

Zbigniew R. Struzik

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

100
papers

3,436
citations

27
h-index

58
g-index

122
ext. papers

4,092
ext. citations

3.5
avg, IF

4.88
L-index

#	Paper	IF	Citations
100	Multifractality in human heartbeat dynamics. <i>Nature</i> , 1999 , 399, 461-5	50.4	1214
99	From 1/f noise to multifractal cascades in heartbeat dynamics. <i>Chaos</i> , 2001 , 11, 641-652	3.3	328
98	Universal scaling law in human behavioral organization. <i>Physical Review Letters</i> , 2007 , 99, 138103	7.4	102
97	Noisy vestibular stimulation improves autonomic and motor responsiveness in central neurodegenerative disorders. <i>Annals of Neurology</i> , 2005 , 58, 175-81	9.4	98
96	Feature learning from incomplete EEG with denoising autoencoder. <i>Neurocomputing</i> , 2015 , 165, 23-31	5.4	91
95	Critical scale invariance in a healthy human heart rate. <i>Physical Review Letters</i> , 2004 , 93, 178103	7.4	88
94	Phase transition in a healthy human heart rate. <i>Physical Review Letters</i> , 2005 , 95, 058101	7.4	82
93	Seven-hour multiunit recordings from rats reveal very long-term correlation in the cortical activity. <i>BMC Neuroscience</i> , 2010 , 11,	3.2	78
92	Criticality and phase transition in stock-price fluctuations. <i>Physical Review Letters</i> , 2006 , 96, 068701	7.4	78
91	Non-Gaussian heart rate as an independent predictor of mortality in patients with chronic heart failure. <i>Heart Rhythm</i> , 2008 , 5, 261-8	6.7	74
90	DETERMINING LOCAL SINGULARITY STRENGTHS AND THEIR SPECTRA WITH THE WAVELET TRANSFORM. <i>Fractals</i> , 2000 , 08, 163-179	3.2	68
89	Model for complex heart rate dynamics in health and diseases. <i>Physical Review E</i> , 2005 , 72, 041904	2.4	66
88	Wavelet methods in (financial) time-series processing. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2001 , 296, 307-319	3.3	63
87	Of mice and men--universality and breakdown of behavioral organization. <i>PLoS ONE</i> , 2008 , 3, e2050	3.7	61
86	What electrophysiology tells us about Alzheimer's disease: a window into the synchronization and connectivity of brain neurons. <i>Neurobiology of Aging</i> , 2020 , 85, 58-73	5.6	59
85	Dynamics of sleep stage transitions in healthy humans and patients with chronic fatigue syndrome. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2008 , 294, R1980-7	3.2	53
84	The Haar Wavelet Transform in the Time Series Similarity Paradigm. <i>Lecture Notes in Computer Science</i> , 1999 , 12-22	0.9	51

