



Bernhard Keimer

Director, Max Planck Institute for Solid State Research

Heisenbergstr. 1, D-70569 Stuttgart, Germany

Phone: +49-711-689-1631, Fax: -1632

E-mail: b.keimer at fkf.mpg.de

Internet: www.fkf.mpg.de/keimer

Curriculum Vitae

1985	Pre-diploma in Physics, Technical University of Munich
1991	Ph.D. in Physics, Massachusetts Institute of Technology
1991 – 1992	Research Associate, Massachusetts Institute of Technology
1992 – 1996	Assistant Professor of Physics, Princeton University
1996 – 1997	Associate Professor of Physics, Princeton University
1997 – 1998	Full Professor of Physics, Princeton University
since 1998	Director, Max-Planck-Institute for Solid State Research Scientific Member, Max Planck Society Honorary Professor, University of Stuttgart

Selected Awards and Honors

1983	Scholarship of the Studienstiftung des Deutschen Volkes
1990	I.B.M. Predoctoral Fellow
1996	Alfred P. Sloan Faculty Fellow
1995	David & Lucile Packard Faculty Fellow
2000	Ehrenfest Lecturer, University of Leiden, Netherlands
2006	Elected Member, Heidelberg Academy of Sciences
2010	Elected Fellow, Faculty of Engineering, University of Tokyo, Japan
2011	Gottfried Wilhelm Leibniz Prize, German Science Foundation
2012	Outstanding Referee, American Physical Society
2014	Foreign Associate, Canadian Institute for Advanced Research
2014	Highly Cited Researcher, Institute for Scientific Information (Thomson Reuters)
2015	Advanced Grant, European Research Council (ERC)

Professional Positions and Memberships

2005-2006, 2013-2014	Managing Director, Max-Planck-Institute for Solid State Research
2001-2013	Speaker, International Max-Planck Research School on Advanced Materials
since 2014	Speaker, International Max-Planck Research School on Condensed Matter Science
since 2011	Co-Director, Max Planck Society – University of British Columbia Center for Quantum Materials
1996 – 1998	Steering Committee, Spallation Neutron Source, Oak Ridge National Laboratory, USA
2002 – 2008	Scientific Advisory Board, Hahn-Meitner-Institut, Berlin, Germany
2003 – 2007	Scientific Advisory Board, Institut Laue Langevin, Grenoble, France
2004 – 2008	Scientific Advisory Board, Canadian Institute for Advanced Research
since 2005	Scientific Advisory Board, FRM-II, Munich, Germany
since 2008	Fellowship Selection Committee, Alexander von Humboldt Foundation
2009 – 2015	International Prize Committee, German Physical Society (Chairman 2012-2015)
2009 – 2014	Supervisory Board, Helmholtz-Zentrum Berlin, Germany
since 2010	Neutron Scattering Advisory Board, Oak Ridge National Laboratory, USA

since 2012	Scientific Advisory Board, University of Cologne, Germany
since 2009	Steering Committee, Transregional Research Center 80, German Science Foundation
since 2014	Steering Committee, Center for Integrated Quantum Science and Technology
since 2015	Board of Trustees, University of Stuttgart (Chairman)

Editorial Boards

2003 – 2005	Editorial Board, Physical Review Letters
2005 – 2009	Editorial Board, Solid State Communications
2000 – 2012	Editorial Board, Science
2004 – 2013	Editorial Board, European Physical Journal B
2014	Editorial Advisor, Nature Milestones in Crystallography
since 2014	Editor, Springer Series in Solid State Sciences

Ten representative publications

1. *Magnetism at the interface between ferromagnetic and superconducting oxides.* J. Chakhalian, J. W. Freeland, G. Srajer, J. Stremper, G. Khaliullin, J. C. Cezar, T. Charlton, R. Dalgliesh, C. Bernhard, G. Cristiani, H.-U. Habermeier, B. Keimer. *Nature Physics* **2**, 244 (2006).
2. *Orbital reconstruction and covalent bonding at an oxide interface.* J. Chakhalian J., J. W. Freeland, H.-U. Habermeier, G. Cristiani, G. Khaliullin, M. van Veenendaal, B. Keimer. *Science* **318**, 1114 (2007).
3. *Electronic Liquid Crystal State in the High-Temperature Superconductor $YBa_2Cu_3O_{6.45}$.* V. Hinkov, D. Haug, B. Fauqué, P. Bourges, Y. Sidis, A. Ivanov, C. Bernhard, C. T. Lin, B. Keimer. *Science* **319**, 597 (2008).
4. *Strength of the spin-fluctuation-mediated pairing interaction in a high-temperature superconductor.* T. Dahm, V. Hinkov, S. V. Borisenko, A. A. Kordyuk, V. B. Zabolotnyy, J. Fink, B. Büchner, D. J. Scalapino, W. Hanke, B. Keimer. *Nature Physics* **5**, 217 (2009).
5. *Dimensionality control of electronic phase transitions in nickel-oxide superlattices.* A. V. Boris, Y. Matiks, E. Benckiser, A. Frañó, P. Popovich, V. Hinkov, P. Wochner, M. Castro-Colin, E. Detemple, V. K. Malik, C. Bernhard, T. Prokscha, A. Suter, Z. Salman, E. Morenzoni, G. Cristiani, H.-U. Habermeier, B. Keimer. *Science* **332**, 937 (2011).
6. *Orbital reflectometry of oxide heterostructures.* E. Benckiser, M. W. Haverkort, S. Brück, E. Goering, S. Macke, A. Frañó, X. Yang, O. K. Andersen, G. Cristiani, H. U. Habermeier, A. V. Boris, I. Zegkinoglou, P. Wochner, H. J. Kim, V. Hinkov, B. Keimer. *Nature Materials* **10**, 189 (2011).
7. *Intense paramagnon excitations in a large family of high-temperature superconductors.* M. Le Tacon, G. Ghiringhelli, J. Chaloupka, M. Moretti Sala, V. Hinkov, M. W. Haverkort, M. Minola, M. Bakr, K. J. Zhou, S. Blanco-Canosa, C. Monney, Y. T. Song, G. L. Sun, C. T. Lin, G. M. De Luca, M. Salluzzo, G. Khaliullin. T. Schmitt, L. Braicovich, B. Keimer. *Nature Physics* **7**, 725 (2011).
8. *Long-Range Incommensurate Charge Fluctuations in $(Y,Nd)Ba_2Cu_3O_{6+x}$.* G. Ghiringhelli, M. Le Tacon, M. Minola, S. Blanco-Canosa, C. Mazzoli, N.B. Brookes, G. M. De Luca, A. Frano, D. G. Hawthorn, F. He, T. Loew, M. Moretti Sala, D. C. Peets, M. Salluzzo, E. Schierle, R. Sutarto, G. A. Sawatzky, E. Weschke, B. Keimer, L. Braicovich. *Science* **337**, 821 (2012).
9. *Inelastic X-ray scattering in $YBa_2Cu_3O_{6.6}$ reveals giant phonon anomalies and elastic central peak due to charge-density-wave formation.* M. Le Tacon, A. Bosak, S. M. Souliou, G. Dellea, T. Loew, R. Heid, K-P. Bohnen, G. Ghiringhelli, M. Krisch, B. Keimer. *Nature Physics* **10**, 52 (2014).
10. *From quantum matter to high-temperature superconductivity in copper oxides.* B. Keimer, S. A. Kivelson, M. R. Norman, S. Uchida, J. Zaanen. *Nature* **518**, 179 (2015).