

# Dante R Chialvo

## List of Publications by Citations

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121  
papers

10,628  
citations

43  
h-index

102  
g-index

132  
ext. papers

12,402  
ext. citations

6  
avg, IF

6.41  
L-index

#	Paper	IF	Citations
121	Organization, development and function of complex brain networks. <i>Trends in Cognitive Sciences</i> , <b>2004</b> , 8, 418-25	14	1549
120	Scale-free brain functional networks. <i>Physical Review Letters</i> , <b>2005</b> , 94, 018102	7.4	1047
119	Emergent complex neural dynamics. <i>Nature Physics</i> , <b>2010</b> , 6, 744-750	16.2	632
118	Beyond feeling: chronic pain hurts the brain, disrupting the default-mode network dynamics. <i>Journal of Neuroscience</i> , <b>2008</b> , 28, 1398-403	6.6	569
117	Chronic pain and the emotional brain: specific brain activity associated with spontaneous fluctuations of intensity of chronic back pain. <i>Journal of Neuroscience</i> , <b>2006</b> , 26, 12165-73	6.6	510
116	The entropic brain: a theory of conscious states informed by neuroimaging research with psychedelic drugs. <i>Frontiers in Human Neuroscience</i> , <b>2014</b> , 8, 20	3.3	409
115	Criticality in large-scale brain fMRI dynamics unveiled by a novel point process analysis. <i>Frontiers in Physiology</i> , <b>2012</b> , 3, 15	4.6	384
114	Chronic pain patients are impaired on an emotional decision-making task. <i>Pain</i> , <b>2004</b> , 108, 129-36	8	376
113	Spontaneous cortical activity in awake monkeys composed of neuronal avalanches. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 15921-6	11.5	368
112	Brain organization into resting state networks emerges at criticality on a model of the human connectome. <i>Physical Review Letters</i> , <b>2013</b> , 110, 178101	7.4	269
111	Enhanced repertoire of brain dynamical states during the psychedelic experience. <i>Human Brain Mapping</i> , <b>2014</b> , 35, 5442-56	5.9	211
110	Low dimensional chaos in cardiac tissue. <i>Nature</i> , <b>1990</b> , 343, 653-7	50.4	205
109	Critical brain networks. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2004</b> , 340, 756-765	3.3	168
108	Non-linear dynamics of cardiac excitation and impulse propagation. <i>Nature</i> , <b>1987</b> , 330, 749-52	50.4	149
107	Supernormal excitability as a mechanism of chaotic dynamics of activation in cardiac Purkinje fibers. <i>Circulation Research</i> , <b>1990</b> , 66, 525-45	15.7	140
106	Brain resting state is disrupted in chronic back pain patients. <i>Neuroscience Letters</i> , <b>2010</b> , 485, 26-31	3.3	138
105	Stochastic resonance in models of neuronal ensembles. <i>Physical Review E</i> , <b>1997</b> , 55, 1798-1808	2.4	134