83	1/f scaling in heart rate requires antagonistic autonomic control. <i>Physical Review E</i> , 2004 , 70, 050901	2.4	45
82	Structural and topological phase transitions on the German Stock Exchange. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2013 , 392, 5963-5973	3.3	43
81	Wavelet transform based multifractal formalism in outlier detection and localisation for financial time series. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2002 , 309, 388-402	3.3	41
80	Sleep-stage dynamics in patients with chronic fatigue syndrome with or without fibromyalgia. <i>Sleep</i> , 2011 , 34, 1551-60	1.1	37
79	Estimator of a non-Gaussian parameter in multiplicative log-normal models. <i>Physical Review E</i> , 2007 , 76, 041113	2.4	37
78	Increased non-gaussianity of heart rate variability predicts cardiac mortality after an acute myocardial infarction. <i>Frontiers in Physiology</i> , 2011 , 2, 65	4.6	36
77	Wavelet-based multiscale resolution analysis of real and simulated time-series of earthquakes. <i>Geophysical Journal International</i> , 2006 , 164, 63-74	2.6	35
76	Multiscale probability density function analysis: non-Gaussian and scale-invariant fluctuations of healthy human heart rate. <i>IEEE Transactions on Biomedical Engineering</i> , 2006 , 53, 95-102	5	33
75	Plasma cytokine fluctuations over time in healthy controls and patients with fibromyalgia. <i>Experimental Biology and Medicine</i> , 2009 , 234, 232-40	3.7	29
74	Long-range negative correlation of glucose dynamics in humans and its breakdown in diabetes mellitus. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2006 , 291, R1638-43	3.2	29
73	Long-range Correlated Glucose Fluctuations in Diabetes. <i>Methods of Information in Medicine</i> , 2007 , 46, 222-226	1.5	25
72	NREM sleep stage transitions control ultradian REM sleep rhythm. <i>Sleep</i> , 2011 , 34, 1423-32	1.1	23
71	Unique very low-frequency heart rate variability during deep sleep in humans. <i>IEEE Transactions on Biomedical Engineering</i> , 2006 , 53, 28-34	5	21
70	Aging of complex heart rate dynamics. <i>IEEE Transactions on Biomedical Engineering</i> , 2006 , 53, 89-94	5	21
69	REVEALING LOCAL VARIABILITY PROPERTIES OF HUMAN HEARTBEAT INTERVALS WITH THE LOCAL EFFECTIVE HINDER EXPONENT. <i>Fractals</i> , 2001 , 09, 77-93	3.2	20
68	Entropic Measures of Complexity of Short-Term Dynamics of Nocturnal Heartbeats in an Aging Population. <i>Entropy</i> , 2015 , 17, 1253-1272	2.8	18
67	The lack of long-range negative correlations in glucose dynamics is associated with worse glucose control in patients with diabetes mellitus. <i>Metabolism: Clinical and Experimental</i> , 2012 , 61, 1041-50	12.7	17
66	Dynamic Structural and Topological Phase Transitions on the Warsaw Stock Exchange: A Phenomenological Approach. <i>Acta Physica Polonica A</i> , 2013 , 123, 615-620	0.6	16

65	On the recurrence time of earthquakes: insight from Vrancea (Romania) intermediate-depth events. <i>Geophysical Journal International</i> , 2008 , 172, 395-404	2.6	15
64	Autonomic Imbalance Induced Breakdown of Long-range Dependence in Healthy Heart Rate. <i>Methods of Information in Medicine</i> , 2007 , 46, 174-178	1.5	12
63	Wavelet transform in similarity paradigm. <i>Lecture Notes in Computer Science</i> , 1998 , 295-309	0.9	12
62	Complexity of cardiovascular rhythms during head-up tilt test by entropy of patterns. <i>Physiological Measurement</i> , 2017 , 38, 819-832	2.9	11
61	THE WAVELET TRANSFORM IN THE SOLUTION TO THE INVERSE FRACTAL PROBLEM. <i>Fractals</i> , 1995 , 03, 329-350	3.2	11
60	Exact probability distribution function for multifractal random walk models of stocks. <i>Europhysics Letters</i> , 2011 , 95, 28007	1.6	10
59	Temporal condensation and dynamic transition within the complex network: an application to real-life market evolution. <i>European Physical Journal B</i> , 2015 , 88, 1	1.2	9
58	Dynamic bifurcations on financial markets. <i>Chaos, Solitons and Fractals</i> , 2016 , 88, 126-142	9.3	9
57	Chronographic Imprint of Age-Induced Alterations in Heart Rate Dynamical Organization. <i>Frontiers in Physiology</i> , 2015 , 6, 201	4.6	8
56	Sleep stage transitions in chronic fatigue syndrome patients with or without fibromyalgia. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2010 , 2010, 5391-4	0.9	8
55	Local Effective Hölder Exponent Estimation on the Wavelet Transform Maxima Tree 1999 , 93-112		8
54	Heart Rhythm Insights Into Structural Remodeling in Atrial Tissue: Timed Automata Approach. <i>Frontiers in Physiology</i> , 2018 , 9, 1859	4.6	7
53	Phase statistics approach to human ventricular fibrillation. <i>Physical Review E</i> , 2009 , 80, 051917	2.4	7
52	Adaptive decision making via entropy minimization. <i>International Journal of Approximate Reasoning</i> , 2018 , 103, 270-287	3.6	7
51	Network tools for tracing the dynamics of heart rate after cardiac transplantation. <i>Chaos, Solitons and Fractals</i> , 2016 , 90, 101-110	9.3	6
50	Multi-command Tactile Brain Computer Interface: A Feasibility Study. <i>Lecture Notes in Computer Science</i> , 2013 , 50-59	0.9	6
49	Sleep stage transitions in healthy humans altered by central monoaminergic antagonist. <i>Methods of Information in Medicine</i> , 2010 , 49, 458-61	1.5	6
48	Increased heteroscedasticity of heart rate in fatal heart failure. <i>Europhysics Letters</i> , 2008 , 82, 28005	1.6	6

