

# Bertrand Georgeot

## List of Publications by Year in descending order

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92  
papers

2,357  
citations

186265

28  
h-index

233421

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g-index

94  
all docs

94  
docs citations

94  
times ranked

1181  
citing authors

#	ARTICLE	IF	CITATIONS
1	Inertial waves in a rotating spherical shell: attractors and asymptotic spectrum. <i>Journal of Fluid Mechanics</i> , 2001, 435, 103-144.	3.4	151
2	Quantum chaos border for quantum computing. <i>Physical Review E</i> , 2000, 62, 3504-3507.	2.1	136
3	Basin entropy: a new tool to analyze uncertainty in dynamical systems. <i>Scientific Reports</i> , 2016, 6, 31416.	3.3	135
4	Emergence of quantum chaos in the quantum computer core and how to manage it. <i>Physical Review E</i> , 2000, 62, 6366-6375.	2.1	110
5	Chaotic billiards generated by arithmetic groups. <i>Physical Review Letters</i> , 1992, 69, 1477-1480.	7.8	84
6	Scaling Theory of the Anderson Transition in Random Graphs: Ergodicity and Universality. <i>Physical Review Letters</i> , 2017, 118, 166801.	7.8	76
7	Asymptotic analysis of high-frequency acoustic modes in rapidly rotating stars. <i>Astronomy and Astrophysics</i> , 2009, 500, 1173-1192.	5.1	71
8	Integrability and Quantum Chaos in Spin Glass Shards. <i>Physical Review Letters</i> , 1998, 81, 5129-5132.	7.8	68
9	Exponential Gain in Quantum Computing of Quantum Chaos and Localization. <i>Physical Review Letters</i> , 2001, 86, 2890-2893.	7.8	67
10	Breit-Wigner Width and Inverse Participation Ratio in Finite Interacting Fermi Systems. <i>Physical Review Letters</i> , 1997, 79, 4365-4368.	7.8	64
11	Exact and Quasiclassical Fredholm Solutions of Quantum Billiards. <i>Physical Review Letters</i> , 1995, 74, 2851-2854.	7.8	54
12	Arithmetical chaos. <i>Physics Reports</i> , 1997, 291, 219-324.	25.6	54
13	Ray Splitting and Quantum Chaos. <i>Physical Review Letters</i> , 1996, 76, 2476-2479.	7.8	50
14	Wave chaos in rapidly rotating stars. <i>Physical Review E</i> , 2008, 78, 016215.	2.1	49
15	Smoothed density of states for problems with ray splitting. <i>Physical Review E</i> , 1996, 53, 207-213.	2.1	42
16	Wave Attractors in Rotating Fluids: A Paradigm for Ill-Posed Cauchy Problems. <i>Physical Review Letters</i> , 2000, 85, 4277-4280.	7.8	41
17	Quantum computing of delocalization in small-world networks. <i>Physical Review E</i> , 2005, 72, 036203.	2.1	41
18	Ray splitting and quantum chaos. <i>Physical Review E</i> , 1996, 53, 3284-3302.	2.1	39

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19	Chirality of Triangular Antiferromagnetic Clusters as a Qubit. <i>Physical Review Letters</i> , 2010, 104, 200502.	7.8	39
20	Two critical localization lengths in the Anderson transition on random graphs. <i>Physical Review Research</i> , 2020, 2, .	3.6	37
21	Fredholm method for scars. <i>Journal of Physics A</i> , 1996, 29, 919-937.	1.6	36
22	Stable Quantum Computation of Unstable Classical Chaos. <i>Physical Review Letters</i> , 2001, 86, 5393-5396.	7.8	34
23	Chaotic dynamics and fractal structures in experiments with cold atoms. <i>Physical Review A</i> , 2017, 95, .	2.5	34
24	Analysis of singular inertial modes in a spherical shell: the slender toroidal shell model. <i>Journal of Fluid Mechanics</i> , 2002, 463, 345-360.	3.4	33
25	Delocalization transition for the Google matrix. <i>Physical Review E</i> , 2009, 80, 026107.	2.1	33
26	Spectral properties of the Google matrix of the World Wide Web and other directed networks. <i>Physical Review E</i> , 2010, 81, 056109.	2.1	33
27	Optically Guided Beam Splitter for Propagating Matter Waves. <i>Physical Review Letters</i> , 2012, 109, 030403.	7.8	31
28	Quantum computing of quantum chaos in the kicked rotator model. <i>Physical Review E</i> , 2003, 67, 046220.	2.1	28
29	Fredholm Theory for Quasiclassical Scattering. <i>Physical Review Letters</i> , 1995, 74, 4110-4113.	7.8	27
30	Quantitative measure of interference. <i>Physical Review A</i> , 2006, 73, .	2.5	27
31	Multifractality and intermediate statistics in quantum maps. <i>Physical Review E</i> , 2008, 77, 035201.	2.1	27
32	Multifractal wave functions of simple quantum maps. <i>Physical Review E</i> , 2010, 82, 046206.	2.1	27
33	Regular oscillation sub-spectrum of rapidly rotating stars. <i>Astronomy and Astrophysics</i> , 2012, 546, A11.	5.1	24
34	Two Scenarios for Quantum Multifractality Breakdown. <i>Physical Review Letters</i> , 2014, 112, 234101.	7.8	23
35	Entanglement of localized states. <i>Physical Review A</i> , 2007, 76, .	2.5	22
36	Chaos-assisted tunneling resonances in a synthetic Floquet superlattice. <i>Science Advances</i> , 2020, 6, .	10.3	22

