

# Bertrand Georgeot

## List of Publications by Year in descending order

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92  
papers

2,357  
citations

186265

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h-index

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all docs

94  
docs citations

94  
times ranked

1181  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Quantum Denoising-Based Super-Resolution Algorithm Applied to Dental Tomography Images. , 2022, , .  |      | 6         |
| 2  | A Novel Image Denoising Algorithm Using Concepts of Quantum Many-Body Theory. Signal Processing, 2022, 201, 108690.                                    | 3.7  | 12        |
| 3  | Harmonic structures of Beethoven quartets: a complex network approach. European Physical Journal B, 2022, 95, .  | 1.5  | 0         |
| 4  | Chaos-Assisted Long-Range Tunneling for Quantum Simulation. Physical Review Letters, 2021, 126, 174102.  | 7.8  | 7         |
| 5  | Symmetry violation of quantum multifractality: Gaussian fluctuations versus algebraic localization. Physical Review Research, 2021, 3, .               | 3.6  | 5         |
| 6  | Coherent forward scattering peak and multifractality. Physical Review Research, 2021, 3, .   | 3.6  | 4         |
| 7  | Image Denoising Inspired by Quantum Many-Body physics. , 2021, , .   |      | 8         |
| 8  | Quantum Mechanics-Based Signal and Image Representation: Application to Denoising. IEEE Open Journal of Signal Processing, 2021, 2, 190-206.           | 3.5  | 22        |
| 9  | Plug-and-Play Quantum Adaptive Denoiser for Deconvolving Poisson Noisy Images. IEEE Access, 2021, 9, 139771-139791.                                    | 4.2  | 11        |
| 10 | Despeckling Ultrasound Images Using Quantum Many-Body Physics. , 2021, , .   |      | 2         |
| 11 | Poisson Image Deconvolution by a Plug-and-Play Quantum Denoising Scheme. , 2021, , .   |      | 6         |
| 12 | 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        |
| 13 | Chaos-assisted tunneling resonances in a synthetic Floquet superlattice. Science Advances, 2020, 6, .  | 10.3 | 22        |
| 14 | Two critical localization lengths in the Anderson transition on random graphs. Physical Review Research, 2020, 2, .                                    | 3.6  | 37        |
| 15 | Multifractality of open quantum systems. Physical Review E, 2019, 100, 032223.   | 2.1  | 9         |
| 16 | Quantum Hamiltonian Computing protocols for molecular electronics Boolean logic gates. Quantum Science and Technology, 2019, 4, 035009.                | 5.8  | 8         |
| 17 | Correlations in the chaotic spectrum of pressure modes in rapidly rotating stars. Europhysics Letters, 2019, 125, 49002.                               | 2.0  | 3         |
| 18 | Regularities in the spectrum of chaotic p-modes in rapidly rotating stars. Astronomy and Astrophysics, 2019, 631, A140.                                | 5.1  | 4         |

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|----|--|-----|-----------|
| 19 | Kapitza stabilization of a repulsive Bose-Einstein condensate in an oscillating optical lattice. Physical Review A, 2018, 97, .                                    | 2.5 | 9         |
| 20 | 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         |
| 21 | Distinguishing humans from computers in the game of go: A complex network approach. Europhysics Letters, 2017, 119, 48001.   | 2.0 | 6         |
| 22 | Chaotic dynamics and fractal structures in experiments with cold atoms. Physical Review A, 2017, 95, .   | 2.5 | 34        |
| 23 | Chaos-assisted tunneling in the presence of Anderson localization. Physical Review E, 2017, 96, 040201.  | 2.1 | 7         |
| 24 | Scaling Theory of the Anderson Transition in Random Graphs: Ergodicity and Universality. Physical Review Letters, 2017, 118, 166801.                               | 7.8 | 76        |
| 25 | Basin entropy: a new tool to analyze uncertainty in dynamical systems. Scientific Reports, 2016, 6, 31416.   | 3.3 | 135       |
| 26 | Probing surface states with many-body wave packet scattering. Europhysics Letters, 2016, 115, 20010.   | 2.0 | 3         |
| 27 | Routes towards the experimental observation of the large fluctuations due to chaos-assisted tunneling effects with cold atoms. Physical Review A, 2016, 94, .      | 2.5 | 7         |
| 28 | Band-gap structures for matter waves. Physical Review A, 2015, 92, .   | 2.5 | 6         |
| 29 | Multifractality of quantum wave functions in the presence of perturbations. Physical Review E, 2015, 92, 032914.   | 2.1 | 11        |
| 30 | Move ordering and communities in complex networks describing the game of go. European Physical Journal B, 2014, 87, 1.   | 1.5 | 6         |
| 31 | Two Scenarios for Quantum Multifractality Breakdown. Physical Review Letters, 2014, 112, 234101.   | 7.8 | 23        |
| 32 | Realization of tunnel barriers for matter waves using spatial gaps. Europhysics Letters, 2013, 103, 50006.   | 2.0 | 10        |
| 33 | Regular and Irregular Pressure Modes in Rapidly Rotating Stars. Lecture Notes in Physics, 2013, , 115-132.   | 0.7 | 1         |
| 34 | The game of go as a complex network. Europhysics Letters, 2012, 97, 68002.   | 2.0 | 9         |
| 35 | Multifractality of quantum wave packets. Physical Review E, 2012, 86, 056215.  | 2.1 | 12        |
| 36 | Optically Guided Beam Splitter for Propagating Matter Waves. Physical Review Letters, 2012, 109, 030403.   | 7.8 | 31        |