47	Semi-Automated Biomarker Discovery from Pharmacodynamic Effects on EEG in ADHD Rodent Models. <i>Scientific Reports</i> , 2018 , 8, 5202	4.9	5
46	Dynamical Landscape of Heart Rhythm in Long-Term Heart Transplant Recipients: A Way to Discern Erratic Rhythms. <i>Frontiers in Physiology</i> , 2018 , 9, 274	4.6	5
45	Transition Network Entropy in Characterization of Complexity of Heart Rhythm After Heart Transplantation. <i>Acta Physica Polonica B</i> , 2014 , 45, 1771	1.9	5
44	Near scale-free dynamics in neural population activity of waking/sleeping rats revealed by multiscale analysis. <i>PLoS ONE</i> , 2010 , 5, e12869	3.7	5
43	Multistructure index in revealing complexity of regulatory mechanisms of human cardiovascular system at rest and orthostatic stress in healthy humans. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2017 , 468, 809-824	3.3	4
42	Granger Causality and Transfer Entropy for Financial Returns. <i>Acta Physica Polonica A</i> , 2015 , 127, A-129-A-135	4.635	4
41	Multistructure index characterization of heart rate and systolic blood pressure reveals precursory signs of syncope. <i>Scientific Reports</i> , 2017 , 7, 419	4.9	4
40	Impact of the Editing of Patterns with Abnormal $\$RR\$$ -intervals on the Assessment of Heart Rate Variability. <i>Acta Physica Polonica B</i> , 2014 , 45, 2103	1.9	4
39	Temporal evolution for the phase histogram of ECG during human ventricular fibrillation. <i>AIP Conference Proceedings</i> , 2007 ,	0	4
38	Time Series Rule Discovery: Tough, Not Meaningless. <i>Lecture Notes in Computer Science</i> , 2003 , 32-39	0.9	4
37	Complex Data: Mining Using Patterns. <i>Lecture Notes in Computer Science</i> , 2002 , 24-35	0.9	4
36	Generalised heart rate statistics reveal neurally mediated homeostasis transients. <i>Europhysics Letters</i> , 2015 , 110, 28002	1.6	3
35	Dynamical Pattern Representation of Cardiovascular Couplings Evoked by Head-up Tilt Test. <i>Entropy</i> , 2018 , 20,	2.8	3
34	Short-term ECG recording for the identification of cardiac autonomic neuropathy in people with diabetes mellitus. <i>AIP Conference Proceedings</i> , 2007 ,	0	3
33	Taking the pulse of the economy. <i>Quantitative Finance</i> , 2003 , 3, C78-C82	1.6	3
32	CUMULATIVE EFFECTIVE HINDER EXPONENT BASED INDICATOR FOR REAL-TIME FETAL HEARTBEAT ANALYSIS DURING LABOUR 2002 ,		3
31	Community Structure in Network Representation of Increments in Beat-to-beat Time Intervals of the Heart in Patients After Heart Transplantation. <i>Acta Physica Polonica B</i> , 2013 , 44, 1219	1.9	3
30	Towards a Universal Measure of Complexity. <i>Entropy</i> , 2020 , 22,	2.8	3

