

10-Year Track Record: Uwe-Jens Wiese

Publications:

In total 94 papers in high-impact peer-reviewed journals (h-index = 30), 54 proceedings contributions. In the past 10 years, 37 papers in high-impact peer-reviewed journals and 21 proceedings contributions. Selection of 10 publications of the past 10 years, citations (cit.) from ISI web of knowledge and the SPIRES High-Energy Physics Database:

- *Solution of the complex action problem in the Potts model for dense QCD*,
M. Alford, S. Chandrasekharan, J. Cox, UJW, Nucl. Phys. B602 (2001) 61 (28 cit.)
- *QCD at fixed topology*,
R. C. Brower, S. Chandrasekharan, J. Negele, UJW, Phys. Lett. B560 (2003) 64 (43 cit.)
- *Exceptional confinement in $G(2)$ gauge theory*,
K. Holland, P. Minkowski, M. Pepe, UJW, Nucl. Phys. B668 (2003) 207 (49 cit.)
- *The deconfinement phase transition of $Sp(2)$ and $Sp(3)$ Yang-Mills theories in $2+1$ and $3+1$ dimensions*,
K. Holland, M. Pepe, UJW, Nucl. Phys. B694 (2004) 35 (37 cit.)
- *Computational complexity and fundamental limitations to fermionic quantum Monte Carlo simulations*,
M. Troyer, UJW, Phys. Rev. Lett. 94 (2005) 170201 (60 cit.)
- *Two-hole bound states from a systematic low-energy effective field theory for magnons and holes in an antiferromagnet*,
C. Brügger, F. Kämpfer, M. Moser, M. Pepe, UJW, Phys. Rev. B74 (2006) 224432 (16 cit.)
- *Exceptional deconfinement in $G(2)$ gauge theory*,
M. Pepe, UJW, Nucl. Phys. B768 (2007) 21 (24 cit.)
- *From an antiferromagnet to a valence bond solid: evidence for a first order phase transition*,
F.-J. Jiang, M. Nyfeler, S. Chandrasekharan, UJW, JSTAT (2008) P02009 (19 cit.)
- *From decay to complete breaking: pulling the strings in $SU(2)$ Yang-Mills theory*,
M. Pepe, UJW, Phys. Rev. Lett. 102 (2009) 191601 (6 cit.)
- *The width of the confining string in Yang-Mills theory*,
F. Gliozzi, M. Pepe, UJW, Phys. Rev. Lett. 104 (2010) 232001 (10 cit.)

Long-term international collaborations and contacts:

- UNAM, Mexico City: Collaboration with W. Bietenholz on lattice field theory
- Duke University: Collaboration with S. Chandrasekharan on the sign problem
- Colima University, Mexico: Collaboration with C. P. Hofmann on quantum magnetism
- NTNU, Taipei: Collaboration with F.-J. Jiang on strongly correlated electron systems
- INFN, Milano: Collaboration with M. Pepe on strongly coupled gauge theories
- MIT: Regular visits and exchanges with E. Farhi, J. Goldstone, R. Jaffe, R. Jackiw, P. Lee, J. Negele, K. Rajagopal, and F. Wilczek

Invited talks at international conferences and workshops:

- Materials Simulation — Present and Future, Shonan, Japan (2001)
- Conference on Computational Physics, CCP 2001, Aachen, Germany (2001)
- Conference on Many Body Theory, RPMBT-11, Manchester, England (2001)
- QCD in the RHIC Era, Santa Barbara, USA (2002)
- Aspects of Confinement and Nonperturbative QCD, Trento, Italy (2003)
- QCD Down Under, Adelaide, Australia (2004)
- Multifaceted Skyrmions and Effective Field Theory, KIAS, Seoul, Korea (2004)
- Effective Field Theories in Nuclear, Particle, and Atomic Physics, Bad Honnef, Germany (2004)
- Computational Hadron Physics, Nicosia, Cyprus (2005)
- Ringberg Workshop on Quantum Field Theory, Ringberg, Germany (2006)
- LATTICE 2008, Williamsburg, USA (2008)
- Numerical Approaches to Quantum Many Body Systems, IPAM, UCLA, USA (2009)
- International Workshop on Chiral Dynamics, Bern, Switzerland (2009)
- NAWI Graz Workshop, Graz, Austria (2009)
- Disentangling Quantum Many Body Systems: Computational and Conceptual Approaches, Kavli Institute, Santa Barbara, USA (2010)

Invited Lectures at Summer Schools:

- Graduate school, Heidelberg, Germany (2001)
- Nuclear Physics school, Schleching, Austria (2002)
- Masses of Hadrons, DPG School, Bad Honnef, Germany (2003)
- Lattice QCD, Bosen, Germany (2004)
- Computational Techniques in Strongly Interacting Field Theory, Trento, Italy (2006)
- Foundations and New Methods in Theoretical Physics, Saalburg, Germany (2009)

Organization of International Conferences, Workshops, and Summer Schools:

- LATTICE 2001, Berlin, Germany (2001), member of the international advisory committee
- LATTICE 2003, MIT, Cambridge, USA (2003), member of the local organizing committee
- The Sign Problem, CECAM, Lyon, France (2003), organizer
- Annual Meeting of the European Physical Society, EPS-13, Bern, Switzerland (2005), member of the scientific program committee
- LATTICE 2007, Regensburg, Germany (2007), member of the international advisory committee
- School of Flavor Physics, Flavianet, Bern (2010), member of the local organizing committee