

Personal Details

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Curriculum Vitae

7.5.1958 Day of birth
1964 - 1969 Grammer School in Hochneukirch
1969 - 1978 Städtisches Gymnasium Rheydt-Odenkirchen
1978 German Abitur
1978 Study of Physics at Technische Hochschule Aachen
1979 Fellowship of “Studienstiftung des Deutschen Volkes”
1980 - 1982 Civil Service
1982 Vordiploma (B.S.) in Physics
1986 Diploma (M.S.) in Theoretical Elementary Particle Physics
at Technical University of Aachen
Title of thesis: “Study of the Higgs Phase Transition
in U(1)-Lattice Gauge Theory with Scalar Field”
1986 Start of Ph.D. work about lattice Higgs models
June 1988 Dissertation in Theoretical Particle Physics
at Technical University of Aachen
Title: “Investigation of the upper bound
for the Higgs boson mass on the lattice”
July 1988 Post Graduate Researcher at HLRZ Jülich
October 1990 Research fellow position at UCSD, La Jolla, USA
September 1993 Research assistant at DESY, Hamburg
January 1995 Habilitation at University of Hamburg
Title: “Domain Wall Fermions
and Chiral Gauge Theories”
March 1995 Heisenberg-Fellowship
December 1996 CERN, Genève, Switzerland with
Scientific Associate Fellowship
October 2000 Leader of Research Group Particle Physics at the
John von Neumann-Institute of Computing
October 2007 Senior Scientific Staff member of DESY NIC group

Research interests

- Lattice Field Theory, see "<https://www-zeuthen.desy.de/~kjansen/lattice/index.html>
- Turbulence, see <https://www-zeuthen.desy.de/~kjansen/turbulence/index.html>
- Theoretical Biology, see <https://www-zeuthen.desy.de/~kjansen/biology/index.html>

Fellowships

- 1978 - 1985 Fellowship of the “Studienstiftung des Deutschen Volkes”
(German National Scholarship Foundation)
- 1995 Heisenberg Fellowship of the DFG (German Research Association)
- 1996 CERN Fellowship as Scientific Associate

Awards

- Wilson Award The 2011 Ken Wilson Lattice Award
- Cyprus Award The Award as an *Experienced Researcher* from the
Cyprus Research Promotion Foundation 2012/2013
- NIC Excellence Award NIC award for excellence project computing $g_\mu - 2$

Professional Activities

Journal editor	Computational Science and Discovery
Journal referee	Phys.Rev.Lett., Phys.Lett.B, Nucl.Phys.B, Phys.Rev.D, EPL, JHEP, CPC, Quantum
Speaker role	Speaker of German Lattice Forum (LatFor) Speaker of the European Twisted Mass Collaboration (ETMC) Deputy Speaker of German Sonderforschungsbereich SFB/TR-9 “Computer aided Theoretical Particle Physics” Board member of the International Lattice Data Grid (ILDG)
Expert role	STFC, United Kingdom Evaluation committee “Center for Computational Sciences”, Tsukuba, Japan DOE, United States Swiss National Fonds, Switzerland Austrian National Fonds, Austria Chaires d’excellence, France Scientific board member of the PetaQCD project
Ombud person	DESY Zeuthen Ombud person 2013-now
WA	Member of the “Wissenschaftlicher Ausschuß” at DESY

Educational activities

Diploma/Master	12 finished Diploma and Master works, 1 running Master work
Ph.D.	16 finished, 1 running Ph.D. works
2015	PhD school on <i>Lattice Practices</i> , Jülich
2014	PhD school on <i>Lattice Practices</i> , Zeuthen
2012	School on <i>Non-perturbative Renormalization</i> , Zeuthen
2012	PhD school on <i>Lattice Practices</i> , Zeuthen
2011	School on <i>Lattice QCD, Hadron Structure and Hadronic Matter</i> , Dubna, Russia
2011	PhD school on <i>Lattice Practices</i> , Zeuthen
2008	PhD school on <i>Lattice Practices</i> , Zeuthen
2007	INT Summer School on <i>Lattice QCD and its applications</i> , Seattle, USA
2006	PhD school on <i>Lattice Practices</i> , Zeuthen
2002	APE Tutorial, Zeuthen
2008–2014	organization DESY summerstudent programme

