

Kay Jürg Wiese

List of Publications by Year in descending order

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106
papers

2,564
citations

196777

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252626

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106
all docs

106
docs citations

106
times ranked

925
citing authors

#	ARTICLE	IF	CITATIONS
1	Depinning and flow of a vortex line in a uniaxial random medium. Physical Review B, 2022, 105, .	1.1	2
2	Mean-field theories for depinning and their experimental signatures. Physical Review E, 2021, 103, 052114.	0.8	5
3	Functionals of fractional Brownian motion and the three arcsine laws. Physical Review E, 2021, 104, 054112.	0.8	8
4	Fractal dimension of critical curves in the $O(n)$ -symmetric ϕ^4 -model and crossover exponent at 6-loop order: Loop-erased random walks, self-avoiding walks, Ising, Span Observables: "When is a Foraging Rabbit No Longer Hungry?" Journal of Statistical Physics, 2020, 178, 625-643.	0.8	26
5	Extreme events for fractional Brownian motion with drift: Theory and numerical validation. Physical Review E, 2020, 102, 022102.	0.5	5
6	Sampling first-passage times of fractional Brownian motion using adaptive bisections. Physical Review E, 2020, 101, 043312.	0.8	11
7	Universal force correlations in an RNA-DNA unzipping experiment. Physical Review Research, 2020, 2, .	0.8	8
8	Field theories for loop-erased random walks. Nuclear Physics B, 2019, 946, 114696.	1.3	6
9	Distribution of velocities in an avalanche, and related quantities: Theory and numerical verification. Europhysics Letters, 2019, 127, 46001.	0.9	9
10	First passage in an interval for fractional Brownian motion. Physical Review E, 2019, 99, 032106.	0.7	4
11	Behavior of random RNA secondary structures near the glass transition. Physical Review E, 2019, 99, 022415.	0.8	14
12	Depinning Transition of Charge-Density Waves: Mapping onto $O(n)$ -Symmetric ϕ^4 -Theory with ϕ^2 -Term	0.8	2
13	Generalized Arcsine Laws for Fractional Brownian Motion. Physical Review Letters, 2018, 120, 040603.	2.9	7
14	Hausdorff dimension of the record set of a fractional Brownian motion. Electronic Communications in Probability, 2018, 23, .	2.9	37
15	Field theory of disordered elastic interfaces at 3-loop order: The $\hat{\Gamma}^2$ -function. Nuclear Physics B, 2018, 932, 540-588.	0.1	4
16	Field theory of disordered elastic interfaces at 3-loop order: Critical exponents and scaling functions. Nuclear Physics B, 2018, 932, 589-618.	0.9	6
17	Pickands' constant at first order in an expansion around Brownian motion. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 16LT04.	0.9	7
18		0.7	8

#	ARTICLE	IF	CITATIONS
19	Spatial shape of avalanches. <i>Physical Review E</i> , 2017, 96, 062116.	0.8	8
20	Avalanches in tip-driven interfaces in random media. <i>Europhysics Letters</i> , 2016, 113, 10002.	0.7	10
21	Extreme-value statistics of fractional Brownian motion bridges. <i>Physical Review E</i> , 2016, 94, 052105.	0.8	28
22	Universal correlations between shocks in the ground state of elastic interfaces in disordered media. <i>Physical Review E</i> , 2016, 94, 012110.	0.8	6
23	Dynamical selection of critical exponents. <i>Physical Review E</i> , 2016, 93, 042105.	0.8	3
24	Coherent-state path integral versus coarse-grained effective stochastic equation of motion: From reaction diffusion to stochastic sandpiles. <i>Physical Review E</i> , 2016, 93, 042117.	0.8	26
25	Distribution of joint local and total size and of extension for avalanches in the Brownian force model. <i>Physical Review E</i> , 2016, 93, 052142.	0.8	8
26	Perturbative expansion for the maximum of fractional Brownian motion. <i>Physical Review E</i> , 2016, 94, 012134.	0.8	21
27	Experimental Evidence for Three Universality Classes for Reaction Fronts in Disordered Flows. <i>Physical Review Letters</i> , 2015, 114, 234502.	2.9	36
28	Maximum of a Fractional Brownian Motion: Analytic Results from Perturbation Theory. <i>Physical Review Letters</i> , 2015, 115, 210601.	2.9	27
29	Spatial shape of avalanches in the Brownian force model. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2015, 2015, P08019.	0.9	11
30	Exact Mapping of the Stochastic Field Theory for Manna Sandpiles to Interfaces in Random Media. <i>Physical Review Letters</i> , 2015, 114, 110601.	2.9	32
31	Avalanche shape and exponents beyond mean-field theory. <i>Europhysics Letters</i> , 2014, 108, 66002.	0.7	43
32	Collective excitations in a large-dmodel for graphene. <i>Physical Review B</i> , 2014, 89, .	1.1	21
33	Non-Gaussian effects and multifractality in the Bragg glass. <i>Europhysics Letters</i> , 2014, 105, 16002.	0.7	6
34	Statistics of avalanches with relaxation and Barkhausen noise: A solvable model. <i>Physical Review E</i> , 2013, 88, 032106.	0.8	21
35	Exact form of the exponential correlation function in the glassy super-rough phase. <i>Physical Review B</i> , 2013, 87, .	1.1	5
36	Avalanche dynamics of elastic interfaces. <i>Physical Review E</i> , 2013, 88, 022106.	0.8	38

