

# Bertrand Berche

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4433014/publications.pdf>

Version: 2024-02-01

135  
papers

2,278  
citations

257357

24  
h-index

302012

39  
g-index

136  
all docs

136  
docs citations

136  
times ranked

1361  
citing authors

#	ARTICLE	IF	CITATIONS
1	Resilience of public transport networks against attacks. European Physical Journal B, 2009, 71, 125-137.	0.6	203
2	Continuum model for chiral induced spin selectivity in helical molecules. Journal of Chemical Physics, 2015, 142, 194308.	1.2	90
3	Finite-Size Scaling Study of the Surface and Bulk Critical Behavior in the Random-Bond Eight-State Potts Model. Physical Review Letters, 1998, 80, 1670-1673.	2.9	86
4	A Chirality-Based Quantum Leap. ACS Nano, 2022, 16, 4989-5035.	7.3	74
5	Bond dilution in the 3D Ising model: a Monte Carlo study. European Physical Journal B, 2004, 38, 463-474.	0.6	62
6	Softening of first-order transition in three-dimensions by quenched disorder. Physical Review E, 2001, 64, 036120.	0.8	54
7	Monte Carlo study of phase transitions in the bond-diluted 3D 4-state Potts model. Nuclear Physics B, 2005, 719, 275-311.	0.9	48
8	Critical mass and the dependency of research quality on group size. Scientometrics, 2011, 86, 527-540.	1.6	48
9	Influence of quenched dilution on the quasi-long-range ordered phase of the $\mathbb{Z}_2$ $\mathbb{Z}_N$ model. European Physical Journal B, 2003, 36, 91-98.	0.6	45
10	Hyperscaling above the upper critical dimension. Nuclear Physics B, 2012, 865, 115-132.	0.9	44
11	Mesoscopic rings with spin-orbit interactions. European Journal of Physics, 2010, 31, 1267-1286.	0.3	42
12	Magnetic critical behavior of two-dimensional random-bond Potts ferromagnets in confined geometries. Physical Review E, 1999, 60, 3853-3865.	0.8	39
13	Universality and multifractal behaviour of spin-spin correlation functions in disordered Potts models. Nuclear Physics B, 2000, 572, 626-650.	0.9	35
14	TRANSPORTATION NETWORK STABILITY: A CASE STUDY OF CITY TRANSIT. International Journal of Modeling, Simulation, and Scientific Computing, 2012, 15, 1250063.	0.9	35
15	Surface magnetization and critical behavior of aperiodic Ising quantum chains. Physical Review B, 1994, 49, 12695-12702.	1.1	33
16	Tests of conformal invariance in randomness-induced second-order phase transitions. Physical Review E, 1998, 58, R6899-R6902.	0.8	33
17	Persistent charge and spin currents in the long-wavelength regime for graphene rings. Physical Review B, 2014, 89, .	1.1	33
18	Role of Fourier Modes in Finite-Size Scaling above the Upper Critical Dimension. Physical Review Letters, 2016, 116, 115701.	2.9	28

