# Uwe-Jens Wiese

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5030617/publications.pdf

Version: 2024-02-01

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|---|---|---|---|
| 56 papers | 3,316 citations | 279798 23 h-index | 175258 52 g-index |
| 56 all docs | 56 docs citations | 56 times ranked | 1770 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Computational Complexity and Fundamental Limitations to Fermionic Quantum Monte Carlo Simulations. Physical Review Letters, 2005, 94, 170201. | 7.8 | 799 |
| 2 | Simulating lattice gauge theories within quantum technologies. European Physical Journal D, 2020, 74, 1. | 1.3 | 272 |
| 3 | Ultracold quantum gases and lattice systems: quantum simulation of lattice gauge theories. Annalen Der Physik, 2013, 525, 777-796. | 2.4 | 257 |
| 4 | Atomic Quantum Simulation of Dynamical Gauge Fields Coupled to Fermionic Matter: From String Breaking to Evolution after a Quench. Physical Review Letters, 2012, 109, 175302. | 7.8 | 241 |
| 5 | Quantum link models: A discrete approach to gauge theories. Nuclear Physics B, 1997, 492, 455-471. | 2.5 | 217 |
| 6 | Atomic Quantum Simulation of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi mathvariant="bold">U</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mi>N</mml:mi><mml:mo) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 547 Td (stretchy="false">)</mml:m xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>SU</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mi>N</mml:mi><mml:mo) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 517 Td (stretchy="false">)</mml:m | 7.8 | 217 |
| 7 | Meron-Cluster Solution of Fermion Sign Problems. Physical Review Letters, 1999, 83, 3116-3119. | 7.8 | 172 |
| 8 | QCD as a quantum link model. Physical Review D, 1999, 60, . | 4.7 | 125 |
| 9 | Square-Lattice Heisenberg Antiferromagnet at Very Large Correlation Lengths. Physical Review Letters, 1998, 80, 1742-1745. | 7.8 | 116 |
| 10 | Two-dimensional lattice gauge theories with superconducting quantum circuits. Annals of Physics, 2014, 351, 634-654. | 2.8 | 93 |
| 11 | Towards quantum simulating QCD. Nuclear Physics A, 2014, 931, 246-256. | 1.5 | 78 |
| 12 | Monte-Carlo study of correlations in quantum spin chains at non-zero temperature. European Physical Journal B, 1998, 4, 291-297. | 1.5 | 50 |
| 13 | D-theory: field quantization by dimensional reduction of discrete variables. Nuclear Physics B, 2004, 693, 149-175. | 2.5 | 50 |
| 14 | The (2 + 1)-d <i>U</i>(1) quantum link model masquerading as deconfined criticality. Journal of Statistical Mechanics: Theory and Experiment, 2013, 2013, P12010. | 2.3 | 42 |
| 15 | From a particle in a box to the uncertainty relation in a quantum dot and to reflecting walls for relativistic fermions. Annals of Physics, 2012, 327, 1-28. | 2.8 | 36 |
| 16 | Study ofCP(Nâˆ'1)Î¸-Vacua by Cluster Simulation ofSU(N)Quantum Spin Ladders. Physical Review Letters, 2005, 94, 010603. | 7.8 | 34 |
| 17 | Two-hole bound states from a systematic low-energy effective field theory for magnons and holes in an antiferromagnet. Physical Review B, 2006, 74, . | 3.2 | 33 |
| 18 | Topological lattice actions. Journal of High Energy Physics, 2010, 2010, 1. | 4.7 | 33 |

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|---|---|---|---|
| 19 | Interfaces, strings, and a soft mode in the square lattice quantum dimer model. Physical Review B, 2014, 90, . | 3.2 | 30 |
| 20 | <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" display="inline" overflow="scroll"><mml:mi mathvariant="double-struck">C</mml:mi></mml:math>P<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si2.gif" display="inline" overflow="scroll"><mml:mrow><mml:mo>(</mml:mo><mml:mi>N</mml:mi><mml:mspace) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 697 T | 2.8 | 28 |
| 21 | al <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="mml53" display="inline" overflow="scroll" altimg="si1.gif"><mml:mi>S</mml:mi><mml:mi>O</mml:mi><mml:mrow><mml:mo>(</mml:mo><mml:mn>3</mml:mn><mml:mo>) â€œNuclear Physicsâ€•with ultracold Gases. Annals of Physics, 2018, 393, 466-483. | 2.8 | 28 |
| 22 | The width of the color flux tube at 2-loop order. Journal of High Energy Physics, 2010, 2010, 1. | 4.7 | 26 |
| 23 | Self-adjoint extensions for confined electrons: From a particle in a spherical cavity to the hydrogen atom in a sphere and on a cone. Annals of Physics, 2012, 327, 2742-2759. | 2.8 | 24 |
| 24 | Linear broadening of the confining string in Yang-Mills theory at low temperature. Journal of High Energy Physics, 2011, 2011, 1. | 4.7 | 23 |
| 25 | Homogeneous versus spiral phases of hole-doped antiferromagnets: A systematic effective field theory investigation. Physical Review B, 2007, 75, . | 3.2 | 22 |
| 26 | Magnon-mediated binding between holes in an antiferromagnet. European Physical Journal B, 2006, 53, 433-437. | 1.5 | 20 |
| 27 | Systematic low-energy effective field theory for electron-doped antiferromagnets. Physical Review B, 2007, 75, . | 3.2 | 19 |
| 28 | Asymptotic freedom, dimensional transmutation, and an infrared conformal fixed point for the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î´</mml:mi></mml:mrow></mml:math>-function potential in one-dimensional relativistic quantum mechanics. Physical Review D, 2014, 89, . | 4.7 | 18 |
| 29 | Finite-volume energy spectrum, fractionalized strings, and low-energy effective field theory for the quantum dimer model on the square lattice. Physical Review B, 2016, 94, . | 3.2 | 18 |
| 30 | Non-trivial Î¸-vacuum effects in the 2-d O(3) model. Journal of High Energy Physics, 2012, 2012, 1. | 4.7 | 17 |
| 31 | From quantum link models to D-theory: a resource efficient framework for the quantum simulation and computation of gauge theories. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20210068. | 3.4 | 17 |
| 32 | From the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>S</mml:mi><mml:mi>U</mml:mi><mml:mo>(</mml:mo> quantum link model on the honeycomb lattice to the quantum dimer model on the kagome lattice: Phase transition and fractionalized flux strings. Physical Review B, 2018, 97, . | 3.2 | 15 |
| 33 | Systematic effective field theory investigation of spiral phases in hole-doped antiferromagnets on the honeycomb lattice. European Physical Journal B, 2009, 69, 473-482. | 1.5 | 13 |
| 34 | Rotor spectra, berry phases, and monopole fields: From antiferromagnets to QCD. Physical Review D, 2008, 78, . | 4.7 | 11 |
| 35 | Majorana fermions in a box. Physical Review D, 2017, 95, . | 4.7 | 11 |
| 36 | Symmetry analysis of holes localized on a skyrmion in a doped antiferromagnet. Physical Review B, 2012, 86, . | 3.2 | 10 |

