

# Bruce J West

## List of Publications by Year in descending order

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88  
papers

4,023  
citations

186265

28  
h-index

149698

56  
g-index

94  
all docs

94  
docs citations

94  
times ranked

2616  
citing authors

#	ARTICLE	IF	CITATIONS
1	Size and History Combine in Allometry Relation of Technology Systems. <i>Journal of Defense Modeling and Simulation</i> , 2022, 19, 417-422.	1.7	1
2	The Fractal Tapestry of Life: II Entailment of Fractional Oncology by Physiology Networks. <i>Frontiers in Network Physiology</i> , 2022, 2, .	1.8	3
3	The Fractal Tapestry of Life: III Multifractals Entail the Fractional Calculus. <i>Fractal and Fractional</i> , 2022, 6, 225.	3.3	2
4	Why Do Big Data and Machine Learning Entail the Fractional Dynamics?. <i>Entropy</i> , 2021, 23, 297.	2.2	20
5	Caputo Fractional Derivative and Quantum-Like Coherence. <i>Entropy</i> , 2021, 23, 211.	2.2	3
6	Fractional Calculus and the Future of Science. <i>Entropy</i> , 2021, 23, 1566.	2.2	7
7	Hypothetical Control of Fatal Quarrel Variability. <i>Entropy</i> , 2021, 23, 1693.	2.2	0
8	Relating size and functionality in human social networks through complexity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 18355-18358.	7.1	25
9	Selfish algorithm and emergence of collective intelligence. <i>Journal of Complex Networks</i> , 2020, 8, .	1.8	6
10	Sir Isaac Newton Stranger in a Strange Land. <i>Entropy</i> , 2020, 22, 1204.	2.2	11
11	On the dynamical foundation of multifractality. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2020, 551, 124038.	2.6	7
12	Changes in Interictal Pretreatment and Posttreatment EEG in Childhood Absence Epilepsy. <i>Frontiers in Neuroscience</i> , 2020, 14, 196.	2.8	11
13	Diffusion Entropy vs. Multiscale and Rényi Entropy to Detect Progression of Autonomic Neuropathy. <i>Frontiers in Physiology</i> , 2020, 11, 607324.	2.8	16
14	Significance of trends in gait dynamics. <i>PLoS Computational Biology</i> , 2020, 16, e1007180.	3.2	5
15	Persistent random motion with maximally correlated fluctuations. <i>Physical Review E</i> , 2019, 100, 022119.	2.1	1
16	Hypothetical Control of Heart Rate Variability. <i>Frontiers in Physiology</i> , 2019, 10, 1078.	2.8	9
17	Entropic Approach to the Detection of Crucial Events. <i>Entropy</i> , 2019, 21, 178.	2.2	18
18	Fractional Dynamics of Individuals in Complex Networks. <i>Frontiers in Physics</i> , 2018, 6, .	2.1	14

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19	Bridging Waves and Crucial Events in the Dynamics of the Brain. <i>Frontiers in Physiology</i> , 2018, 9, 1174.	2.8	14
20	Self-Organized Temporal Criticality: Bottom-Up Resilience versus Top-Down Vulnerability. <i>Complexity</i> , 2018, 2018, 1-10.	1.6	12
21	Meditation-Induced Coherence and Crucial Events. <i>Frontiers in Physiology</i> , 2018, 9, 626.	2.8	10
22	Asymmetry of short-term control of spatio-temporal gait parameters during treadmill walking. <i>Scientific Reports</i> , 2017, 7, 44349.	3.3	8
23	Crucial events, randomness, and multifractality in heartbeats. <i>Physical Review E</i> , 2017, 96, 062216.	2.1	24
24	Self-organizing Complex Networks: individual versus global rules. <i>Frontiers in Physiology</i> , 2017, 8, 478.	2.8	45
25	The fractional landau model. <i>IEEE/CAA Journal of Automatica Sinica</i> , 2016, 3, 257-260.	13.1	2
26	Spectral decomposition of nonlinear systems with memory. <i>Physical Review E</i> , 2016, 93, 022211.	2.1	30
27	Nonergodic complexity management. <i>Physical Review E</i> , 2016, 93, 062301.	2.1	10
28	Information Forces. <i>Journal of Theoretical and Computational Science</i> , 2016, 03, .	0.1	1
29	From Neural and Social Cooperation to the Global Emergence of Cognition. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015, 3, 78.	4.1	13
30	Diffusion in heterogeneous media: An iterative scheme for finding approximate solutions to fractional differential equations with time-dependent coefficients. <i>Journal of Computational Physics</i> , 2015, 293, 297-311.	3.8	16
31	Structural determinants of criticality in biological networks. <i>Frontiers in Physiology</i> , 2015, 6, 127.	2.8	32
32	A Fractional Probability Calculus View of Allometry. <i>Systems</i> , 2014, 2, 89-118.	2.3	5
33	A mathematics for medicine: The Network Effect. <i>Frontiers in Physiology</i> , 2014, 5, 456.	2.8	19
34	<i>Colloquium</i>: Fractional calculus view of complexity: A tutorial. <i>Reviews of Modern Physics</i> , 2014, 86, 1169-1186.	45.6	117
35	Renewal and memory origin of anomalous diffusion: A discussion of their joint action. <i>Physical Review E</i> , 2013, 88, 062106.	2.1	13
36	Physiologic time: A hypothesis. <i>Physics of Life Reviews</i> , 2013, 10, 210-224.	2.8	43

