

Werner Krauth

List of Publications by Year in descending order

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Version: 2024-02-01

96
papers

12,180
citations

66315

42
h-index

40954

93
g-index

98
all docs

98
docs citations

98
times ranked

6373
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Dynamical mean-field theory of strongly correlated fermion systems and the limit of infinite dimensions. <i>Reviews of Modern Physics</i> , 1996, 68, 13-125. | 16.4 | 5,739 |
| 2 | Exact diagonalization approach to correlated fermions in infinite dimensions: Mott transition and superconductivity. <i>Physical Review Letters</i> , 1994, 72, 1545-1548. | 2.9 | 549 |
| 3 | Two-Step Melting in Two Dimensions: First-Order Liquid-Hexatic Transition. <i>Physical Review Letters</i> , 2011, 107, 155704. | 2.9 | 445 |
| 4 | Learning algorithms with optimal stability in neural networks. <i>Journal of Physics A</i> , 1987, 20, L745-L752. | 1.6 | 325 |
| 5 | Superfluid-insulator transition in disordered boson systems. <i>Physical Review Letters</i> , 1991, 67, 2307-2310. | 2.9 | 268 |
| 6 | Numerical solution of the $d=2$ Hubbard model: Evidence for a Mott transition. <i>Physical Review Letters</i> , 1992, 69, 1240-1243. | 2.9 | 229 |
| 7 | Storage capacity of memory networks with binary couplings. <i>Journal De Physique</i> , 1989, 50, 3057-3066. | 1.8 | 219 |
| 8 | Two-Dimensional Melting: From Liquid-Hexatic Coexistence to Continuous Transitions. <i>Physical Review Letters</i> , 2015, 114, 035702. | 2.9 | 218 |
| 9 | Physical properties of the half-filled Hubbard model in infinite dimensions. <i>Physical Review B</i> , 1993, 48, 7167-7182. | 1.1 | 209 |
| 10 | Coulomb and Liquid Dimer Models in Three Dimensions. <i>Physical Review Letters</i> , 2003, 91, 167004. | 2.9 | 195 |
| 11 | Gutzwiller wave function for a model of strongly interacting bosons. <i>Physical Review B</i> , 1992, 45, 3137-3140. | 1.1 | 192 |
| 12 | Hard-disk equation of state: First-order liquid-hexatic transition in two dimensions with three simulation methods. <i>Physical Review E</i> , 2013, 87, 042134. | 0.8 | 192 |
| 13 | Absence of thermodynamic phase transition in a model glass former. <i>Nature</i> , 2000, 405, 550-551. | 13.7 | 153 |
| 14 | Mott and Superfluid Transitions in a Strongly Interacting Lattice Boson System. <i>Europhysics Letters</i> , 1991, 14, 627-632. | 0.7 | 141 |
| 15 | Quantum Monte Carlo Calculations for a Large Number of Bosons in a Harmonic Trap. <i>Physical Review Letters</i> , 1996, 77, 3695-3699. | 2.9 | 141 |
| 16 | Roughness at the depinning threshold for a long-range elastic string. <i>Physical Review E</i> , 2002, 65, 025101. | 0.8 | 131 |
| 17 | Event-chain Monte Carlo algorithms for hard-sphere systems. <i>Physical Review E</i> , 2009, 80, 056704. | 0.8 | 128 |
| 18 | Monte Carlo approach to M-theory. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1998, 431, 31-41. | 1.5 | 125 |