104	Brain activity for spontaneous pain of postherpetic neuralgia and its modulation by lidocaine patch therapy. <i>Pain</i> , <b>2007</b> , 128, 88-100	8	134
103	Ising-like dynamics in large-scale functional brain networks. <i>Physical Review E</i> , <b>2009</b> , 79, 061922	2.4	133
102	Asymmetric unbiased fluctuations are sufficient for the operation of a correlation ratchet. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>1995</b> , 209, 26-30	2.3	128
101	Spike avalanches exhibit universal dynamics across the sleep-wake cycle. <i>PLoS ONE</i> , <b>2010</b> , 5, e14129	3.7	127
100	Disrupted functional connectivity of the pain network in fibromyalgia. <i>Psychosomatic Medicine</i> , <b>2012</b> , 74, 55-62	3.7	118
99	Stochastic and Deterministic Resonances for Excitable Systems. <i>Physical Review Letters</i> , <b>1998</b> , 81, 4012-4015	4.1	109
98	Sustained vortex-like waves in normal isolated ventricular muscle. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1990</b> , 87, 8785-9	11.5	109
97	Learning from mistakes. <i>Neuroscience</i> , <b>1999</b> , 90, 1137-48	3.9	108
96	Large-scale signatures of unconsciousness are consistent with a departure from critical dynamics. <i>Journal of the Royal Society Interface</i> , <b>2016</b> , 13, 20151027	4.1	100
95	Pattern formation and functionality in swarm models. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>1995</b> , 207, 185-193	2.3	97
94	Self-similar correlation function in brain resting-state functional magnetic resonance imaging. <i>Journal of the Royal Society Interface</i> , <b>2011</b> , 8, 472-9	4.1	94
93	Expression of IL-1beta in supraspinal brain regions in rats with neuropathic pain. <i>Neuroscience Letters</i> , <b>2006</b> , 407, 176-81	3.3	85
92	Modulated noisy biological dynamics: Three examples. <i>Journal of Statistical Physics</i> , <b>1993</b> , 70, 375-391	1.5	80
91	Noise in neurons is message dependent. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2000</b> , 97, 5557-61	11.5	75
90	Dynamics of pain: fractal dimension of temporal variability of spontaneous pain differentiates between pain States. <i>Journal of Neurophysiology</i> , <b>2006</b> , 95, 730-6	3.2	74
89	How do you feel when you can't feel your body? Interoception, functional connectivity and emotional processing in depersonalization-derealization disorder. <i>PLoS ONE</i> , <b>2014</b> , 9, e98769	3.7	73
88	Altered associative learning and emotional decision making in fibromyalgia. <i>Journal of Psychosomatic Research</i> , <b>2011</b> , 70, 294-301	4.1	72
87	What kind of noise is brain noise: anomalous scaling behavior of the resting brain activity fluctuations. <i>Frontiers in Physiology</i> , <b>2012</b> , 3, 307	4.6	67

86	Generic excitable dynamics on a two-dimensional map. <i>Chaos, Solitons and Fractals</i> , <b>1995</b> , 5, 461-479	9.3	58
85	Electrical restitution, critical mass, and the riddle of fibrillation. <i>Journal of Cardiovascular Electrophysiology</i> , <b>1999</b> , 10, 1087-9	2.7	56
84	Adaptive learning by extremal dynamics and negative feedback. <i>Physical Review E</i> , <b>2001</b> , 63, 031912	2.4	52
83	Subharmonic stochastic synchronization and resonance in neuronal systems. <i>Physical Review E</i> , <b>2002</b> , 65, 050902	2.4	51
82	Brain Network Organization and Social Executive Performance in Frontotemporal Dementia. <i>Journal of the International Neuropsychological Society</i> , <b>2016</b> , 22, 250-62	3.1	51
81	Spontaneous BOLD event triggered averages for estimating functional connectivity at resting state. <i>Neuroscience Letters</i> , <b>2011</b> , 488, 158-63	3.3	49
80	How Swarms Build Cognitive Maps <b>1995</b> , 439-450		45
79	How we hear what is not there: a neural mechanism for the missing fundamental illusion. <i>Chaos</i> , <b>2003</b> , 13, 1226-30	3.3	43
78	Mitochondrial network complexity emerges from fission/fusion dynamics. <i>Scientific Reports</i> , <b>2018</b> , 8, 363	4.9	42
77	Noise-induced tuning curve changes in mechanoreceptors. <i>Journal of Neurophysiology</i> , <b>1998</b> , 79, 1879-90	3.2	41
76	The Voxel-Wise Functional Connectome Can Be Efficiently Derived from Co-activations in a Sparse Spatio-Temporal Point-Process. <i>Frontiers in Neuroscience</i> , <b>2016</b> , 10, 381	5.1	40
75	Modular organization of brain resting state networks in chronic back pain patients. <i>Frontiers in Neuroinformatics</i> , <b>2010</b> , 4, 116	3.9	39
74	Disruption of transfer entropy and inter-hemispheric brain functional connectivity in patients with disorder of consciousness. <i>Frontiers in Neuroinformatics</i> , <b>2013</b> , 7, 24	3.9	35
73	Tackling variability: A multicenter study to provide a gold-standard network approach for frontotemporal dementia. <i>Human Brain Mapping</i> , <b>2017</b> , 38, 3804-3822	5.9	34
72	Nonequilibrium fluctuation-induced phenomena in Josephson junctions. <i>Physical Review E</i> , <b>1996</b> , 53, 2239-2242	2.4	34
71	Spared nerve injury rats exhibit thermal hyperalgesia on an automated operant dynamic thermal escape task. <i>Molecular Pain</i> , <b>2005</b> , 1, 18	3.4	33
70	Emergent self-organized complex network topology out of stability constraints. <i>Physical Review Letters</i> , <b>2009</b> , 103, 108701	7.4	32
69	Unraveling the fluctuations of animal motor activity. <i>Chaos</i> , <b>2009</b> , 19, 033123	3.3	32