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37	Functional renormalization-group approach to decaying turbulence. Journal of Statistical Mechanics: Theory and Experiment, 2013, 2013, P04014.	0.9	10
38	Distribution of velocities in an avalanche. Europhysics Letters, 2012, 97, 46004.	0.7	25
39	First-principles derivation of static avalanche-size distributions. Physical Review E, 2012, 85, 061102.	0.8	26
40	Super-rough phase of the random-phase sine-Gordon model: Two-loop results. Physical Review B, 2012, 86, .	1.1	7
41	Nonstationary dynamics of the Alessandro-Beatrice-Bertotti-Montorsi model. Physical Review E, 2012, 85, 031105.	0.8	30
42	Equilibrium avalanches in spin glasses. Physical Review B, 2012, 85, .	1.1	34
43	Distribution of velocities and acceleration for a particle in Brownian correlated disorder: Inertial case. Physical Review E, 2012, 85, 061116.	0.8	8
44	Shock statistics in higher-dimensional Burgers turbulence. Europhysics Letters, 2011, 96, 14005.	0.7	5
45	Interference in disordered systems: A particle in a complex random landscape. Physical Review E, 2011, 83, 061116.	0.8	7
46	Perturbation theory for fractional Brownian motion in presence of absorbing boundaries. Physical Review E, 2011, 83, 061141.	0.8	38
47	Avalanches in mean-field models and the Barkhausen noise in spin-glasses. Europhysics Letters, 2010, 91, 57004.	0.7	40
48	Elasticity of a contact-line and avalanche-size distribution at depinning. Physical Review E, 2010, 82, 011108.	0.8	17
49	Statistics of static avalanches in a random pinning landscape. Physical Review E, 2009, 79, 050101.	0.8	50
50	Avalanche-size distribution at the depinning transition: A numerical test of the theory. Physical Review B, 2009, 80, .	1.1	77
51	Driven particle in a random landscape: Disorder correlator, avalanche distribution, and extreme value statistics of records. Physical Review E, 2009, 79, 051105.	0.8	80
52	Field theory of the RNA freezing transition. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P10019.	0.9	1
53	Size distributions of shocks and static avalanches from the functional renormalization group. Physical Review E, 2009, 79, 051106.	0.8	84
54	Fluctuation force exerted by a planar self-avoiding polymer. Europhysics Letters, 2009, 86, 22001.	0.7	2

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55	Height fluctuations of a contact line: A direct measurement of the renormalized disorder correlator. Europhysics Letters, 2009, 87, 56001.	0.7	80
56	Field Theory Conjecture for Loop-Erased Random Walks. Journal of Statistical Physics, 2008, 133, 805-812.	0.5	12
57	A growth model for RNA secondary structures. Journal of Statistical Mechanics: Theory and Experiment, 2008, 2008, P04008.	0.9	11
58	Cusps and shocks in the renormalized potential of glassy random manifolds: How functional renormalization group and replica symmetry breaking fit together. Physical Review B, 2008, 77, .	1.1	22
59	Depinning in a two-layer model of plastic flow. Physical Review B, 2008, 78, .	1.1	13
60	Random RNA under tension. Europhysics Letters, 2007, 78, 68003.	0.7	5
61	Measuring Functional Renormalization Group Fixed-Point Functions for Pinned Manifolds. Physical Review Letters, 2007, 98, 155701.	2.9	45
62	Systematic Field Theory of the RNA Glass Transition. Physical Review Letters, 2007, 98, 128102.	2.9	10
63	Wetting and minimal surfaces. Physical Review E, 2007, 75, 031601.	0.8	3
64	Le Doussal and Wiese Reply:. Physical Review Letters, 2007, 98, .	2.9	6
65	How to measure functional RG fixed-point functions for dynamics and at depinning. Europhysics Letters, 2007, 77, 66001.	0.7	29
66	Numerical calculation of the functional renormalization group fixed-point functions at the depinning transition. Physical Review B, 2007, 75, .	1.1	60
67	Universal distribution of threshold forces at the depinning transition. Physical Review E, 2006, 74, 041110.	0.8	22
68	Freezing of Random RNA. Physical Review Letters, 2006, 96, 228101.	2.9	27
69	Can Nonlinear Elasticity Explain Contact-Line Roughness at Depinning?. Physical Review Letters, 2006, 96, 015702.	2.9	33
70	Statics and dynamics of elastic manifolds in media with long-range correlated disorder. Physical Review E, 2006, 74, 061109.	0.8	25
71	Random-Field Spin Models beyond 1 Loop: A Mechanism for Decreasing the Lower Critical Dimension. Physical Review Letters, 2006, 96, 197202.	2.9	47
72	Why one needs a functional renormalization group to survive in a disordered world. Pramana - Journal of Physics, 2005, 64, 817-827.	0.9	2