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|----|---|-----|-----------|
| 37 | Regular oscillation sub-spectrum of rapidly rotating stars. <i>Astronomy and Astrophysics</i> , 2012, 546, A11.   | 5.1 | 24        |
| 38 | Universal emergence of PageRank. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2011, 44, 465101.  | 2.1 | 14        |
| 39 | Exploring Classically Chaotic Potentials with a Matter Wave Quantum Probe. <i>Physical Review Letters</i> , 2011, 107, 254104.                          | 7.8 | 21        |
| 40 | Regular Modes in Rotating Stars. <i>Physical Review Letters</i> , 2011, 107, 121101.  | 7.8 | 16        |
| 41 | Modes in rapidly rotating stars: Looking for regular patterns in synthetic asymptotic spectra. <i>Astronomische Nachrichten</i> , 2010, 331, 1053-1056. | 1.2 | 13        |
| 42 | Quantum Algorithm for Exact Monte Carlo Sampling. <i>Physical Review Letters</i> , 2010, 104, 250502.   | 7.8 | 1         |
| 43 | 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        |
| 44 | Chirality of Triangular Antiferromagnetic Clusters as a Qubit. <i>Physical Review Letters</i> , 2010, 104, 200502.                                      | 7.8 | 39        |
| 45 | Interaction of a propagating guided matter wave with a localized potential. <i>New Journal of Physics</i> , 2010, 12, 085013.                           | 2.9 | 12        |
| 46 | Multifractal wave functions of simple quantum maps. <i>Physical Review E</i> , 2010, 82, 046206.  | 2.1 | 27        |
| 47 | Asymptotic analysis of high-frequency acoustic modes in rapidly rotating stars. <i>Astronomy and Astrophysics</i> , 2009, 500, 1173-1192.               | 5.1 | 71        |
| 48 | Entropy of entanglement and multifractal exponents for random states. <i>Physical Review A</i> , 2009, 79, .  | 2.5 | 13        |
| 49 | Chaotic dynamics of a Bose-Einstein condensate coupled to a qubit. <i>Physical Review E</i> , 2009, 79, 066205.   | 2.1 | 5         |
| 50 | Quantum circuit for three-qubit random states. <i>Physical Review A</i> , 2009, 80, .   | 2.5 | 3         |
| 51 | Delocalization transition for the Google matrix. <i>Physical Review E</i> , 2009, 80, 026107.   | 2.1 | 33        |
| 52 | Quantum computation of multifractal exponents through the quantum wavelet transform. <i>Physical Review A</i> , 2009, 79, .                             | 2.5 | 6         |
| 53 | Entanglement and Localization of Wavefunctions. <i>NATO Science for Peace and Security Series B: Physics and Biophysics</i> , 2009, , 51-63.            | 0.3 | 0         |
| 54 | Multifractality and intermediate statistics in quantum maps. <i>Physical Review E</i> , 2008, 77, 035201.   | 2.1 | 27        |