#	ARTICLE	IF	CITATIONS
19	Comparison of a citation-based indicator and peer review for absolute and specific measures of research-group excellence. <i>Scientometrics</i> , 2013, 97, 767-777.	1.6	27
20	Predicting results of the Research Excellence Framework using departmental h-index. <i>Scientometrics</i> , 2015, 102, 2165-2180.	1.6	27
21	Critical behavior near a smooth inhomogeneity in the planar Ising model and conformal invariance. <i>Physical Review Letters</i> , 1990, 65, 1773-1776.	2.9	25
22	Aperiodicity-Induced Second-Order Phase Transition in the 8-State Potts Model. <i>Physical Review Letters</i> , 1998, 80, 297-300.	2.9	25
23	Fisher's scaling relation above the upper critical dimension. <i>Europhysics Letters</i> , 2014, 105, 26005.	0.7	25
24	Geometric effects in the electronic transport of deformed nanotubes. <i>Nanotechnology</i> , 2016, 27, 135302.	1.3	24
25	Correlations in the low-temperature phase of the two-dimensional XY model. <i>Europhysics Letters</i> , 2002, 60, 539-545.	0.7	23
26	A new critical exponent 'coppa' and its logarithmic counterpart 'hat coppa'. <i>Condensed Matter Physics</i> , 2013, 16, 23601.	0.3	23
27	Quantifying the evolution of a scientific topic: reaction of the academic community to the Chernobyl disaster. <i>Scientometrics</i> , 2016, 106, 1151-1166.	1.6	23
28	Bulk and surface properties in the critical phase of the two-dimensional XY model. <i>Journal of Physics A</i> , 2003, 36, 585-607.	1.6	22
29	Managing research quality: critical mass and optimal academic research group size. <i>IMA Journal of Management Mathematics</i> , 2012, 23, 195-207.	1.1	22
30	Finite-size scaling above the upper critical dimension in Ising models with long-range interactions. <i>European Physical Journal B</i> , 2015, 88, 1.	0.6	22
31	Critical behaviour near multiple junctions and dirty surfaces in the two-dimensional Ising model. <i>Journal of Physics A</i> , 1991, 24, L1031-L1036.	1.6	21
32	Gauge symmetry breaking and topological quantization for the Pauli Hamiltonian. <i>Europhysics Letters</i> , 2008, 83, 47005.	0.7	21
33	Symmetry relations for multifractal spectra at random critical points. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2009, 2009, P12002.	0.9	21
34	Violation of Lee-Yang circle theorem for Ising phase transitions on complex networks. <i>Europhysics Letters</i> , 2015, 111, 60009.	0.7	21
35	Partition function zeros for the Ising model on complete graphs and on annealed scale-free networks. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2016, 49, 135001.	0.7	21
36	Classical Yang-Mills theory in condensed matter physics. <i>European Journal of Physics</i> , 2013, 34, 161-180.	0.3	20

#	ARTICLE	IF	CITATIONS
37	Optics near a hyperbolic defect. <i>Physical Review A</i> , 2015, 92, .	1.0	20
38	Size Effect on Magnetism of Fe Thin Films in Fe/Ir Superlattices. <i>Physical Review Letters</i> , 2001, 86, 3883-3886.	2.9	18
39	Absolute and specific measures of research group excellence. <i>Scientometrics</i> , 2013, 95, 115-127.	1.6	18
40	Intrinsic Rashba coupling due to hydrogen bonding in DNA. <i>Journal of Chemical Physics</i> , 2019, 151, 125102.	1.2	18
41	Spin-orbit interaction and spin selectivity for tunneling electron transfer in DNA. <i>Physical Review B</i> , 2020, 101, .	1.1	18
42	The fate of Ernst Ising and the fate of his model. <i>Journal of Physical Studies</i> , 2017, 21, .	0.2	18
43	Inhomogeneous Ising chain in a transverse field: finite-size scaling and asymptotic conformal spectrum. <i>Journal of Physics A</i> , 1990, 23, 3029-3041.	1.6	17
44	Evidence for a topological transition in nematic-to-isotropic phase transition in two dimensions. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2003, 308, 461-466.	0.9	17
45	Surface magnetization of aperiodic Ising systems: a comparative study of the bond and site problems. <i>Journal of Physics A</i> , 1994, 27, 6349-6366.	1.6	16
46	Anisotropic scaling in layered aperiodic Ising systems. <i>Journal of Physics A</i> , 1995, 28, L165-L171.	1.6	16
47	Topological transition in a two-dimensional model of liquid crystal. <i>Physical Review E</i> , 2005, 72, 031711.	0.8	16
48	Quantum oscillations and wave packet revival in conical graphene structure. <i>European Physical Journal B</i> , 2016, 89, 1.	0.6	16
49	Marginal Anisotropy in Layered Aperiodic Ising Systems. <i>Journal De Physique, I</i> , 1996, 6, 621-640.	1.2	16
50	Local and cluster critical dynamics of the 3d random-site Ising model. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006, 370, 163-178.	1.2	15
51	Laser-induced modulation of the Landau level structure in single-layer graphene. <i>Physical Review B</i> , 2015, 92, .	1.1	15
52	Predicting results of the research excellence framework using departmental h-index: revisited. <i>Scientometrics</i> , 2015, 104, 1013-1017.	1.6	15
53	Universal finite-size scaling for percolation theory in high dimensions. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2017, 50, 235001.	0.7	15
54	Quenched bond dilution in two-dimensional Potts models. <i>Journal of Physics A</i> , 2001, 34, 9593-9614.	1.6	14