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|---|---|---|---|
| 37 | Systematic low-energy effective field theory for magnons and holes in an antiferromagnet on the honeycomb lattice. Physical Review B, 2012, 85, . | 3.2 | 9 |
| 38 | Topological lattice actions for the 2d XY model. Journal of High Energy Physics, 2013, 2013, 1. | 4.7 | 9 |
| 39 | Real-time dynamics of open quantum spin systems driven by dissipative processes. Physical Review B, 2015, 92, . | 3.2 | 9 |
| 40 | Nematic confined phases in the U(1) quantum link model on a triangular lattice: Near-term quantum computations of string dynamics on a chip. Physical Review Research, 2022, 4, . | 3.6 | 9 |
| 41 | Microscopic model versus systematic low-energy effective field theory for a doped quantum ferromagnet. Physical Review B, 2010, 81, . | 3.2 | 8 |
| 42 | Real-time simulation of large open quantum spin systems driven by dissipation. Physical Review B, 2014, 90, . | 3.2 | 7 |
| 43 | Real-time simulation of nonequilibrium transport of magnetization in large open quantum spin systems driven by dissipation. Physical Review B, 2015, 92, . | 3.2 | 7 |
| 44 | <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="mml127" display="inline" overflow="scroll" altimg="si8.gif"><mml:mi>S</mml:mi><mml:mi>U</mml:mi><mml:mrow><mml:mo>(</mml:mo><mml:mn>3</mml:mn><mml:mo>)</r quantum spin ladders as a regularization of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="mml128" display="inline" overflow="scroll" altimg="si65.gif"><mml:mi mathvariant="double-struck">C</mml:mi><mml:mi>P</mml:mi><mml:mrow>< | 2.8 | 7 |
| 45 | Drastic reduction of cutoff effects in 2-d lattice O(N) models. Journal of High Energy Physics, 2012, 2012, 1. | 4.7 | 6 |
| 46 | Canonical quantization on the half-line and in an interval based upon an alternative concept for the momentum in a space with boundaries. Physical Review Research, 2021, 3, . | 3.6 | 6 |
| 47 | Doubled lattice Chernâ€“Simonsâ€“Yangâ€“Mills theories with discrete gauge group. Annals of Physics, 2016, 374, 255-290. | 2.8 | 4 |
| 48 | Crystalline confinement. , 2014, , . | | 4 |
| 49 | THE CENTER SYMMETRY AND ITS SPONTANEOUS BREAKDOWN AT HIGH TEMPERATURES. , 2001, , 1909-1944. | | 3 |
| 50 | Supersymmetric descendants of self-adjointly extended quantum mechanical Hamiltonians. Annals of Physics, 2013, 337, 1-24. | 2.8 | 3 |
| 51 | Holes localized on a Skyrmion in a doped antiferromagnet on the honeycomb lattice: Symmetry analysis. Annals of Physics, 2015, 354, 213-243. | 2.8 | 3 |
| 52 | Real-time evolution of strongly coupled fermions driven by dissipation. Annals of Physics, 2016, 372, 309-319. | 2.8 | 3 |
| 53 | CLUSTER ALGORITHM SOLUTION OF SIGN AND COMPLEX ACTION PROBLEMS. International Journal of Modern Physics B, 2003, 17, 5435-5447. | 2.0 | 2 |
| 54 | Alternative momentum concept for a quantum mechanical particle in a box. Physical Review Research, 2021, 3, . | 3.6 | 2 |

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|---|---|---|---|
| 55 | COMPLEX ACTION PROBLEMS IN MODELS FOR QCD AT FINITE DENSITY. , 2003, , . | | 0 |
| 56 | CLUSTER ALGORITHM SOLUTION OF SIGN AND COMPLEX ACTION PROBLEMS. , 2002, , . | | 0 |