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|----|--|-----|-----------|
| 19 | Cluster algorithm for hard spheres and related systems. Journal of Physics A, 1995, 28, L597-L601. | 1.6 | 111 |
| 20 | Dynamics and Thermodynamics of the Low-Temperature Strongly Interacting Bose Gas. Physical Review Letters, 2011, 107, 135301. | 2.9 | 106 |
| 21 | Transition Temperature of the Homogeneous, Weakly Interacting Bose Gas. Physical Review Letters, 1999, 83, 2687-2690. | 2.9 | 93 |
| 22 | Depinning of elastic manifolds. Physical Review E, 2003, 67, 021602. | 0.8 | 92 |
| 23 | Width distribution of contact lines on a disordered substrate. Physical Review E, 2004, 69, 035103. | 0.8 | 89 |
| 24 | Generalized event-chain Monte Carlo: Constructing rejection-free global-balance algorithms from infinitesimal steps. Journal of Chemical Physics, 2014, 140, 054116. | 1.2 | 89 |
| 25 | Origin of the Roughness Exponent in Elastic Strings at the Depinning Threshold. Physical Review Letters, 2001, 87, . | 2.9 | 87 |
| 26 | Dynamics below the Depinning Threshold in Disordered Elastic Systems. Physical Review Letters, 2006, 97, 057001. | 2.9 | 85 |
| 27 | Thermodynamic phases in two-dimensional active matter. Nature Communications, 2018, 9, 5045. | 5.8 | 83 |
| 28 | The Cavity Method and the Travelling-Salesman Problem. Europhysics Letters, 1989, 8, 213-218. | 0.7 | 78 |
| 29 | Creep dynamics of elastic manifolds via exact transition pathways. Physical Review B, 2009, 79, . | 1.1 | 77 |
| 30 | Kosterlitz-Thouless Transition of the Quasi-Two-Dimensional Trapped Bose Gas. Physical Review Letters, 2008, 100, 190402. | 2.9 | 68 |
| 31 | Numerical Solution of Hard-Core Mixtures. Physical Review Letters, 1998, 80, 3787-3790. | 2.9 | 65 |
| 32 | The roles of stability and symmetry in the dynamics of neural networks. Journal of Physics A, 1988, 21, 2995-3011. | 1.6 | 63 |
| 33 | Precision Monte Carlo test of the Hartree-Fock approximation for a trapped Bose gas. Physical Review A, 1999, 59, 2956-2961. | 1.0 | 63 |
| 34 | Critical storage capacity of the $J = \hat{A} \pm 1$ neural network. Journal of Physics A, 1989, 22, L519-L523. | 1.6 | 62 |
| 35 | Effect of a magnetic field on Mott-Hubbard systems. Physical Review B, 1994, 50, 3092-3102. | 1.1 | 59 |
| 36 | Critical exponents of the driven elastic string in a disordered medium. Physical Review E, 2005, 71, 061601. | 0.8 | 58 |

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|----|---|-----|-----------|
| 37 | Superconductivity in the two-band Hubbard model in infinite dimensions. European Physical Journal B, 1993, 92, 313-321. | 0.6 | 57 |
| 38 | Finite Yang-Mills integrals. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1998, 435, 350-355. | 1.5 | 57 |
| 39 | Equilibrium state of a trapped two-dimensional Bose gas. Physical Review A, 2010, 82, . | 1.0 | 57 |
| 40 | Pocket Monte Carlo algorithm for classical doped dimer models. Physical Review B, 2003, 67, . | 1.1 | 48 |
| 41 | Efimov-driven phase transitions of the unitary Bose gas. Nature Communications, 2014, 5, 3503. | 5.8 | 46 |
| 42 | Bethe ansatz for the one-dimensional boson Hubbard model. Physical Review B, 1991, 44, 9772-9775. | 1.1 | 45 |
| 43 | Universal interface width distributions at the depinning threshold. Physical Review E, 2003, 68, 036128. | 0.8 | 43 |
| 44 | Monte Carlo dynamics of driven elastic strings in disordered media. Physical Review B, 2001, 65, . | 1.1 | 42 |
| 45 | Eigenvalue distributions in Yang-Mills integrals. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1999, 453, 253-257. | 1.5 | 40 |
| 46 | Depinning exponents of the driven long-range elastic string. Journal of Statistical Mechanics: Theory and Experiment, 2007, 2007, P01019-P01019. | 0.9 | 38 |
| 47 | Semiclassical theory of the quasi-“two-dimensional trapped Bose gas. Europhysics Letters, 2008, 82, 30001. | 0.7 | 38 |
| 48 | Hard-sphere melting and crystallization with event-chain Monte Carlo. Journal of Chemical Physics, 2015, 143, 084509. | 1.2 | 37 |
| 49 | Yang-“Mills integrals for orthogonal, symplectic and exceptional groups. Nuclear Physics B, 2000, 584, 641-655. | 0.9 | 33 |
| 50 | Event-chain Monte Carlo for classical continuous spin models. Europhysics Letters, 2015, 112, 20003. | 0.7 | 30 |
| 51 | Event-chain algorithm for the Heisenberg model: Evidence for $z=1$ scaling. Physical Review E, 2015, 92, 063306. | 0.8 | 28 |
| 52 | A rapid dynamical Monte Carlo algorithm for glassy systems. Journal of Physics A, 1994, 27, L715-L720. | 1.6 | 27 |
| 53 | Aging without disorder on long time scales. European Physical Journal B, 1995, 97, 127-131. | 0.6 | 27 |
| 54 | Two-dimensional QCD in the Wu-Mandelstam-Leibbrandt prescription. Physical Review D, 1998, 57, 2456-2459. | 1.6 | 26 |

