

WALTER KOB

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Research ID: AAM-4316-2020

Date of birth: May 1, 1961
Place of birth: Basel, Switzerland
Citizen of Switzerland and Italy

Education

11/97 Habilitation in Theoretical Condensed Matter Physics, Universität Mainz, Germany
11/89 Ph.D in Theoretical Condensed Matter Physics (*magna cum laude*), Universität Basel, Switzerland
10/85 Diploma in Theoretical Condensed Matter Physics, Universität Basel, Switzerland

Experience

9/00-present Full Professor (classe exceptionnelle), Département de Physique, Université Montpellier.
Research in statistical mechanical properties of disordered systems (supercooled liquids, glasses, gels, Potts-glasses, oxide glasses)

2/94-8/00 Assistant Professor (non-tenure track) in the group of Professor Kurt Binder, Mainz, Germany.
Research in statistical mechanical properties of disordered systems (supercooled liquids, glasses, Potts-glasses, electrophoresis)

9/90-1/94 Postdoctoral research associate (with Professor H.C. Andersen), Department of Chemistry, Stanford University.
Research on the dynamics of supercooled liquids

12/89-9/90 Postdoctoral research associate (with Professor R. Schilling), Institut für Physik, Universität Basel.
Research on the dynamics of the glass transition

11/85-11/89 Graduate student in theoretical physics (with Professors R. Schilling and H. Thomas)
Institut für Physik, Universität Basel
Research on glass transition, annealing of defects, nonlinear dynamics, domain growth in magnetic materials

Honors

- 2020 George W. Morey Award from the American Ceramic Society
- 2019 Senior member of the Institut Universitaire de France
- 2013 Darshana and Arun Varshneya Frontiers of Glass Science Lecture by the American Ceramic Society
- 2011 Ivan Pechès Award of the French Academy of Science
- 2010 Senior member of the Institut Universitaire de France
- 2007 Otto Schott Research Award for “Outstanding research achievements in glass science”
- 1992 Fellowship for advanced investigators, Swiss National Science Foundation
- 1990 Fellowship for young investigators, Swiss National Science Foundation

Research Activities

The main focus of my research is the study of the static and dynamical properties of disordered systems, such as simple liquids, structural glasses, gels, polymers, etc. by means of computer simulations and other statistical mechanics methods. Research areas include:

- Higher order correlation functions of simple and complex liquids
 - Dynamics of supercooled liquids and the nature of the glass transition
 - Static and dynamical properties of gels
 - Dynamics of liquids in restrictive geometries
 - Interactions of amorphous silica surfaces with water
 - Dynamics of polymers in electrophoresis
 - Structure and dynamics of sodium-silicate melts and glasses
 - Structure and dynamics of thin films and small clusters of vitreous SiO₂
 - Potential energy landscape of glass-forming systems
 - Fracture of oxide glasses
 - Aging of glassy systems
 - Granular systems
- More than 220 publications; 1 textbook; more than 12000 citations; h-index=53

Selected Professional Activities

- Organisation of the session “Computer Simulations and Modeling” at the 25th International Congress on Glass, Boston, MA, June 9-14, 2019
- Organisation of the session “Computer Simulations and Modeling” at the GOMD-meeting; San Antonio, TX, May 20-24, 2018
- Organisation of the session “Computer Simulations and Modeling” at the GOMD-meeting; Madison, WI, May 22-26, 2016
- Organisation of the session “Computer Simulations and Modeling” at the GOMD-meeting; Miami, FL, May 17-21, 2015
- Organization of CECAM Workshop on “Phase Space and Energy Landscapes in Disordered Systems”; Lyon, May 31–June 3, 1996
- Organization of Workshop on “Lengthscales and heterogeneities” Mainz, Sept. 29/30, 1997
- Organisation of SIMU Workshop *Multiscale Modeling of Macromolecular Systems*; Mainz Sept. 4–9 2000
- Organisation of the session “Aging in Glassy Systems”: *Fourth International Discussion Meeting on Relaxations in Complex Systems* Heraklion, Greece June 18–26, 2001

- Organization of Workshop on “Metastability and Landscapes in Complex Systems”; Lyon May 22–24, 2003
- Proposal and manuscript referee for: Australian Research Council, Deutsche Forschungsgemeinschaft (Germany), Istituto Nazionale della Fisica della Materia (Italy), National Science Foundation (USA), Chemical Physics Letters, Europhysics Letters, European Physical Journal B, Geochimica and Cosmochimica Acta, Journal of Chemical Physics, Journal of Non-Crystalline Solids, Journal of Physical Chemistry B, Molecular Physics, Nature, Nature Phys., Nature Mat., PhysChemComm, Physical Review B, Physical Review E, Physical Review Letters, Science
- January 2003 - December 2004: Director of the Laboratoire des Verres, UMR 5587
- January 2005 - December 2008: Director of the Laboratoire des Colloïdes, Verres et Nanomatériaux, UMR 5587
- 2010 - Oct. 2013: Chair of Review Panel Commission on Soft Condensed Matter at the Linac Coherent Light Source at Stanford University
- 2010-2013 Member of the board of the LABEX NUMEV, Montpellier
- 2013 - 2015: Review Panel on Condensed Matter Experiments at the ESRF in Grenoble