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37	Networking of psychophysics, psychology, and neurophysiology. <i>Frontiers in Physiology</i> , 2012, 3, 423.	2.8	2
38	From Self-Organized to Extended Criticality. <i>Frontiers in Physiology</i> , 2012, 3, 98.	2.8	28
39	ON ALLOMETRY RELATIONS. <i>International Journal of Modern Physics B</i> , 2012, 26, 1230010.	2.0	23
40	Transmission of information between complex systems: $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 1 \langle \text{mml:mn} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mi} \rangle f \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ resonance <i>Physical Review E</i> , 2011, 83, 051130.	2.1	57
41	Can intermittent long-range jumps of a random walker compensate for lethargy?. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2011, 44, 152003.	2.1	3
42	NETWORKS AND $1/f$ NOISE. <i>Fluctuation and Noise Letters</i> , 2011, 10, 515-531.	1.5	1
43	The wisdom of the body; a contemporary view. <i>Frontiers in Physiology</i> , 2010, 1, 1.	2.8	101
44	Fractal physiology and the fractional calculus: a perspective. <i>Frontiers in Physiology</i> , 2010, 1, 12.	2.8	159
45	Beyond the Death of Linear Response: $1/f$ Optimal Information Transport. <i>Physical Review Letters</i> , 2010, 105, 040601.	7.8	51
46	Spontaneous brain activity as a source of ideal $1/f$ noise. <i>Physical Review E</i> , 2009, 80, 061914.	2.1	100
47	A theory of noise in human cognition. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2009, 388, 4192-4204.	2.6	72
48	Control from an Allometric Perspective. <i>Advances in Experimental Medicine and Biology</i> , 2009, 629, 57-82.	1.6	11
49	Maximizing information exchange between complex networks. <i>Physics Reports</i> , 2008, 468, 1-99.	25.6	211
50	Fractal response of physiological signals to stress conditions, environmental changes, and neurodegenerative diseases. <i>Complexity</i> , 2007, 12, 12-17.	1.6	42
51	Thoughts on modeling complexity. <i>Complexity</i> , 2006, 11, 33-43.	1.6	11
52	Wavelet analysis of scaling properties of gastric electrical activity. <i>Journal of Applied Physiology</i> , 2006, 101, 1425-1431.	2.5	8
53	Multiscaling comparative analysis of time series and geophysical phenomena. <i>Complexity</i> , 2005, 10, 51-56.	1.6	25
54	The independently fractal nature of respiration and heart rate during exercise under normobaric and hyperbaric conditions. <i>Respiratory Physiology and Neurobiology</i> , 2005, 145, 219-233.	1.6	29