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|----|--|-----|-----------|
| 55 | Phase separation in two-dimensional additive mixtures. <i>Physical Review E</i> , 1999, 59, 2939-2941. | 0.8 | 25 |
| 56 | Numerical Solutions of the Von Karman Equations for a Thin Plate. <i>International Journal of Modern Physics C</i> , 1997, 08, 427-434. | 0.8 | 24 |
| 57 | Universal correlations and coherence in quasi-two-dimensional trapped Bose gases. <i>Physical Review A</i> , 2010, 81, . | 1.0 | 24 |
| 58 | Irreversible Local Markov Chains with Rapid Convergence towards Equilibrium. <i>Physical Review Letters</i> , 2017, 119, 240603. | 2.9 | 23 |
| 59 | Solid-liquid transition of skyrmions in a two-dimensional chiral magnet. <i>Physical Review B</i> , 2019, 99, . | 1.1 | 22 |
| 60 | Non-integrability of two-dimensional QCD. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1996, 388, 808-812. | 1.5 | 19 |
| 61 | Extensive Numerical Simulations of Weighted Matchings: Total Length and Distribution of Links in the Optimal Solution. <i>Europhysics Letters</i> , 1991, 14, 295-301. | 0.7 | 18 |
| 62 | Introduction to Monte Carlo algorithms. , 1998, , 1-35. | | 18 |
| 63 | Cell-veto Monte Carlo algorithm for long-range systems. <i>Physical Review E</i> , 2016, 94, 031302. | 0.8 | 18 |
| 64 | Event-Chain Monte Carlo: Foundations, Applications, and Prospects. <i>Frontiers in Physics</i> , 2021, 9, . | 1.0 | 18 |
| 65 | Sampling from a polytope and hard-disk Monte Carlo. <i>Journal of Physics: Conference Series</i> , 2013, 454, 012031. | 0.3 | 16 |
| 66 | All-atom computations with irreversible Markov chains. <i>Journal of Chemical Physics</i> , 2018, 149, 064113. | 1.2 | 16 |
| 67 | Coexistence of solutions in dynamical mean-field theory of the Mott transition. <i>Physical Review B</i> , 2000, 62, 6860-6861. | 1.1 | 13 |
| 68 | Geometry of Gaussian signals. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2005, 2005, L08001-L08001. | 0.9 | 13 |
| 69 | Addendum to "Event-chain Monte Carlo algorithms for hard-sphere systems". <i>Physical Review E</i> , 2012, 86, 017701. | 0.8 | 13 |
| 70 | Laser with large photon correlation times. <i>Physical Review A</i> , 1987, 35, 2523-2531. | 1.0 | 11 |
| 71 | Renormalization Group Approach to Exact Sampling. <i>Physical Review Letters</i> , 2008, 100, 060601. | 2.9 | 10 |
| 72 | Linewidths of lasers with broken polarization symmetry. <i>Physical Review A</i> , 1987, 35, 4192-4199. | 1.0 | 9 |