#	ARTICLE	IF	CITATIONS
55	Modeling Kleinian cosmology with electronic metamaterials. <i>Physical Review D</i> , 2016, 94, .	1.6	14
56	Criticality of the random-site Ising model: Metropolis, Swendsen-Wang and Wolff Monte Carlo algorithms. <i>Condensed Matter Physics</i> , 2005, 8, 149-162.	0.3	14
57	The 2D XY model on a finite lattice with structural disorder: quasi-long-range ordering under realistic conditions. <i>European Physical Journal B</i> , 2007, 56, 93-105.	0.6	13
58	Extended scaling in high dimensions. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2008, 2008, P11010.	0.9	13
59	High-precision determination of universal amplitude ratios for the $q=3$ Potts model in two dimensions. <i>Physical Review B</i> , 2008, 77, .	1.1	13
60	Numerical revision of the universal amplitude ratios for the two-dimensional 4-state Potts model. <i>Nuclear Physics B</i> , 2009, 811, 491-518.	0.9	13
61	The extensive nature of group quality. <i>Europhysics Letters</i> , 2010, 90, 58002.	0.7	13
62	Geometrical optics limit of phonon transport in a channel of disclinations. <i>European Physical Journal B</i> , 2017, 90, 1.	0.6	13
63	Critical-off-critical interface in the Ising quantum chain and conformal invariance. <i>Journal of Physics A</i> , 1991, 24, 245-256.	1.6	12
64	Quasi-long-range ordering in a finite-size 2D classical Heisenberg model. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2007, 40, 3741-3748.	0.7	12
65	Spin superfluidity and spin-orbit gauge symmetry fixing. <i>Europhysics Letters</i> , 2012, 97, 67007.	0.7	12
66	Random Ising model in three dimensions: theory, experiment and simulation - a difficult coexistence. <i>Condensed Matter Physics</i> , 2005, 8, 47-58.	0.3	12
67	Susceptibility amplitude ratio in the two-dimensional three-state Potts model. <i>Nuclear Physics B</i> , 2002, 620, 579-587.	0.9	11
68	Crossover effects in the bond-diluted Ising model in three dimensions. <i>Computer Physics Communications</i> , 2002, 147, 427-430.	3.0	11
69	On the universality class of the 3d Ising model with long-range-correlated disorder. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2008, 387, 4497-4512.	1.2	11
70	Normalization of peer-evaluation measures of group research quality across academic disciplines. <i>Research Evaluation</i> , 2011, 20, 107-116.	1.3	11
71	Monte Carlo study of anisotropic scaling generated by disorder. <i>Physical Review E</i> , 2015, 92, 042118.	0.8	11
72	Cluster Monte Carlo and dynamical scaling for long-range interactions. <i>European Physical Journal: Special Topics</i> , 2017, 226, 581-594.	1.2	11