Third part grants

01/2007 – 12/2014	SFB/ TR 9 Project “Computergestützte Theoretische Teilchenphysik”
01/2007 – 07/2010	DFG JA 674/5 Project “Quantenchromodynamik mit chiral rotiertem Massenterm”
01/2007 – 12/2014	DFG Mu932/4 Project “Chiral invariant Higgs-Yukawa model on the lattice”
01/2012 – 12/2013	DAAD 54368813 Project “Non-perturbative Higgs-Yukawa models on the Lattice”
01/2014 – 01/2016	DFG JA 674/6-1 Project “Quasi Monte Carlo methods in quantum field theory”
09/2015 – 09/2019	HPC-LEAP “High Performance Computing in Life sciences, Engineering and Physics” European Joint Doctorate

Regular awards for supercomputing time

Jülich	HLRZ (Cray), NIC (CRAY and BlueGeneL/P/Q)
Munich	LRZ (SGI parallel system, SuperMUC)
Stuttgart	HRLS (CRAY)
Prace	Jülich, Cineca, Munich
HLRN	SGI parallel system
Bochum	Cyber 205
UCSD	San Diego Supercomputer Center, Cray

Supervised Diploma and Master theses

Carsten Urbach	<i>Untersuchung der Reversibilitätsverletzung beim Hybrid-Monte-Carlo-Algorithmus</i> FU Berlin September 2002
Nils Christian	<i>Untersuchung des Skalierungsverhaltens verschiedener Gitterwirkungen im Schwingermodell</i> FU Berlin October 2004
Beatrix Pollakowski	<i>Dynamische Overlap-Fermionen im zweidimensionalen Schwingermodell</i> HU Berlin September 2005
Jénifer González López	<i>Cutoff effects and continuum limit at tree-level of perturbation theory for Wilson twisted mass fermions at maximal twist</i> HU Berlin August 2007
Isaac Hailperin	<i>Eigenwertspektrum der Gitter Quantenchromodynamik mit chiral rotiertem Massenterm</i> FU Berlin April 2008
Andreas Nube	<i>Anwendung des PHMC-Algorithmus in der Gitter-QCD mit chiral rotiertem Massenterm</i> HU Berlin May 2008
Marcus Petschlies	<i>Exploring the phase structure of Wilson twisted mass lattice QCD at finite temperature</i> HU Berlin June 2008
David Mesterházy	<i>Untersuchungen der Burgers Gleichung im Pfadintegral Formalismus</i> HU Berlin June 2008 (Bachelor)
Olivia Haas	<i>The Locality of the Overlap Operator towards the Continuum Limit</i> TU Berlin March 2010 (Bachelor)
Roman Welsing	<i>Das η' Meson mit dynamischen up, down, strange und charm Quarks in der Gitter QCD</i> FU Berlin September 2010
Pan Kessel	<i>Wilson Loops in small Volume</i> HU Berlin September 2011

Supervised Ph.D. theses

- Dr. Thomas Chiarappa *Chiral Fermion on the Lattice:
Investigation of the ϵ -expansion of ChPT,*
Ph.D. HU Berlin 2001-2004
- Dr. Carsten Urbach *Wilson Twisted Mass Fermions:
Towards Realistic Simulations of Lattice-QCD,*
Ph.D. FU Berlin 2002-2005
- Dr. Philipp Gerhold *Upper and lower Higgs boson mass bounds
from a chirally invariant lattice Higgs-Yukawa model,*
Ph.D. HU Berlin 2006-2009,
Defense 15.10.2009 (Summa cum Laude)
- Dr. Krzysztof Cichy *Lattice QCD with chirally invariant fermions,*
Ph.D. Adam Mickiewicz University in Poznan 2007-2010,
Defense 18.05.2010 (Summa cum Laude)
- Dr. Xu Feng *Investigating scattering phenomena from Lattice QCD
using twisted mass fermions,*
Ph.D. Universität Münster 2007-2010,
Defense 15.07.2010 (Summa cum Laude)
- Dr. Jim Kallarackal *The Higgs boson resonance from a chiral
Higgs-Yukawa model on the lattice,*
Ph.D. HU Berlin 2008-2011, Defense 9.06.2011
- Dr. Jénifer González López *On the chirally rotated Schrödinger functional with Wilson fermions,*
Ph.D. HU Berlin 2008-2011, Defense 13.07.2011
- Dr. Simon Dinter *Nucleon structure from lattice QCD,*
Ph.D. HU Berlin 2009-2012, Defense 13.10.2012
- Dr. Marcus Petschlies *Non-perturbative investigation of current
correlators in twisted mass lattice QCD,*
Ph.D. HU Berlin 2009-2013, Defense 25.03.2013