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|----|--|-----|-----------|
| 73 | Yang-Mills integrals. <i>Classical and Quantum Gravity</i> , 2000, 17, 1171-1179. | 1.5 | 9 |
| 74 | Universal width distributions in non-Markovian Gaussian processes. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2007, 2007, P02009-P02009. | 0.9 | 9 |
| 75 | Irreversible Markov chains in spin models: Topological excitations. <i>Europhysics Letters</i> , 2018, 121, 10008. | 0.7 | 9 |
| 76 | A kinetic-Monte Carlo perspective on active matter. <i>Journal of Chemical Physics</i> , 2019, 150, 144113. | 1.2 | 9 |
| 77 | Selective-pivot sampling of radial distribution functions in asymmetric liquid mixtures. <i>Molecular Physics</i> , 2007, 105, 2393-2398. | 0.8 | 8 |
| 78 | Mixing and perfect sampling in one-dimensional particle systems. <i>Europhysics Letters</i> , 2018, 124, 20003. | 0.7 | 8 |
| 79 | JeLLyFysh-Version1.0” a Python application for all-atom event-chain Monte Carlo. <i>Computer Physics Communications</i> , 2020, 253, 107168. | 3.0 | 8 |
| 80 | Coming Home from a MOOC. <i>Computing in Science and Engineering</i> , 2015, 17, 91-95. | 1.2 | 7 |
| 81 | Thermal effects in the dynamics of disordered elastic systems. <i>Physica B: Condensed Matter</i> , 2009, 404, 444-446. | 1.3 | 6 |
| 82 | Damage spreading and coupling in Markov chains. <i>Europhysics Letters</i> , 2010, 92, 60004. | 0.7 | 6 |
| 83 | Momentum Distribution in the Unitary Bose Gas from First Principles. <i>Physical Review Letters</i> , 2016, 117, 225301. | 2.9 | 6 |
| 84 | Multithreaded event-chain Monte Carlo with local times. <i>Computer Physics Communications</i> , 2021, 261, 107702. | 3.0 | 6 |
| 85 | Off-diagonal long-range order, cycle probabilities, and condensate fraction in the ideal Bose gas. <i>Physical Review E</i> , 2007, 76, 051109. | 0.8 | 5 |
| 86 | Event-chain Monte Carlo with factor fields. <i>Physical Review E</i> , 2019, 99, 043301. | 0.8 | 4 |
| 87 | Hard-disk dipoles and non-reversible Markov chains. <i>Journal of Chemical Physics</i> , 2022, 156, 084108. | 1.2 | 4 |
| 88 | Cluster Monte Carlo Algorithms. , 2005, , 5-22. | | 3 |
| 89 | Variant Monte Carlo algorithm for driven elastic strings in random media. <i>Computer Physics Communications</i> , 2005, 169, 188-191. | 3.0 | 3 |
| 90 | Vacancy diffusion in the triangular-lattice dimer model. <i>Physical Review E</i> , 2008, 78, 021112. | 0.8 | 3 |

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|----|--|-----|-----------|
| 91 | Convergence and coupling for spin glasses and hard spheres. <i>Physical Review E</i> , 2010, 81, 016705. | 0.8 | 3 |
| 92 | Direction-sweep Markov chains. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2022, 55, 105003. | 0.7 | 3 |
| 93 | Large-scale dynamics of event-chain Monte Carlo. <i>Physical Review E</i> , 2022, 105, 015309. | 0.8 | 2 |
| 94 | Sparse Hard-Disk Packings and Local Markov Chains. <i>Journal of Statistical Physics</i> , 2022, 187, 1. | 0.5 | 2 |
| 95 | Jamming and Geometric Representations of Graphs. <i>Electronic Journal of Combinatorics</i> , 2006, 13, . | 0.2 | 1 |
| 96 | Liquid-solid transitions in the three-body hard-core model. <i>Europhysics Letters</i> , 2015, 109, 20003. | 0.7 | 0 |