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55	An out-of-equilibrium model of the distributions of wealth. Quantitative Finance, 2004, 4, 353-364.	1.7	46
56	EVIDENCE OF "ESSENTIAL UNCERTAINTY" IN EMERGENCY-WARD LENGTH OF STAY. Fractals, 2004, 12, 197-209.	3.7	5
57	Influence of Progressive Central Hypovolemia on Hölder Exponent Distributions of Cardiac Interbeat Intervals. Annals of Biomedical Engineering, 2004, 32, 1077-1087.	2.5	16
58	Multifractality of cerebral blood flow. Physica A: Statistical Mechanics and Its Applications, 2003, 318, 453-460.	2.6	40
59	Nonlinear dynamical model of human gait. Physical Review E, 2003, 67, 051917.	2.1	151
60	Wavelet analysis of epileptic spikes. Physical Review E, 2003, 67, 052902.	2.1	71
61	Fractional Langevin model of memory in financial time series. Physical Review E, 2002, 65, 037106.	2.1	52
62	SOCIAL, BIOLOGICAL AND PHYSICAL META-MECHANISMS: A TALE OF TAILS. , 2002, , .		0
63	Fractional calculus and the evolution of fractal phenomena. Physica A: Statistical Mechanics and Its Applications, 1999, 265, 535-546.	2.6	113
64	LEVY STATISTICS OF WATER WAVE LOADING ON SHIPS AND PLATFORMS. , 1998, , 252-265.		0
65	Comment on "Quantum suppression of chaos in the spin-boson model". Physical Review E, 1997, 56, 2325-2328.	2.1	0
66	Chaotic properties of internal wave triad interactions. Physics of Fluids, 1997, 9, 632-647.	4.0	14
67	Quantum Irreversibility and Chaos. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1997, 52, 53-58.	1.5	0
68	The Application of Nonlinear Dynamics in Nursing Research. Nonlinear Dynamics, Psychology, and Life Sciences, 1997, 1, 237-261.	0.2	2
69	Dynamical approach to Lévy processes. Physical Review E, 1996, 54, 4760-4767.	2.1	70
70	EXTREMA OF FRACTAL RANDOM WATER WAVES. International Journal of Modern Physics B, 1996, 10, 67-132.	2.0	7
71	Anomalous diffusion and the correspondence principle. Physical Review E, 1995, 51, 5524-5534.	2.1	23
72	ANALYSIS AND NUMERICAL COMPUTATION OF THE DIMENSION OF COLORED NOISE AND DETERMINISTIC TIME SERIES WITH POWER-LAW SPECTRA. Fractals, 1994, 02, 53-64.	3.7	0

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73	A DYNAMICAL APPROACH TO FRACTIONAL BROWNIAN MOTION. <i>Fractals</i> , 1994, 02, 81-94.	3.7	32
74	Quantum dissipative systems. <i>Journal of Statistical Physics</i> , 1994, 77, 951-952.	1.2	0
75	Fractal physiology for physicists: Lévy statistics. <i>Physics Reports</i> , 1994, 246, 1-100.	25.6	247
76	Tunneling versus Chaos in the Kicked Harper Model. <i>Physical Review Letters</i> , 1994, 73, 802-805.	7.8	51
77	Fractal Physiology. , 1994, , .		515
78	CHAOS, NOISE AND COMPLEX FRACTAL DIMENSIONS. <i>Fractals</i> , 1993, 01, 21-28.	3.7	4
79	IRREVERSIBILITY AND QUANTUM MACROSCOPIC EFFECTS IN CLASSICALLY CHAOTIC SYSTEMS. <i>International Journal of Modern Physics B</i> , 1993, 07, 1175-1205.	2.0	3
80	METHODS FOR DISTINGUISHING CHAOS FROM COLORED NOISE. <i>Studies of Nonlinear Phenomena in Life Science</i> , 1993, , 1-41.	0.2	0
81	Geophysical attractors may be only colored noise. <i>Journal of Applied Physics</i> , 1991, 69, 6747-6749.	2.5	7
82	A model of turbulent mixing in the A+B $\rightarrow$ 0 reaction. <i>Journal of Statistical Physics</i> , 1991, 65, 1247-1260.	1.2	4
83	The Disproportionate Response. , 1990, , 258-290.		1
84	Science in Pictures: Chaos and Fractals in Human Physiology. <i>Scientific American</i> , 1990, 262, 42-49.	1.0	625
85	Physiology in fractal dimensions: Error tolerance. <i>Annals of Biomedical Engineering</i> , 1990, 18, 135-149.	2.5	113
86	FRACTAL FORMS IN PHYSIOLOGY. <i>International Journal of Modern Physics B</i> , 1990, 04, 1629-1669.	2.0	39
87	Linear systems with Lévy fluctuations. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1982, 113, 203-216.	2.6	126
88	On an Enriched Collection of Stochastic Processes. , 1979, , 61-175.		92