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73	Instanton Calculus for the Self-Avoiding Manifold Model. Journal of Statistical Physics, 2005, 120, 875-1035.	0.5	3
74	Supersymmetry breaking in disordered systems and relation to functional renormalization and replica-symmetry breaking. Journal of Physics Condensed Matter, 2005, 17, S1889-S1898.	0.7	10
75	Scaling behavior of tethered crumpled manifolds with inner dimension close to d : Resumming the perturbation theory. Nuclear Physics B, 2005, 711, 530-564.	0.9	2
76	Two-loop functional renormalization for elastic manifolds pinned by disorder in N dimensions. Physical Review E, 2005, 72, 035101.	0.8	28
77	Functional renormalization group and the field theory of disordered elastic systems. Physical Review E, 2004, 69, 026112.	0.8	100
78	Derivation of the functional renormalization group β -function at order ϵ^2 for manifolds pinned by disorder. Nuclear Physics B, 2004, 701, 409-480.	0.9	16
79	The Functional Renormalization Group Treatment of Disordered Systems, a Review. Annales Henri Poincare, 2003, 4, 505-528.	0.8	6
80	The 4-loop β -function in the 2D non-Abelian Thirring model, and comparison with its conjectured exact form. Nuclear Physics B, 2003, 661, 577-607.	0.9	20
81	The Functional Renormalization Group Treatment of Disordered Systems, a Review. , 2003, , 505-528.		0
82	Fabry-Perot interference and spin filtering in carbon nanotubes. Physical Review B, 2003, 68, .	1.1	35
83	Functional renormalization group for anisotropic depinning and relation to branching processes. Physical Review E, 2003, 67, 016121.	0.8	30
84	Higher correlations, universal distributions, and finite size scaling in the field theory of depinning. Physical Review E, 2003, 68, 046118.	0.8	32
85	Universal interface width distributions at the depinning threshold. Physical Review E, 2003, 68, 036128.	0.8	43
86	Functional renormalization group at large N for disordered elastic systems, and relation to replica symmetry breaking. Physical Review B, 2003, 68, .	1.1	40
87	Interacting crumpled manifolds: Exact results to all orders of perturbation theory. Europhysics Letters, 2003, 64, 371-377.	0.7	3
88	Functional Renormalization Group at Large N for Disordered Systems. Physical Review Letters, 2002, 89, 125702.	2.9	37
89	Interacting crumpled manifolds. Journal of Physics A, 2002, 35, 1195-1229.	1.6	6
90	Two-loop functional renormalization group theory of the depinning transition. Physical Review B, 2002, 66, .	1.1	174

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91	Polymerized Membranes, a Review**The author has won the Physics Prize of the Academy of Science in Göttingen. Phase Transitions and Critical Phenomena, 2001, , 253-480.	1.2	12
92	Renormalization of Pinned Elastic Systems: How Does It Work Beyond One Loop?. Physical Review Letters, 2001, 86, 1785-1788.	2.9	188
93	The Passive Polymer Problem. Journal of Statistical Physics, 2000, 101, 843-891.	0.5	15
94	Polymers and manifolds in static random flows: a renormalization group study. Nuclear Physics B, 1999, 552, 529-598.	0.9	15
95	On the Perturbation Expansion of the KPZ Equation. Journal of Statistical Physics, 1998, 93, 143-154.	0.5	74
96	Dynamics of selfavoiding tethered membranes. I. Model A dynamics (Rouse model). European Physical Journal B, 1998, 1, 269-272.	0.6	14
97	Dynamics of selfavoiding tethered membranes. II. Inclusion of hydrodynamic interaction (Zimm model). European Physical Journal B, 1998, 1, 273-276.	0.6	8
98	Generalizing the O(N)-field theory to N-colored manifolds of arbitrary internal dimension D. Nuclear Physics B, 1998, 528, 469-522.	0.9	8
99	Large order behavior for self-avoiding membranes. Nuclear Physics B, 1998, 535, 555-595.	0.9	8
100	Glassy Trapping of Manifolds in Nonpotential Random Flows. Physical Review Letters, 1998, 80, 2362-2365.	2.9	12
101	Critical discussion of the two-loop calculations for the Kardar-Parisi-Zhang equation. Physical Review E, 1997, 56, 5013-5017.	0.8	27
102	New renormalization group results for scaling of self-avoiding tethered membranes. Nuclear Physics B, 1997, 487, 529-632.	0.9	26
103	Classification of perturbations for membranes with bending rigidity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1996, 387, 57-63.	1.5	7
104	Scaling of Self-Avoiding Tethered Membranes: 2-Loop Renormalization Group Results. Physical Review Letters, 1996, 76, 4564-4567.	2.9	35
105	Self-avoiding tethered membranes at the tricritical point. Nuclear Physics B, 1995, 450, 495-557.	0.9	18
106	ANOMALOUS DIMENSIONS OF SOFT OPERATORS IN SUPERSYMMETRIC NONLINEAR SIGMA-MODELS. Modern Physics Letters A, 1993, 08, 3845-3852.	0.5	0