29	Multibranch multifractality and the phase transitions in time series of mean interevent times. <i>Physical Review E</i> , 2020 , 101, 063303	2.4	2
28	Noise as a potential controller in antagonist inter-reacting systems. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2018 , 512, 500-506	3.3	2
27	Complexity of the heart rhythm after heart transplantation by entropy of transition network for RR-increments of RR time intervals between heartbeats. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2013 , 2013, 6127-30	0.9	2
26	Reasoning from non-stationarity. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2002 , 314, 246-255	3.3	2
25	Changes in the Hurst Exponent of Heart Rate Variability during Physical Activity. <i>AIP Conference Proceedings</i> , 2005 ,	0	2
24	SOLVING THE TWO-DIMENSIONAL INVERSE FRACTAL PROBLEM WITH THE WAVELET TRANSFORM. <i>Fractals</i> , 1996 , 04, 469-475	3.2	2
23	C. elegans episodic swimming is driven by multifractal kinetics. <i>Scientific Reports</i> , 2020 , 10, 14775	4.9	2
22	Methods for transition toward computer assisted cognitive examination. <i>Methods of Information in Medicine</i> , 2015 , 54, 256-61	1.5	1
21	EEG epileptic seizures separation with multivariate empirical mode decomposition for diagnostic purposes. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2013 , 2013, 7128-31	0.9	1
20	Multiscale Fluctuation Analysis Revisited. <i>AIP Conference Proceedings</i> , 2007 ,	0	1
19	A few remarks on the analysis of physiological data for ubiquitous medicine. <i>International Congress Series</i> , 2006 , 1287, 219-224		1
18	Fluctuation dynamics of exchange rates on Polish financial market. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004 , 344, 184-189	3.3	1
17	Functional Roles of Noise and Fluctuations in the Human Brain. <i>AIP Conference Proceedings</i> , 2005 ,	0	1
16	Statistical physics of human heart rate in health and disease. <i>Understanding Complex Systems</i> , 2009 , 139-154	1.4	1
15	Visualization of Short-Term Heart Period Variability with Network Tools as a Method for Quantifying Autonomic Drive 2017 , 141-158		1
14	Amelioration of symptoms in neurological disorders by noisy vestibular stimulation. <i>Equilibrium Research</i> , 2008 , 67, 58-64	0.2	1
13	Taming Surprises 2003 , 411-422		1
12	Spectral Power Estimation for Unevenly Spaced Motor Imagery Data. <i>Lecture Notes in Computer Science</i> , 2013 , 168-175	0.9	1

11	Dynamic theta/beta ratio of clinical EEG in Alzheimer's disease. <i>Journal of Neuroscience Methods</i> , 2021 , 359, 109219	3	1
10	Combining behavior and EEG analysis for exploration of dynamic effects of ADHD treatment in animal models. <i>Journal of Neuroscience Methods</i> , 2018 , 298, 24-32	3	0
9	The Society of Brains: How Alan Turing and Marvin Minsky Were Both Right. <i>Journal of Physics: Conference Series</i> , 2015 , 604, 012016	0.3	
8	Asymmetric intermittency observed in human heart rate dynamics. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2011 , 2011, 7743-6	0.9	
7	Dual Antagonistic Autonomic Control Necessary for 1/f Scaling in Heart Rate 2005 , 141-151		
6	1/f noise in a one-dimensional charge density wave system. <i>Europhysics Letters</i> , 2004 , 66, 385-391	1.6	
5	Econonatology: the physics of the economy in labour. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003 , 324, 344-351	3.3	
4	Power law and its transition in the slow convergence to a Gaussian in the S&P500 index 2006 , 67-71		
3	Econophysics vs Cardiophysics: the Dual Face of Multifractality 2004 , 210-215		
2	The Practical Measurement of Fractal Parameters. <i>NATO ASI Series Series B: Physics</i> , 1993 , 417-424		
1	Sensitivity Analysis of a Model of Lower Limb Haemodynamics. <i>Lecture Notes in Computer Science</i> , 2022 , 65-77	0.9	