68	Anticipated synchronization: a metaphorical linear view. <i>Chaos</i> , <b>2004</b> , 14, 7-13	3.3	31
67	Control of voltage-dependent biomolecules via nonequilibrium kinetic focusing. <i>Physical Review Letters</i> , <b>1996</b> , 76, 550-553	7.4	30
66	Critical Fluctuations in the Native State of Proteins. <i>Physical Review Letters</i> , <b>2017</b> , 118, 088102	7.4	29
65	Nrf2 stabilization prevents critical oxidative damage in Down syndrome cells. <i>Aging Cell</i> , <b>2018</b> , 17, e128129	7.9	29
64	Age-of-onset of menopause is associated with enhanced painful and non-painful sensitivity in fibromyalgia. <i>Clinical Rheumatology</i> , <b>2013</b> , 32, 975-81	3.9	29
63	Identifying directed links in large scale functional networks: application to brain fMRI. <i>BMC Cell Biology</i> , <b>2007</b> , 8 Suppl 1, S5		29
62	Ghost resonance in a semiconductor laser with optical feedback. <i>Europhysics Letters</i> , <b>2003</b> , 64, 178-184	1.6	28
61	Ghost stochastic resonance with distributed inputs in pulse-coupled electronic neurons. <i>Physical Review E</i> , <b>2006</b> , 73, 021101	2.4	27
60	Single subject pharmacological-MRI (phMRI) study: modulation of brain activity of psoriatic arthritis pain by cyclooxygenase-2 inhibitor. <i>Molecular Pain</i> , <b>2005</b> , 1, 32	3.4	27
59	GHOST STOCHASTIC RESONANCE IN AN ELECTRONIC CIRCUIT. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , <b>2006</b> , 16, 731-735	2	26
58	Poissonian bursts in e-mail correspondence. <i>European Physical Journal B</i> , <b>2010</b> , 75, 389-394	1.2	23
57	Solar forced Dansgaard-Oeschger events and their phase relation with solar proxies. <i>Geophysical Research Letters</i> , <b>2008</b> , 35,	4.9	23
56	Fibronectin rescues estrogen receptor $\beta$ from lysosomal degradation in breast cancer cells. <i>Journal of Cell Biology</i> , <b>2018</b> , 217, 2777-2798	7.3	22
55	The ghost of stochastic resonance: an introductory review. <i>Contemporary Physics</i> , <b>2012</b> , 53, 17-38	3.3	20
54	Neurologic dysfunction and genotoxicity induced by low levels of chlorpyrifos. <i>NeuroToxicology</i> , <b>2014</b> , 45, 22-30	4.4	19
53	Emergent complexity: What uphill analysis or downhill invention cannot do. <i>New Ideas in Psychology</i> , <b>2008</b> , 26, 158-173	2.5	19
52	DEMONSTRATION OF 1/f FLUCTUATIONS AND WHITE NOISE IN THE HUMAN HEART RATE BY THE VARIANCE-TIME-CURVE: IMPLICATIONS FOR SELF-SIMILARITY. <i>Fractals</i> , <b>1993</b> , 01, 312-320	3.2	18
51	Evaluating the reliability of neurocognitive biomarkers of neurodegenerative diseases across countries: A machine learning approach. <i>NeuroImage</i> , <b>2020</b> , 208, 116456	7.9	18