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37	Quantum Mechanics-Based Signal and Image Representation: Application to Denoising. IEEE Open Journal of Signal Processing, 2021, 2, 190-206.	3.5	22
38	Exploring Classically Chaotic Potentials with a Matter Wave Quantum Probe. Physical Review Letters, 2011, 107, 254104.	7.8	21
39	Cooling by Time Reversal of Atomic Matter Waves. Physical Review Letters, 2008, 100, 044106.	7.8	20
40	Quantum computation and analysis of Wigner and Husimi functions: Toward a quantum image treatment. Physical Review E, 2005, 71, 066215.	2.1	19
41	Time Reversal of Bose-Einstein Condensates. Physical Review Letters, 2008, 101, 074102.	7.8	19
42	Optimal number of controlled-NOT gates to generate a three-qubit state. Physical Review A, 2008, 77, .	2.5	18
43	Accuracy of neural networks for the simulation of chaotic dynamics: Precision of training data vs precision of the algorithm. Chaos, 2020, 30, 113118.	2.5	17
44	Trace formula for Riemann surfaces with magnetic field. Physical Review Letters, 1993, 71, 3786-3789.	7.8	16
45	Regular Modes in Rotating Stars. Physical Review Letters, 2011, 107, 121101.	7.8	16
46	Quantum computation of a complex system: The kicked Harper model. Physical Review E, 2004, 70, 056218.	2.1	14
47	Universal emergence of PageRank. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 465101.	2.1	14
48	Entropy of entanglement and multifractal exponents for random states. Physical Review A, 2009, 79, .	2.5	13
49	Pâ€modes in rapidly rotating stars: Looking for regular patterns in synthetic asymptotic spectra. Astronomische Nachrichten, 2010, 331, 1053-1056.	1.2	13
50	Interaction of a propagating guided matter wave with a localized potential. New Journal of Physics, 2010, 12, 085013.	2.9	12
51	Multifractality of quantum wave packets. Physical Review E, 2012, 86, 056215.	2.1	12
52	A Novel Image Denoising Algorithm Using Concepts of Quantum Many-Body Theory. Signal Processing, 2022, 201, 108690.	3.7	12
53	Multifractality of quantum wave functions in the presence of perturbations. Physical Review E, 2015, 92, 032914.	2.1	11
54	Plug-and-Play Quantum Adaptive Denoiser for Deconvolving Poisson Noisy Images. IEEE Access, 2021, 9, 139771-139791.	4.2	11