- Dr. David Mesterházy *Equilibrium and Nonequilibrium Scaling Phenomena
in strongly correlated Systems,*
Ph.D. Ruperto-Carola-University of Heidelberg 2010-2013
- Dr. Elena García Ramos *Investigations of chiral symmetry breaking
and topological aspects of lattice QCD,*
Ph.D. HU Berlin 2009-2013, 16.12.2013
- Dr. Andreas Ammon
(geb. Nube) *Chiral description and physical limit
of pseudoscalar decay constants with four,
dynamical quarks and applicability of,
quasi Monte Carlo for lattice systems,*
Ph.D. HU Berlin 2010-2013, Defense 13.2.2014
- Dr. Hernan Leövey *Derivative based Quasi-Monte Carlo
Constructions and Sensitivity Estimates,*
Ph.D. HU Berlin 2011-2015,
Defense 10.9.2015 (Summa cum Laude)
- Dr. Grit Pientka
(geb. Hotzel) *Hadronic Contributions
to electroweak observables,*
Ph.D. HU Berlin 2011-2015,
Defense 11.9.2015 (Summa cum Laude)
- Dr. Christian Wiese *Investigating New Lattice Approaches
to the Momentum and Spin Structure of the Nucleon,*
Ph.D. HU Berlin 2012-2016,
Defense 13.5.2016 (Magna cum Laude)
- Dr. Bartosz Kostrzewa *Maximally Twisted Mass Lattice QCD
at the Physical Pion Mass,*
Ph.D. HU Berlin 2012-2016,
Defense 21.6.2016 (Magna cum Laude)

Five important publications

P. Hernandez, K. Jansen, M. Lüscher,

Locality properties of Neuberger's lattice Dirac operator,

Nucl. Phys. **B552** (1999) 363. (Cited 373)

A. Hasenfratz, K. Jansen, C. B. Lang, T. Neuhaus, H. Yoneyama,

The Triviality Bound of the Four Component ϕ^4 Model,

Phys. Lett. **B199** (1987) 531. (Cited 183)

Z. Fodor, J. Hein, K. Jansen, A. Jaster, I. Montvay,

Simulating the electroweak phase transition in the $SU(2)$ Higgs model,

Nucl. Phys. **B439** (1995) 147. (Cited 143)

European Twisted Mass Collaboration, P. Boucaud *et. al.*,

Dynamical twisted mass fermions with light quarks,

Phys. Lett. **B650** (2007) 304. (Cited 209)

C. Urbach, K. Jansen, A. Shindler, U. Wenger,

HMC algorithm with multiple time scale integration and mass preconditioning,

Comput.Phys.Commun. **174** (2006) 87. (Cited 173)

I am the author of a total of 364 scientific publications which have been cited 9707 times (as of March 2017 and according to the Spires data base <http://www.slac.stanford.edu/spires/hep/>). 170 of these publications have appeared in peer reviewed international journals, 194 are contributions to proceedings of international conferences and schools including a number of invited plenary talks.

Some hobbies

<https://www-zeuthen.desy.de/~kjansen/hobbies/index.html>

Music Playing guitar (Jazz, Blues, Rock, Musical)
 Member of DESY-Band (Zeuthen)

Diving around the world

Hiking enjoy long hiking trips
 preferably combined with swimming

Cooking like to cook around the world
 participated in competitions