#	ARTICLE	IF	CITATIONS
73	Cosmology in the laboratory: An analogy between hyperbolic metamaterials and the Milne universe. <i>Physical Review D</i> , 2017, 96, .	1.6	11
74	Surface magnetization of aperiodic Ising quantum chains. <i>European Physical Journal B</i> , 1993, 92, 307-312.	0.6	10
75	The McCoy-Wu model in the mean-field approximation. <i>Journal of Physics A</i> , 1998, 31, 5193-5202.	1.6	10
76	A study of logarithmic corrections and universal amplitude ratios in the two-dimensional 4-state Potts model. <i>Europhysics Letters</i> , 2008, 81, 30008.	0.7	10
77	Critical masses for academic research groups and consequences for higher education research policy and management. <i>Higher Education Management and Policy</i> , 2011, 23, 1-21.	0.4	10
78	Second-order phase transition induced by deterministic fluctuations in aperiodic eight-state Potts models. <i>European Physical Journal B</i> , 1999, 7, 439-449.	0.6	9
79	Fenımenos crıticos: 150 anos desde Cagniard de la Tour. <i>Revista Brasileira De Ensino De Fisica</i> , 2009, 31, 2602.1-2602.4.	0.2	9
80	Critical behavior of the random Potts chain. <i>Physical Review B</i> , 1999, 60, 12974-12981.	1.1	8
81	Ferromagnetic order induced on graphene by Ni/Co proximity effects. <i>Physical Review B</i> , 2016, 94, .	1.1	8
82	Marginal extended perturbations in two dimensions and gap-exponent relations. <i>Journal of Physics A</i> , 1993, 26, 3131-3141.	1.6	7
83	Aperiodic spin chain in the mean field approximation. <i>Journal of Physics A</i> , 1997, 30, 1347-1362.	1.6	7
84	3D bond-diluted 4-state Potts model: a Monte Carlo study. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , 2002, 106-107, 899-901.	0.5	7
85	Interplay of topological and structural defects in the two-dimensional XY model. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2008, 372, 5716-5721.	0.9	7
86	Gauge transformations and conserved quantities in classical and quantum mechanics. <i>American Journal of Physics</i> , 2016, 84, 616-625.	0.3	7
87	Generalized Ising Model on a Scale-Free Network: An Interplay of Power Laws. <i>Entropy</i> , 2021, 23, 1175.	1.1	7
88	Ising model with variable spin/agent strengths. <i>Journal of Physics Complexity</i> , 2020, 1, 035008.	0.9	7
89	Influence of dilution on the strong first-order phase transition of the 3D 4-state Potts model. <i>Computer Physics Communications</i> , 2002, 147, 431-434.	3.0	6
90	Numerical investigation of logarithmic corrections in two-dimensional spin models. <i>JETP Letters</i> , 2004, 79, 213-217.	0.4	6

#	ARTICLE	IF	CITATIONS
91	Charge- and spin-polarized currents in mesoscopic rings with Rashba spin-orbit interactions coupled to an electron reservoir. <i>Physical Review B</i> , 2014, 90, .	1.1	6
92	Spin current generation and control in carbon nanotubes by combining rotation and magnetic field. <i>Journal of Physics Condensed Matter</i> , 2020, 32, 185301.	0.7	6
93	PHASE TRANSITIONS IN TWO-DIMENSIONAL RANDOM POTTS MODELS. , 2004, , 147-199.		6
94	Surface shape and local critical behavior: The percolation problem in two dimensions. <i>Physical Review E</i> , 1994, 50, 4542-4550.	0.8	5
95	The two-dimensional 4-state Potts model in a magnetic field. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2013, 46, 095001.	0.7	5
96	Marginal dimensions of the Potts model with invisible states. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2016, 49, 255001.	0.7	5
97	Surface geometry and local critical behaviour : the self-avoiding-walk. <i>Journal De Physique, I</i> , 1993, 3, 925-934.	1.2	5
98	Conformal invariance and perturbations in the two-dimensional Ising model: Surface defects. <i>Journal of Statistical Physics</i> , 1989, 56, 589-607.	0.5	4
99	Realization of supersymmetric quantum mechanics in inhomogeneous Ising models. <i>Journal of Physics A</i> , 1995, 28, 3579-3590.	1.6	4
100	Crossover between aperiodic and homogeneous surface critical behaviors in multilayered two-dimensional Ising models. <i>Physical Review B</i> , 1997, 56, 5276-5285.	1.1	4
101	Universal ratios of critical amplitudes in the Potts model universality class. <i>Computer Physics Communications</i> , 2009, 180, 493-496.	3.0	4
102	A perfect spin filtering device through Mach-Zehnder interferometry in a GaAs/AlGaAs electron gas. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 115303.	0.7	4
103	Gauge transformations of spin-orbit interactions in graphene. <i>European Physical Journal B</i> , 2015, 88, 1.	0.6	4
104	Academic research groups: evaluation of their quality and quality of their evaluation. <i>Journal of Physics: Conference Series</i> , 2016, 681, 012004.	0.3	4
105	Optical concentrator from a hyperbolic liquid-crystal metamaterial. <i>Europhysics Letters</i> , 2018, 124, 34006.	0.7	4
106	Equilibrium currents in a Corbino graphene ring. <i>Condensed Matter Physics</i> , 2014, 17, 33803.	0.3	4
107	Classical Kalb-Ramond field theory in curved spacetimes. <i>Physical Review D</i> , 2022, 105, .	1.6	4
108	Surface properties at the Kosterlitz-Thouless transition. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2002, 302, 336-340.	0.9	3