50	General relation between variance-time curve and power spectral density for point processes exhibiting $1/f$ beta-fluctuations, with special reference to heart rate variability. <i>Biological Cybernetics</i> , <b>1995</b> , 73, 255-63	2.8	17
49	Noise-induced memory in extended excitable systems. <i>Physical Review E</i> , <b>2000</b> , 61, 5654-7	2.4	16
48	The Brain: What is Critical About It?. <i>AIP Conference Proceedings</i> , <b>2008</b> ,	0	15
47	Inflammatory and neuropathic pain animals exhibit distinct responses to innocuous thermal and motoric challenges. <i>Molecular Pain</i> , <b>2006</b> , 2, 1	3.4	15
46	Fluctuation-Induced Transport in a Periodic Potential: Noise versus Chaos. <i>Physical Review Letters</i> , <b>1997</b> , 78, 1605-1605	7.4	14
45	Heart rate dynamics in monoamine oxidase-A- and -B-deficient mice. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , <b>2002</b> , 282, H1751-9	5.2	12
44	Extreme brain events: Higher-order statistics of brain resting activity and its relation with structural connectivity. <i>Europhysics Letters</i> , <b>2015</b> , 111, 68007	1.6	11
43	Brain complexity born out of criticality <b>2013</b> ,		11
42	Scale-free fluctuations in behavioral performance: delineating changes in spontaneous behavior of humans with induced sleep deficiency. <i>PLoS ONE</i> , <b>2014</b> , 9, e107542	3.7	11
41	Controlling a complex system near its critical point via temporal correlations. <i>Scientific Reports</i> , <b>2020</b> , 10, 12145	4.9	11
40	The shadows of pain. <i>Pain</i> , <b>2006</b> , 123, 221-222	8	9
39	Dynamics of synchronization in the sinoatrial node. <i>Annals of the New York Academy of Sciences</i> , <b>1990</b> , 591, 154-65	6.5	9
38	How we move is universal: Scaling in the average shape of human activity. <i>Papers in Physics</i> , <b>2015</b> , 7,		9
37	The environmental pollutant endosulfan disrupts cerebral cortical function at low doses. <i>NeuroToxicology</i> , <b>2011</b> , 32, 31-7	4.4	8
36	LARGE SCALE-INVARIANT FLUCTUATIONS IN NORMAL BLOOD CELL COUNTS: A SIGN OF CRITICALITY?. <i>Fractals</i> , <b>2000</b> , 08, 279-283	3.2	8
35	Toward very simple generic models of excitable cells. Order and chaos in cardiac tissues. Facts and conjectures. <i>Annals of the New York Academy of Sciences</i> , <b>1990</b> , 591, 351-66	6.5	8
34	Irregular dynamics of excitation in biologic and mathematical models of cardiac cells. <i>Annals of the New York Academy of Sciences</i> , <b>1990</b> , 601, 281-98	6.5	8
33	Strobing brain thunders: Functional correlation of extreme activity events. <i>Chaos, Solitons and Fractals</i> , <b>2013</b> , 55, 102-108	9.3	7