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55	Intermediate quantum maps for quantum computation. <i>Physical Review A</i> , 2005, 72, .	2.5	10
56	Realization of tunnel barriers for matter waves using spatial gaps. <i>Europhysics Letters</i> , 2013, 103, 50006.	2.0	10
57	Quantum computing of Poincaré recurrences and periodic orbits. <i>Physical Review A</i> , 2004, 69, .	2.5	9
58	The game of go as a complex network. <i>Europhysics Letters</i> , 2012, 97, 68002.	2.0	9
59	Kapitza stabilization of a repulsive Bose-Einstein condensate in an oscillating optical lattice. <i>Physical Review A</i> , 2018, 97, .	2.5	9
60	Multifractality of open quantum systems. <i>Physical Review E</i> , 2019, 100, 032223.	2.1	9
61	Quantum chaos on constant negative curvature surfaces. <i>Chaos, Solitons and Fractals</i> , 1995, 5, 1311-1323.	5.1	8
62	Strange attractor simulated on a quantum computer. <i>European Physical Journal D</i> , 2003, 22, 127-130.	1.3	8
63	Quantum Hamiltonian Computing protocols for molecular electronics Boolean logic gates. <i>Quantum Science and Technology</i> , 2019, 4, 035009.	5.8	8
64	Image Denoising Inspired by Quantum Many-Body physics. , 2021, , .		8
65	Georgeot and Shepelyansky Reply:. <i>Physical Review Letters</i> , 2002, 88, .	7.8	7
66	Interference versus success probability in quantum algorithms with imperfections. <i>Physical Review A</i> , 2008, 77, .	2.5	7
67	Routes towards the experimental observation of the large fluctuations due to chaos-assisted tunneling effects with cold atoms. <i>Physical Review A</i> , 2016, 94, .	2.5	7
68	Chaos-assisted tunneling in the presence of Anderson localization. <i>Physical Review E</i> , 2017, 96, 040201.	2.1	7
69	Chaos-Assisted Long-Range Tunneling for Quantum Simulation. <i>Physical Review Letters</i> , 2021, 126, 174102.	7.8	7
70	Quantum computation of multifractal exponents through the quantum wavelet transform. <i>Physical Review A</i> , 2009, 79, .	2.5	6
71	Move ordering and communities in complex networks describing the game of go. <i>European Physical Journal B</i> , 2014, 87, 1.	1.5	6
72	Band-gap structures for matter waves. <i>Physical Review A</i> , 2015, 92, .	2.5	6

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73	Distinguishing humans from computers in the game of go: A complex network approach. Europhysics Letters, 2017, 119, 48001.	2.0	6
74	Poisson Image Deconvolution by a Plug-and-Play Quantum Denoising Scheme. , 2021, , .		6
75	Quantum Denoising-Based Super-Resolution Algorithm Applied to Dental Tomography Images. , 2022, , .		6
76	Chaotic dynamics of a Bose-Einstein condensate coupled to a qubit. Physical Review E, 2009, 79, 066205.	2.1	5
77	Symmetry violation of quantum multifractality: Gaussian fluctuations versus algebraic localization. Physical Review Research, 2021, 3, .	3.6	5
78	Basin Entropy, a Measure of Final State Unpredictability and Its Application to the Chaotic Scattering of Cold Atoms. Understanding Complex Systems, 2018, , 9-34.	0.6	5
79	Trace formulas for arithmetical systems. Physical Review E, 1993, 47, R2217-R2220.	2.1	4
80	Regularities in the spectrum of chaotic p-modes in rapidly rotating stars. Astronomy and Astrophysics, 2019, 631, A140.	5.1	4
81	Coherent forward scattering peak and multifractality. Physical Review Research, 2021, 3, .	3.6	4
82	Quantum computing of semiclassical formulas. Physical Review E, 2008, 77, 046218.	2.1	3
83	Quantum circuit for three-qubit random states. Physical Review A, 2009, 80, .	2.5	3
84	Probing surface states with many-body wave packet scattering. Europhysics Letters, 2016, 115, 20010.	2.0	3
85	Correlations in the chaotic spectrum of pressure modes in rapidly rotating stars. Europhysics Letters, 2019, 125, 49002.	2.0	3
86	Quantum computing for physics research. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 559, 6-12.	1.6	2
87	Complexity of chaos and quantum computation. Mathematical Structures in Computer Science, 2007, 17, .	0.6	2
88	Despeckling Ultrasound Images Using Quantum Many-Body Physics. , 2021, , .		2
89	Quantum Algorithm for Exact Monte-Carlo Sampling. Physical Review Letters, 2010, 104, 250502.	7.8	1
90	Regular and Irregular Pressure Modes in Rapidly Rotating Stars. Lecture Notes in Physics, 2013, , 115-132.	0.7	1

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91	Entanglement and Localization of Wavefunctions. NATO Science for Peace and Security Series B: Physics and Biophysics, 2009, , 51-63.	0.3	0
92	Harmonic structures of Beethoven quartets: a complex network approach. European Physical Journal B, 2022, 95, .	1.5	0