeiss
- Design and construction of early optical prototypes and their respective control and analysis schemes

### Research Specialist

2019 - 2021

Janelia Research Campus, Ashburn, VA, USA

- Design, construction, modification, and troubleshooting of advanced optical systems (iPALM, Lattice Light Sheet Microscope, SiMView Light Sheet Microscope, Aberration Corrected Multifocal Microscope, MOSAIC, FIB-SEM, cryo-SIM, etc.)
- Support of (inter)national scientists with their imaging experiments via technical consultations and during their data acquisition at the instruments of Janelia's Advanced Imaging Center and Janelia's Light Microscopy Core, and at various other imaging modalities on campus
- Troubleshooting of sample preparation
- Development and implementation of new image and data analysis strategies for Janelians and users from around the world
- Review of proposal drafts, and proposals submitted to the Advanced Imaging Center
- Design and realization of microscopy and data analysis workshops, symposia, and conferences

### Postdoctoral Research Fellow

2017 - 2018

National Institutes of Health, National Cancer Institute, Bethesda, MD, USA

- Design and construction a microscope for live-cell 5-color single-molecule transcription imaging in eukaryotic cells at high resolution in time and space to capture promoter-enhancer interactions
- Development of advanced fluorescence labeling strategies for the genome based on dCas9 (CAS-FISH)
- Computational modeling and data analysis of 4D genome data

Ph.D. Student 2010 - 2016

Max Planck Institute for Biophysical Chemistry, Göttingen, Germany

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

Dissertation title: "4Pi-RESOLFT nanoscopy"

Advisor: Prof. Dr. Stefan W. Hell

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

- Design and construction of a two-color STED microscope
- Design and construction of a 4Pi-RESOLFT nanoscope, including optical and acquisition system.
- Development of acquisition software
- System/sample testing and optimization

Master Student 2009

Max Planck Institute of Biochemistry, Martinsried/Munich, Germany

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 (CryoStage<sup>2</sup>) for the reliable transfer of amorphous frozen-hydrated samples from a fluorescence to an electron microscope for correlative microscopy
- Further development and testing of the software based on scale-invariant feature transform (SIFT) for the correlative microscopy approach

### Undergraduate Researcher - various research assistant positions

2005 - 2008

- 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 Diploma in Physics Technical University of Munich, Munich, Germany

# Honors & Awards

Helmsley Fellowship, Helmsley Charitable Trust	2017
66th Lindau Nobel Laureate Meeting, Participant	2016
Excellence Award, Max Planck Society	2010
Oskar Karl Forster Scholarship, Technical University of Munich	2009
Study Career Scholarship, Technical University of Munich	2008

### **PUBLICATIONS**

- 24. Nogueira, A.T., Herron J.C., O'Shaughnessy E.C., **Boehm U.** et al., *Resolving protein conformation in iPALM*. Nature Communications (2022). submitted
- 23. Reiche, M.A., Aaron J., **Boehm U.** et al., Micro-Meta App: an interactive tool for collecting microscopy metadata based on community specifications. J. Cell Sci. (2022). DOI:10.1242/jcs.259656
- 22. Gaudreault N., ..., **Boehm U.** et al., *Illumination Power and Illumination Stability*. protocol.io (2022). DOI:10.17504/protocols.io.bzp8p5rw
- 21. **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
- 20. 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
- 19. 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
- 18. **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
- 17. **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
- 16. 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
- 15. **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
- 14. 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
- 13. 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
- 12. Rigano A., **Boehm U.** et al., WU-BIMAC/NBOMicroscopyMetadataSpecs: 4DN-BINA-OME (NBO) Microscopy Metadata Specifications. zenodo, (2021). DOI:10.5281/zenodo.4710731
- 11. **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
- 10. Galbraith J., Aaron J., **Boehm U.**, Chew T.-L. and Galbraith C., *Resolving the 3D Nano-architecture of the Actin Cytoskeleton*. Microscopy and Microanalysis, p1 (2020). DOI:10.1017/S1431927620016736
- 9. 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
- 8. **Boehm U.**, Hell S.W., Schmidt, R., *4Pi-RESOLFT nanoscopy*. Nature Comm. 7 (10504), p1-8 (2016). DOI:10.1038/ncomms10504
- 7. **Boehm U.**, 4Pi-RESOLFT nanoscopy. PhD Thesis, Heidelberg University (2016) DOI: 10.11 588/HEIDOK.00020200
- 6. **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.