32	Flattened cortical maps of cerebral function in the rat: a region-of-interest approach to data sampling, analysis and display. <i>Neuroscience Letters</i> , <b>2008</b> , 434, 179-84	3.3	6
31	DENDRITIC COMPLEXITY AND THE EVOLUTION OF CEREBELLAR PURKINJE CELLS. <i>Fractals</i> , <b>1994</b> , 02, 95-102	3.2	6
30	THE COLLECTIVE BRAIN <b>2011</b> ,		6
29	Further results on why a point process is effective for estimating correlation between brain regions. <i>Papers in Physics</i> , 12, 120003		6
28	Critical Brain Dynamics at Large Scale <b>2014</b> , 43-66		5
27	Disruption of transfer entropy and inter-hemispheric brain functional connectivity in patients with disorder of consciousness. <i>BMC Neuroscience</i> , <b>2013</b> , 14, P83	3.2	5
26	Low-dose cholinesterase inhibitors do not induce delayed effects on cerebral blood flow and metabolism. <i>Pharmacology Biochemistry and Behavior</i> , <b>2005</b> , 80, 529-40	3.9	5
25	1/f Power spectral density of the cardiac QRS complex is not associated with a fractal Purkinje system. <i>Biophysical Journal</i> , <b>1991</b> , 60, 1303-5	2.9	5
24	On the pros and cons of using temporal derivatives to assess brain functional connectivity. <i>NeuroImage</i> , <b>2019</b> , 184, 577-585	7.9	5
23	On the Problem of Anisotropic Propagation in Ventricular Muscle. <i>Developments in Cardiovascular Medicine</i> , <b>1989</b> , 181-197		5
22	The brain near the edge. <i>AIP Conference Proceedings</i> , <b>2007</b> ,	0	4
21	Life at the Edge: Complexity and Criticality in Biological Function. <i>Acta Physica Polonica B</i> , <b>2018</b> , 49, 1955-9		4
20	Trial-by-trial variability in cortical responses exhibits scaling in spatial correlations predicted from critical dynamics		4
19	Seeking a fingerprint: analysis of point processes in actigraphy recording. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2016</b> , 2016, 054034	1.9	4
18	Universal and nonuniversal neural dynamics on small world connectomes: A finite-size scaling analysis. <i>Physical Review E</i> , <b>2019</b> , 100, 052138	2.4	4
17	Morphology and microchemistry of the otoliths of the inner ear of anuran larvae. <i>Hearing Research</i> , <b>2016</b> , 335, 47-52	3.9	3
16	Invited review: Fluctuation-induced transport. From the very small to the very large scales. <i>Papers in Physics</i> , <b>2016</b> , 8,		3
15	How ants move: individual and collective scaling properties. <i>Journal of the Royal Society Interface</i> , <b>2018</b> , 15,	4.1	2

14	A simple conceptual model to interpret the 100 000 years dynamics of paleo-climate records. <i>Nonlinear Processes in Geophysics</i> , <b>2010</b> , 17, 585-592	2.9	2
13	Circadian rhythms of heart rate and locomotion after treatment with low-dose acetylcholinesterase inhibitors. <i>Journal of Applied Toxicology</i> , <b>2006</b> , 26, 410-8	4.1	2
12	Noise sampled signal transmission in an array of Schmitt Triggers. <i>AIP Conference Proceedings</i> , <b>1993</b> ,	0	2
11	One more reason why neurons need to be noisy <b>1993</b> ,		2
10	Box scaling as a proxy of finite size correlations. <i>Scientific Reports</i> , <b>2021</b> , 11, 15937	4.9	2
9	Scale-Free Dynamics in Animal Groups and Brain Networks. <i>Frontiers in Systems Neuroscience</i> , <b>2020</b> , 14, 591210	3.5	2
8	Low-dimensional dynamics in cardiac tissues: experiments and theory <b>1993</b> ,		1
7	Bifurcations in a simple hydraulic oscillator: the SantalusCupS <i>European Journal of Physics</i> , <b>1991</b> , 12, 297-302	0.8	1
6	Revisiting Nonlinear Functional Brain Co-activations: Directed, Dynamic, and Delayed. <i>Frontiers in Neuroscience</i> , <b>2021</b> , 15, 700171	5.1	1
5	Observing changes in human functioning during induced sleep deficiency and recovery periods. <i>PLoS ONE</i> , <b>2021</b> , 16, e0255771	3.7	1
4	Similar local neuronal dynamics may lead to different collective behavior.. <i>Physical Review E</i> , <b>2021</b> , 104, 064309	2.4	0
3	Non-linear Functional Brain Co-activations in Short-Term Memory Distortion Tasks.. <i>Frontiers in Neuroscience</i> , <b>2021</b> , 15, 778242	5.1	0
2	Nonlinear Dynamics and Ionic Mechanisms of Excitation Patterns in Models of the Cardiac Myocyte. <i>NATO ASI Series Series B: Physics</i> , <b>1991</b> , 295-312		
1	Low Dimensional Chaos and the Transition from Rhythmic to Arrhythmic Behavior in Cardiac Tissue. <i>Developments in Cardiovascular Medicine</i> , <b>1991</b> , 115-123		