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|----|---|-----|-----------|
| 55 | Wave chaos in rapidly rotating stars. <i>Physical Review E</i> , 2008, 78, 016215.  | 2.1 | 49        |
| 56 | Optimal number of controlled-NOT gates to generate a three-qubit state. <i>Physical Review A</i> , 2008, 77, .  | 2.5 | 18        |
| 57 | Interference versus success probability in quantum algorithms with imperfections. <i>Physical Review A</i> , 2008, 77, .  | 2.5 | 7         |
| 58 | Quantum computing of semiclassical formulas. <i>Physical Review E</i> , 2008, 77, 046218.   | 2.1 | 3         |
| 59 | Time Reversal of Bose-Einstein Condensates. <i>Physical Review Letters</i> , 2008, 101, 074102.   | 7.8 | 19        |
| 60 | Cooling by Time Reversal of Atomic Matter Waves. <i>Physical Review Letters</i> , 2008, 100, 044106.  | 7.8 | 20        |
| 61 | Entanglement of localized states. <i>Physical Review A</i> , 2007, 76, .  | 2.5 | 22        |
| 62 | Complexity of chaos and quantum computation. <i>Mathematical Structures in Computer Science</i> , 2007, 17, .   | 0.6 | 2         |
| 63 | Quantum computing for physics research. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2006, 559, 6-12. | 1.6 | 2         |
| 64 | Quantitative measure of interference. <i>Physical Review A</i> , 2006, 73, .  | 2.5 | 27        |
| 65 | Quantum computation and analysis of Wigner and Husimi functions: Toward a quantum image treatment. <i>Physical Review E</i> , 2005, 71, 066215.   | 2.1 | 19        |
| 66 | Intermediate quantum maps for quantum computation. <i>Physical Review A</i> , 2005, 72, .   | 2.5 | 10        |
| 67 | Quantum computing of delocalization in small-world networks. <i>Physical Review E</i> , 2005, 72, 036203.   | 2.1 | 41        |
| 68 | Quantum computing of Poincaré recurrences and periodic orbits. <i>Physical Review A</i> , 2004, 69, .   | 2.5 | 9         |
| 69 | Quantum computation of a complex system: The kicked Harper model. <i>Physical Review E</i> , 2004, 70, 056218.  | 2.1 | 14        |
| 70 | Strange attractor simulated on a quantum computer. <i>European Physical Journal D</i> , 2003, 22, 127-130.  | 1.3 | 8         |
| 71 | Quantum computing of quantum chaos in the kicked rotator model. <i>Physical Review E</i> , 2003, 67, 046220.  | 2.1 | 28        |
| 72 | Georgeot and Shepelyansky Reply:. <i>Physical Review Letters</i> , 2002, 88, .  | 7.8 | 7         |

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|----|---|------|-----------|
| 73 | Analysis of singular inertial modes in a spherical shell: the slender toroidal shell model. Journal of Fluid Mechanics, 2002, 463, 345-360. | 3.4  | 33        |
| 74 | Inertial waves in a rotating spherical shell: attractors and asymptotic spectrum. Journal of Fluid Mechanics, 2001, 435, 103-144.           | 3.4  | 151       |
| 75 | Exponential Gain in Quantum Computing of Quantum Chaos and Localization. Physical Review Letters, 2001, 86, 2890-2893.                      | 7.8  | 67        |
| 76 | Stable Quantum Computation of Unstable Classical Chaos. Physical Review Letters, 2001, 86, 5393-5396.                                       | 7.8  | 34        |
| 77 | Wave Attractors in Rotating Fluids: A Paradigm for Ill-Posed Cauchy Problems. Physical Review Letters, 2000, 85, 4277-4280.                 | 7.8  | 41        |
| 78 | Quantum chaos border for quantum computing. Physical Review E, 2000, 62, 3504-3507.   | 2.1  | 136       |
| 79 | Emergence of quantum chaos in the quantum computer core and how to manage it. Physical Review E, 2000, 62, 6366-6375.                       | 2.1  | 110       |
| 80 | Integrability and Quantum Chaos in Spin Glass Shards. Physical Review Letters, 1998, 81, 5129-5132.   | 7.8  | 68        |
| 81 | Breit-Wigner Width and Inverse Participation Ratio in Finite Interacting Fermi Systems. Physical Review Letters, 1997, 79, 4365-4368.       | 7.8  | 64        |
| 82 | Arithmetical chaos. Physics Reports, 1997, 291, 219-324.  | 25.6 | 54        |
| 83 | Smoothed density of states for problems with ray splitting. Physical Review E, 1996, 53, 207-213.   | 2.1  | 42        |
| 84 | Ray splitting and quantum chaos. Physical Review E, 1996, 53, 3284-3302.  | 2.1  | 39        |
| 85 | Ray Splitting and Quantum Chaos. Physical Review Letters, 1996, 76, 2476-2479.  | 7.8  | 50        |
| 86 | Fredholm method for scars. Journal of Physics A, 1996, 29, 919-937.   | 1.6  | 36        |
| 87 | Quantum chaos on constant negative curvature surfaces. Chaos, Solitons and Fractals, 1995, 5, 1311-1323.                                    | 5.1  | 8         |
| 88 | Fredholm Theory for Quasiclassical Scattering. Physical Review Letters, 1995, 74, 4110-4113.  | 7.8  | 27        |
| 89 | Exact and Quasiclassical Fredholm Solutions of Quantum Billiards. Physical Review Letters, 1995, 74, 2851-2854.                             | 7.8  | 54        |
| 90 | Trace formula for Riemann surfaces with magnetic field. Physical Review Letters, 1993, 71, 3786-3789.                                       | 7.8  | 16        |

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|----|---|-----|-----------|
| 91 | Trace formulas for arithmetical systems. Physical Review E, 1993, 47, R2217-R2220.              | 2.1 | 4         |
| 92 | Chaotic billiards generated by arithmetic groups. Physical Review Letters, 1992, 69, 1477-1480. | 7.8 | 84        |