- 5. 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
- 4. 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
- 2. 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

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 (invited) 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	2018

	Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, United States of America	
	NIH Light Microscopy Interest Group Seminar (invited) NIH, Bethesda, MD, United States of America	2018
	Chan Zuckerberg Initiative 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 (invited) Max Planck Institute for Biophysical Chemistry, Göttingen, Germany	2016
	NCI Departmental Seminar (invited) NIH, Bethesda, MD, United States of America	2016
	Departmental Seminar (invited) 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 (invited) 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	NIH FAES Imaging - From IF and FISH to Automated and Confocal Mic (virtual workshop), Instructor of the Image Analysis Bootcamp, National Institutes of Health, Bethesda, United States of America	roscopy 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
	$ \mathbf{DECODE} \ \mathbf{for} \ \mathbf{Single} \ \mathbf{Molecule} \ \mathbf{Localization} \ \mathbf{Microscopy} \ (\mathbf{virtual} \ \mathbf{workshop}) $	2020

	at the From Image to Knowledge with ImageJ & Friends conference Instructor, Janelia Research Campus, Ashburn, United States of America		
	NIH FAES Image Processing and Analysis workshop (virtual workshop) Instructor, National Institutes of Health, Bethesda, United States of America	2019 - 202	21
	Open Science in Imaging and Microscopy (breakout session during a workshop Instructor, Janelia Research Campus, Ashburn, United States of America	201	.9
	Advanced Imaging Techniques in Biomedical Sciences (summer intern journal Instructor, National Institutes of Health, Bethesda, United States of America	al club) 201	.8
	Introduction to microscopy (graduate course) Teaching assistant, University of Massachusetts Medical School, Worcester, United States of America	201	.7
	Optical Microscopy & Imaging in the Biomedical Sciences (summer intern journal club) Instructor, National Institutes of Health, Bethesda, United States of America	201	.7
	Advanced physics laboratory course for physics students (undergraduate con Teaching assistant, Heidelberg University, Germany	urse) 201	.1
	Experimental Physics III: Optics (undergraduate course) Teaching assistant, University of Göttingen, Germany	201	.1
	Experimental Physics IV: Quantum, atomic and molecular physics (undergraduate course), Teaching assistant, University of Göttingen, Germany	201	.0
	Theoretical Physics I: Theoretical Mechanics (undergraduate course) Teaching assistant, Technical University of Munich, Germany	200	)9
	Theoretical Physics II: Electrodynamics (undergraduate course) Teaching assistant, Technical University of Munich, Germany	200	)8
Mentoring	Janelia Buddy Program for International Scientists Focus: Facilitating the transition of international scientists to Janelia in partnership with Janelia's Human Resource Department Janelia Research Campus, Ashburn, United States of America	2020 - 202	?1
	Mentoring of Postbac Students Focus: Navigating a scientific career	2020 - 202	21
	Janelia Research Campus, Ashburn, United States of America  Mentoring of Ph.D., College, and High School Students  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 - 201	18
	Mentoring of Ph.D. students and Master Students Focus: Navigating a scientific career, how to work in an optics laboratory & in-depth support with individual research projects Max Planck Institute for Biophysical Chemistry, Göttingen, Germany	2010 - 201	.6
Conference Organization	Advanced Imaging Methods Workshop 2022, Organizer UC Berkeley, Berkeley, CA, United States of America	202	22
	OIG-ABG Educational Lectures, Organizer Ashburn, VA, United States of America	2021 - presen	nt
	Janelia+EMBL BioImaging Seminar Series, Organizer Ashburn, VA, United States of America	2020 - presen	nt

