

Curriculum Vitae

1. Personal Details:

Name: **Priv.-Doz. Dr. Axel Pelster**
Birth: 12/05/1966 in Backnang, Germany
Nationality: German
Family status: married, 3 children
Official position: Scientific Collaborator
ResearcherID: O-4591-2015
Official Address: Department of Physics, Technical University of Kaiserslautern
Erwin Schrödinger Straße, Gebäude 46, 67663 Kaiserslautern
Telephone: +49-631-205-2270
Fax: +49-631-205-3907
Email: axel.pelster@physik.uni-kl.de
Website: <http://www-user.rhrk.uni-kl.de/~apelster/index.html>
Private Address: Forststraße 49, 12163 Berlin, Germany
phone: +49-30-79706448, cellular phone: +49-179-1056074



2. Professional History:

08/1986–07/1992: Physics Studies at University of Stuttgart
02/1987–06/1992: Scholarship of German National Scholarship Foundation
08/1992–02/1996: PhD student (BAT IIA/2), University of Stuttgart
04/1996–02/2004: Postdoc (BAT IIA) and Assistent (C1), Free University of Berlin
01/2004: Habilitation and Private Lecturer, Free University of Berlin
Research stays: Washington University in St. Louis (2001)
Massachusetts Institute of Technology in Cambridge (2002)
02/2004–09/2008: Main Scientific Assistent (C2), University Duisburg-Essen
10/2008–09/2009: Visiting Professor, Free University of Berlin
10/2009–07/2010: Visiting Professor, University of Potsdam
08/2010–03/2011: Main Scientific Assistent (C2), University Duisburg-Essen
04/2011–09/2011: Visiting Professor, University of Bielefeld
10/2011: Main Scientific Assistent (C2), University Duisburg-Essen
11/2011–03/2012: Fellow at Hanse Institute of Advanced Studies, Delmenhorst
04/2012–09/2012: Scientific Collaborator, Technical University of Kaiserslautern
10/2012–02/2013: Fellow at Hanse Institute of Advanced Studies, Delmenhorst
01/2013: Adjunct Professor of ICRANET Faculty
03/2013–03/2016: Scientific Collaborator (TV-L 13), Technical University of Kaiserslautern
since 04/2016: permanent Scientific Collaborator (TV-L 13), Technical University of Kaiserslautern

3. Research Fields:

- **Ultracold quantum gases:** dirty bosons, dipolar quantum gases, bosons in optical lattices, rotating BECs, boson-fermion mixtures, spinor Bose and Fermi gases, photon Bose-Einstein condensate
- **Nonlinear dynamical systems:** synergetics, time delays, retinotopic projections, Markov processes
- **Quantum field theory:** path and functional integrals, recursive graphical construction of Feynman diagrams, variational perturbation theory, critical phenomena, renormalization-group theory
- **General relativity:** anholonomic space-time transformations, gravity with torsion, Bose stars