

## Bio

Dr. Peter Fischer received his PhD in Physics (Dr.rer.nat.) from the Technical University in Munich, Germany in 1993 on pioneering work with X-ray magnetic circular dichroism in rare earth systems and his Habilitation from the University in Würzburg, Germany in 2000 based on his pioneering work on Magnetic Soft X-ray microscopy.

Since 2004 he is with the Materials Sciences Division at Lawrence Berkeley National Laboratory in Berkeley CA. He is Senior Staff Scientist and Principal Investigator in the Non-Equilibrium Magnetic Materials Program and currently also Acting Division Director at MSD. His research program is focused on the use of polarized synchrotron radiation for the study of fundamental problems in magnetism. Since 2014 he is also Adjunct Professor for Physics at the University of California in Santa Cruz.

Dr. Fischer has published more than 190 peer reviewed papers and has given over 280 invited presentations at national and international conferences. He was nominated as Distinguished Lecturer of the IEEE Magnetics Society in 2011. For his achievements of “hitting the 10nm resolution milestone with soft X-ray microscopy” he received the Klaus Halbach Award at the Advanced Light Source in 2010.

Dr. Fischer is Fellow of the APS and IEEE.



## PETER FISCHER

APS Fellow, IEEE Fellow

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### - Professional Experience

07/2016- present: Acting Division Director in the Materials Sciences Division at the E.O. Lawrence Berkeley National Laboratory  
07/2015- present: Deputy Division Director in the Materials Sciences Division at the E.O. Lawrence Berkeley National Laboratory  
03/2014- present: Adjunct Professor of Physics, University of California, Santa Cruz  
08/2016- present: Senior Staff Scientist and Principal Investigator in the Materials Sciences Division at the E.O. Lawrence Berkeley National Laboratory  
08/2004-08/2016: Staff scientist and Principal Investigator in the Materials Science Division at the E.O. Lawrence Berkeley National Laboratory  
10/2001-08/2004: Staff scientist (group leader) MPI for Metals Research, Stuttgart, Germany and Lecturer ("Privatdozent") (C2 level) for Experimental Physics at the U Stuttgart, Germany  
03/2000-10/2001: Lecturer (C2 level) for Experimental Physics at the U Würzburg, Germany  
02/1998-02/2000: scientific assistant (C1 level) at the University of Würzburg, Germany  
04/1994-02/1998: scientific assistant (C1 level) at the University of Augsburg, Germany  
05/1993-03/1994: Post-doc at the Institute for Physics at the University of Augsburg, Germany

### - Professional Preparation

01/17/2000 Habilitation thesis, U Wuerzburg/Germany: "Studies of magnetism in the nanometer range with X-ray magnetic circular dichroism"(in German)  
07/26/1993 Dr.rer.nat (PhD), TU Munich/Germany: "X-ray magnetic circular dichroism at the L2,3 edges of 4f-elements" (in German)  
01/27/1989 Dipl.phys.univ. (MSc), TU Munich/Germany: "Studies of the Bremsstrahlung of Electrons under Channeling-Conditions" (in German)

### - Recognition

2014 APS Fellow  
2014 IEEE Fellow  
2013 Zhongshan Distinguished Lecturer, Nanjing, China  
2011 IEEE Magnetics Society Distinguished Lecturer, IEEE Magnetics Society  
2010 Klaus Halbach Award, ALS Berkeley CA  
Total of >260 invited talks at conferences, workshops, summer schools

### - Professional Service

Editorial Board Member for Scientific Reports (2013-present), Advisory Editorial Board member for the Journal of Magnetism and Magnetic Materials (2013-present), Associate Editorial Board of Frontiers in Condensed Matter Physics (2013-present), Editorial Board of AIMS Materials Science (2013-present), reviewer for numerous journals, incl JAP, PRL, APL, ApplPhysA, JMSJ, JPhysD, JMMM, Ultramicroscopy, NJP, Nature Comm., Nature Photonics, Nature Materials, JESRP  
Member and chair of numerous conferences, program committees (MMM, Intermag, ICM, XRM) and review panels, incl Program Co-chair of MMM 2016, New Orleans, LA, Chair of the MML2010 in Berkeley, CA and of the ICMFS2018 in Santa Cruz CA, Member of the Proposal review committees at the ALS, SLS, Diamond, CLS, Australian Light Source, Chair of MIND within AVS, Member-At-Large of GMAG

within APS, AdComm of IEEE Magsoc, reviewer for funding agencies (NSF, DOE, German Science Foundation DPG, Swiss National Foundation SNF, American Association for the Advancement of Science AAAS)

**Selected Publications:** (Career total of >190, h-index: 30 (ResearchID), 35 (Google Scholar))

- P. Fischer**, G. Schütz, G. Schmahl, P. Guttmann und D. Raasch, *Imaging of Magnetic Domains with the X-ray microscope at BESSY using X-ray Magnetic Circular Dichroism*, [Z.f. Physik B 101 \(1996\) 313-316](#)
- G. Meier, M. Bolte, R. Eiselt, B. Krüger, D.-H. Kim., **P. Fischer**, *Direct imaging of current driven stochastic domain-wall motion and deformation*, [Phys. Rev. Lett. 98, 187202 \(2007\)](#)
- P. Fischer**, H. Ohldag, *X-rays and magnetism*, [Report on Progress in Physics 78 094501 \(2015\)](#)
- V. Uhlíř, M. Urbánek, L. Hladík, J. Spousta, M.-Y. Im, **P. Fischer**, N. Eibagi, J. J. Kan, E. E. Fullerton and T. Šikola, *Dynamic switching of the spin circulation in tapered magnetic nanodisks*, [Nature Nanotechnology 8 341-346 \(2013\)](#)
- M.-Y. Im, K.-S. Lee, A. Vogel, J.-I. Hong, G. Meier, **P. Fischer**, *Stochastic formation of magnetic vortex structures in asymmetric disks triggered by chaotic dynamics*, [Nature Communication 5 5620 \(2014\)](#)
- Z. Gu, M.E. Nowakowski, D.B. Carlton, R. Storz, M.-Y. Im, J. Hong, W. Chao, B. Lambson, P. Bennett, M.T. Alam, M.A. Marcus, A. Doran, A. Young, A. Scholl, **P. Fischer**, J. Bokor, *Sub-nanosecond signal propagation in anisotropy engineered nanomagnetic logic chains*, [Nature Communications 6 6466 \(2015\)](#)
- S. Kasai, **P. Fischer**, M.-Y. Im, K. Yamada, Y. Nakatani, K. Kobayashi, H. Kohno, and T. Ono, *Real-time X-ray imaging of current-induced resonant motion of a vortex core in a ferromagnetic disk*, [Phys Rev Lett 101, 237203 \(2008\)](#)
- R. Streubel, D. Makarov, D. Karnaushenko, L. Han, O. G. Schmidt, J. Lee, S.-K. Kim, R. Schäfer, M.-Y. Im, **P. Fischer**, *Magnetic properties of rolled-up single-layer ferromagnetic nanomembranes*, [Adv. Mater 26 316 \(2014\)](#)
- R. Streubel, F. Kronast, **P. Fischer**, D. Parkinson, O.G. Schmidt, D. Makarov, *Retrieving Three-Dimensional Spin Textures by Full-field Magnetic Soft X-ray Tomography*, [Nature Communication 6 7612 \(2015\)](#)
- W. Chao, J. Kim, S. Rekawa, **P. Fischer**, E.H. Anderson, *Demonstration of 12 nm Resolution Fresnel Zone Plate Lens based Soft X-ray Microscopy*, [Optics Express 17\(20\) 17669 \(2009\)](#)