	Optical Interest Group (OIG), Organizer Ashburn, VA, United States of America	2020 - present
	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
Professional Services	Wiley Analytical Science Magazine, Editorial Board Member Weinheim, Germany	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 Freiburg, Germany	2020 - present
	Frontiers in Bioinformatics, Review Editor for Computational BioImaging Lausanne, Switzerland	2020 - present
	CZI Imaging Scientists Round 2, Grant reviewer San Francisco, United States of America	2020
	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	2020 - present
	BioImaging North America (BINA), Committee member of the "Quality Control and Data Management" working group	2020 - present
	Janelia's Optical Interest Group, Coordinator 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 National Institutes of Health, Bethesda, United States of America	2016 - prese	$\operatorname{nt}$
DPG Arbeitskreis für Changengleichheit, Board member & deputy spokesperson, Bad Honnef, Germany	2016 - prese	$\operatorname{nt}$
Lindau Nobel Laureate Meeting, Freelance writer Lindau, Germany	2016 - prese	$\operatorname{nt}$
66th Lindau Nobel Laureate Meeting, "Women in Science"-correspondent Lindau, Germany	203	16
Lise Meitner Gesellschaft e.V., Co-founder and board member Berlin, Germany	20	11
Max Planck PhDnet, Steering group 2011 member & deputy spokesperson Max Planck Society, Munich, Germany	203	11
PhD/Postdoc Community, PhD/Postdoc representative Max Planck Institute for Biophysical Chemistry, Göttingen, Germany	2011 - 20	14
Fundamentals of Statistics An 18-week in-depth introduction course by MITx to develop and understand fundamental statistical principles on firm mathematical grounds starting from the construction estimators and tests, as well as an analysis of their asymptotic performance.		21
Leadership Principles for Scientists, Engineers, and Researchers A four-month and four-course online program from MIT that empowers engineers, so tists, and researchers with the leadership insight needed to solve problems, innovate, drive change.		21
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 ear models to deep learning and reinforcement learning, through hands-on Python projections.		21
Data Analysis for Social Scientists An 11-week course by MITx to learn methods for harnessing and analyzing data to ans questions of cultural, social, economic, and policy interest.	20: swer	20
Probability - The Science of Uncertainty and Data A 16-week course by MITx to build foundational knowledge of data science with an induction to probabilistic models, including random processes and the essential element statistical inference.		20
Fierce Conversations program A 6-week course offered by Howard Hughes Medical Institute about Feedback, Confro tion, Team, Delegation, Coaching, and Accountability.	20: nta-	20
LabVIEW Core 2 A certificate course offered by National Instruments about the LabVIEW basics.	203	20
LabVIEW Core 1 A certificate course offered by National Instruments about the LabVIEW basics.	209	20
HBS Entrepreneurship Essentials Entrepreneurship Essentials is a 4-week, 30-hour online certificate program from I vard Business School. Entrepreneurship Essentials introduces participants to the trepreneurial journey from finding an idea to gaining traction in the marketplace to rai capital for a venture. Participants learn an overarching framework - People, Opportun Context, Deal - to evaluate opportunities to manage start-ups and finance ventures.	en- sing	20

CERTIFICATES & TRAINING

	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 management. Participants in this course learn to identify, understand, design, and shape critical organizational and managerial processes as a means of getting the work done.	2019
	HBS CORe (Credential of Readiness) CORe (Credential of Readiness) is a 150-hour certificate program on business fundamentals from Harvard Business School. The CORe is comprised of three courses - Business Analytics, Economics for Managers, and Financial Accounting - developed by leading Harvard 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, Diversity In A Multicultural 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, BioImaging North America (BINA), One BioImaging Society (GerBI), Network of European BioImage Analyst (NEUBIAS), Quan BioImaging Society, Deutsch Gesellschaft fuer angewandte Optik (DGaO)	
Languages	German - native language English - fluent, spoken and written French - basic knowledge Swedish - basic knowledge	

References Available upon request