

**Curriculum Vitae:** Uwe-Jens Wiese, born in Hannover, Germany, 30. December 1958

**Education and Employment:**

1984: Diploma thesis in theoretical nuclear physics at Hannover University  
1986: Ph.D. thesis in theoretical particle physics at Hannover University  
1986-1988: Postdoctoral researcher at Hamburg University  
1988-1992: Postdoctoral researcher at the Deutsches Elektronen-Synchrotron (DESY), HLRZ Jülich  
1992-1993: Postdoctoral researcher at Bern University  
1993: Habilitation thesis in theoretical particle physics at RWTH Aachen  
1993-1994: Postdoctoral researcher at DESY (HLRZ Jülich)  
1994-1999: Assistant Professor at the Massachusetts Institute of Technology (MIT)  
1997-2001: Alfred P. Sloan Fellow at MIT  
1999-2001: Associate Professor at MIT, tenure in 2001  
2001-2004: Leave of absence from MIT  
since 2001: Full Professor at Bern University  
2003: Promotion to Full Professor at MIT  
2004: Resignation from MIT for family-related reasons  
2004-2010: Director of the Institute for Theoretical Physics at Bern University  
2008-2009: Sabbatical at MIT and ETH Zürich

**Graduate and Undergraduate Teaching:**

1990-1993: Graduate courses taught at RWTH Aachen:  
Particle Physics of the Early Universe, The Strong Interaction  
1993: Graduate course taught at Wuppertal University:  
Particle Physics of the Early Universe  
1994-2001: Undergraduate courses taught at MIT:  
Classical Mechanics, Vibrations and Waves, Quantum Mechanics  
1994-2001: Graduate courses taught at MIT:  
The Standard Model, The Strong Interaction, Particle Physics of the Early Universe  
since 2001: Undergraduate courses taught at Bern University:  
Mathematical Methods I and II, Electrodynamics, Quantum Mechanics I and II,  
Statistical Mechanics I and II, Classical Field Theory  
since 2001: Graduate courses taught at Bern University:  
Quantum Field Theory I and II, Lattice Field Theory,  
The Standard Model, The Particle Physics of the Early Universe

**Research Grants as Principal Investigator at Bern University:**

Research at MIT was covered by the DOE MIT umbrella grant DE-FC02-94ER40818.

Funding source	Identifier	Duration	Amount
SNSF	2100-066782	1.4.02 - 31.3.04	CHF 298'354
SNSF	2160-067509	1.7.02 - 30.6.03	CHF 150'000
SNSF	200020-103509	1.4.04 - 31.3.06	CHF 300'829
SNSF	IZ7320-110848	1.9.05 - 31.8.08	CHF 66'980
SNSF	200020-112161	1.4.06 - 31.3.08	CHF 334'259
SNSF	200020-120022	1.4.08 - 31.3.10	CHF 360'398
SNSF	200020-129999	1.4.10 - 31.3.12	CHF 375'174
CRUS	Coop. Proj. C-13	1.1.08 - 31.12.11	CHF 6'036'629

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## Publications:

94 papers in high-impact peer-reviewed journals (h-index = 30), 51 proceedings contributions  
Selected publications, citations (cit.) from ISI and SPIRES:

- [1] *Topology and dynamics of the confinement mechanism*,  
A. S. Kronfeld, G. Schierholz, UJW, Nucl. Phys. B293 (1987) 461 (377 cit.)
- [2] *Monopole condensation and color confinement*,  
A. S. Kronfeld, M. L. Laursen, G. Schierholz, UJW, Phys. Lett. B198 (1987) 516 (353 cit.)
- [3] *Monopole condensate and monopole mass in  $U(1)$  lattice gauge theory*,  
L. Polley, UJW, Nucl. Phys. B356 (1991) 629 (64 cit.)
- [4] *Fixed point actions for Wilson fermions*, UJW, Phys. Lett. B315 (1993) 417 (60 cit.)
- [5] *A determination of the low-energy parameters of the 2-d Heisenberg antiferromagnet*,  
UJW, H.-P. Ying, Z. Phys. B93 (1994) 147 (120 cit.)
- [6] *Meron-cluster simulation of the  $\theta$ -vacuum in the 2-d  $O(3)$ -model*,  
W. Bietenholz, A. Pochinsky, UJW, Phys. Rev. Lett. 75 (1995) 4524 (61 cit.)
- [7] *A Monte Carlo study of correlations in quantum spin ladders*,  
M. Greven, R. J. Birgeneau, UJW, Phys. Rev. Lett. 77 (1996) 1865 (104 cit.)
- [8] *Simulations of discrete quantum systems in continuous Euclidean time*,  
B. B. Beard, UJW, Phys. Rev. Lett. 77 (1996) 5130 (230 cit.)
- [9] *Perfect lattice actions for quarks and gluons*,  
W. Bietenholz, UJW, Nucl. Phys. B464 (1996) 319 (140 cit.)
- [10] *Quantum link models: a discrete approach to gauge theories*,  
S. Chandrasekharan, UJW, Nucl. Phys. B492 (1997) 455 (38 cit.)
- [11] *Meron-Cluster solution of a fermion sign problem*,  
S. Chandrasekharan, UJW, Phys. Rev. Lett. 83 (1999) 3116 (90 cit.)
- [12] *Can one see the number of colors?*, O. Bär, UJW, Nucl. Phys. B609 (2001) 225 (16 cit.)
- [13] *Exceptional confinement in  $G(2)$  gauge theory*,  
K. Holland, P. Minkowski, M. Pepe, UJW, Nucl. Phys. B668 (2003) 207 (49 cit.)
- [14] *Study of  $CP(N-1)$   $\theta$ -vacua by cluster-simulation of  $SU(N)$  quantum spin ladders*,  
B. B. Beard, M. Pepe, S. Riederer, UJW, Phys. Rev. Lett. 94 (2005) 010603 (10 cit.)
- [15] *Computational complexity and fundamental limitations to fermionic quantum Monte Carlo simulations*, M. Troyer, UJW, Phys. Rev. Lett. 94 (2005) 170201 (60 cit.)
- [16] *Two-hole bound states from a systematic low-energy effective field theory for magnons and holes in an antiferromagnet*, C. Brügger et al., Phys. Rev. B74 (2006) 224432 (16 cit.)
- [17] *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.)
- [18] *The width of the confining string in Yang-Mills theory*,  
F. Gliozzi, M. Pepe, UJW, Phys. Rev. Lett. 104 (2010) 232001 (10 cit.)

## Organization of International Conferences, Workshops, and Summer Schools:

1997: Nonperturbative QCD, international workshop at Aspen Physics Center  
2000: QCD in Extreme Conditions, international workshop, INT, Seattle  
2003: The Sign Problem, international workshop, CECAM, Lyon  
2003: LATTICE 2003, international conference, MIT, Cambridge, USA  
2005: Annual meeting of the European Physical Society, EPS-13, Bern  
2010: Summer School of Flavor Physics, Flavianet, Bern

## Professional Services:

since 1992: Referee for various journals including Physical Review Letters, Nuclear Physics, Physics Letters, JSTAT, and for fellowships of the Humboldt foundation  
since 2002: Member of several visiting and evaluation committees including Jefferson Laboratory, Forschungszentrum Jülich, DFG Transregio  
since 2004: Member of the peer review panels for computer time allocation for the German John von Neumann Institute for Computing (NIC) and Europe-wide for PRACE  
since 2010: Member of the scientific council of the John von Neumann Institute for Computing