#	ARTICLE	IF	CITATIONS
109	Using torsion to manipulate spin currents. Europhysics Letters, 2017, 117, 47007.	0.7	3
110	Wiggly cosmic string as a waveguide for massless and massive fields. Physical Review D, 2017, 96, .	1.6	3
111	Improving student understanding of electrodynamics: The case for differential forms. American Journal of Physics, 2020, 88, 1083-1093.	0.3	3
112	Static and dynamic critical behaviour of 3d random-site Ising model: Different Monte Carlo algorithms. Journal of Molecular Liquids, 2006, 127, 69-70.	2.3	2
113	Introduction to thermodynamics of spin models in the Hamiltonian limit. European Journal of Physics, 2006, 27, 11-28.	0.3	2
114	Perturbation expansion for the diluted two-dimensional XY model. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 366, 150-154.	0.9	2
115	Network harness: bundles of routes in public transport networks. , 2009, , .		2
116	Logarithmic corrections and universal amplitude ratios in the 4-state Potts model. Physics Procedia, 2010, 7, 7-18.	1.2	2
117	Mach-Zehnder interferometric device for spin filtering in a GaAs/AlGaAs electron gas. Journal of Applied Physics, 2011, 110, 114523.	1.1	2
118	Magnetic and geometric effects on the electronic transport of metallic nanotubes. Journal of Applied Physics, 2021, 129, .	1.1	2
119	Monte Carlo Studies of Three-Dimensional Bond-Diluted Ferromagnets. , 2003, , 227-238.		2
120	Spin polarization of entangled and mixed electron states in a beam splitter geometry coupled to an electron reservoir. Physical Review B, 2012, 86, .	1.1	1
121	STATISTICS OF STATISTICIANS: CRITICAL MASS OF STATISTICS AND OPERATIONAL RESEARCH GROUPS. International Journal of Modern Physics Conference Series, 2012, 16, 29-40.	0.7	1
122	Scaling and Finite-Size Scaling above the Upper Critical Dimension. , 2015, , 1-54.		1
123	Tayloring energy levels with curvature ? An illustration of Da Costa formalism. Journal of Physics: Conference Series, 2017, 785, 012003.	0.3	1
124	Quenched Disorder Distributions in Three-Dimensional Diluted Ferromagnets. Springer Proceedings in Physics, 2004, , 89-94.	0.1	1
125	La constante cosmologique et le d'�ploiement de l'�espace. Philosophia Scientiae, 2011, , 123-135.	0.1	1
126	Conformal invariance and surface defects in the two-dimensional Ising model. Exact results. Journal of Statistical Physics, 1990, 60, 167-180.	0.5	0



#	ARTICLE	IF	CITATIONS
127	Influence of deterministic fluctuations on the 8-state Potts model. Computer Physics Communications, 1999, 121-122, 197-198.	3.0	0
128	Monte Carlo investigation of the influence of randomness at first-order phase transitions. Computer Physics Communications, 1999, 121-122, 191-193.	3.0	0
129	Two Curie temperatures in a single iron thin film. , 0, , .		0
130	Statistics of statisticians: Critical masses for research groups. Significance, 2012, 9, 22-25.	0.3	0
131	Photoinduced polarization enhancement on biased bilayer graphene in the Landau level regime. Journal of Physics Condensed Matter, 2019, 31, 495703.	0.7	0
132	Masse critique dâ€™un groupe de recherche. , 2011, , 21-23.	0.1	0
133	On the comparison of extensive and intensive measures of the efficiency of scientific groups. Reports National Academy of Science of Ukraine, 2014, , 75-81.	0.0	0
134	On the discontinuity of the specific heat of the Ising model on a scale-free network. Condensed Matter Physics, 2015, 18, 44601.	0.3	0
135	Complex-Network Approach for Visualizing and Quantifying the Evolution of a Scientific Topic. Advances in Human and Social Aspects of Technology Book Series, 2018, , 106-120.	0.3	0