Alessandro Torcini

List of Publications by Year
in descending order

133 papers	3,371 citations	136740 32 h-index	189595 50 g-index
152 all docs	152 docs citations	152 times ranked	1932 citing authors

#	Article	IF	Citations
1	Coherent oscillations in balanced neural networks driven by endogenous fluctuations. Chaos, 2022, 32, 023120.	1.0	14
2	Reduction Methodology for Fluctuation Driven Population Dynamics. Physical Review Letters, 2021, 127, 038301.	2.9	25
3	Asynchronous and Coherent Dynamics in Balanced Excitatory-Inhibitory Spiking Networks. Frontiers in Systems Neuroscience, 2021, 15, 752261.	1.2	11
4	Emergent excitability in populations of nonexcitable units. Physical Review E, 2020, 102, 050201.	0.8	8
5	Cross frequency coupling in next generation inhibitory neural mass models. Chaos, 2020, 30, 053121.	1.0	22
6	Theta-Nested Gamma Oscillations in Next Generation Neural Mass Models. Frontiers in Computational Neuroscience, 2020, 14, 47.	1.2	45
7	Coexistence of fast and slow gamma oscillations in one population of inhibitory spiking neurons. Physical Review Research, 2020, 2, .	1.3	27
8	Quantitative and qualitative analysis of asynchronous neural activity. Physical Review Research, 2020, 2, .	1.3	9
9	Exact neural mass model for synaptic-based working memory. PLoS Computational Biology, 2020, 16, e1008533.	1.5	32
10	Neural activity of heterogeneous inhibitory spiking networks with delay. Physical Review E, 2019, 99, 052412.	0.8	7
11	Internal representation of hippocampal neuronal population spans a time-distance continuum. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 7477-7482.	3.3	22
12	Functional Cliques in Developmentally Correlated Neural Networks. PoliTO Springer Series, 2019, , 53-64.	0.3	0
13	Chimera States in Pulse Coupled Neural Networks: The Influence of Dilution and Noise. PoliTO Springer Series, 2019, , 65-79.	0.3	2
14	Collective irregular dynamics in balanced networks of leaky integrate-and-fire neurons. European Physical Journal: Special Topics, 2018, 227, 1185-1204.	1.2	17
15	Modeling driver cells in developing neuronal networks. PLoS Computational Biology, 2018, 14, e1006551.	1.5	13
16	Transition from Asynchronous to Oscillatory Dynamics in Balanced Spiking Networks with Instantaneous Synapses. Physical Review Letters, 2018, 121, 128301.	2.9	55
17	Ubiquity of collective irregular dynamics in balanced networks ofÂspikingÂneurons. Chaos, 2018, 28, 081106.	1.0	28
18	Exact firing time statistics of neurons driven by discrete inhibitory noise. Scientific Reports, 2017, 7, 1577.	1.6	12

#	ARTICLE	IF	CITATIONS
19	Death and rebirth of neural activity in sparse inhibitory networks. New Journal of Physics, 2017, 19, 053011.	1.2	21
20	Dynamics of Fully Coupled Rotators with Unimodal and Bimodal Frequency Distribution. Understanding Complex Systems, 2016, , 25-45.	0.3	5
21	Cell Assembly Dynamics of Sparsely-Connected Inhibitory Networks: A Simple Model for the Collective Activity of Striatal Projection Neurons. PLoS Computational Biology, 2016, 12, e1004778.	1.5	19
22	Intermittent chaotic chimeras for coupled rotators. Physical Review E, 2015, 92, 030901.	0.8	84
23	Stochastic mean-field formulation of the dynamics of diluted neural networks. BMC Neuroscience, 2015, 16, .	0.8	0
24	Stochastic mean-field formulation of the dynamics of diluted neural networks. Physical Review E, 2015, 91, 022928.	0.8	5
25	Dynamics versus energetics in phase separation. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P03016.	0.9	2
26	Linear stability in networks of pulse-coupled neurons. Frontiers in Computational Neuroscience, 2014, 8, 8.	1.2	16
27	Spatio-temporal dynamics induced by competing instabilities in two asymmetrically coupled nonlinear evolution equations. Chaos, 2014, 24, 043142.	1.0	8
28	Clique of Functional Hubs Orchestrates Population Bursts in Developmentally Regulated Neural Networks. PLoS Computational Biology, 2014, 10, e1003823.	1.5	32
29	Sisyphus effect in pulse-coupled excitatory neural networks with spike-timing-dependent plasticity. Physical Review E, 2014, 89, 062701.	0.8	8
30	Stable chaos in fluctuation driven neural circuits. Chaos, Solitons and Fractals, 2014, 69, 233-245.	2.5	11
31	Hysteretic transitions in the Kuramoto model with inertia. Physical Review E, 2014, 90, 042905.	0.8	99
32	Critical connectivity for emergence of collective oscillations in strongly diluted neural networks. BMC Neuroscience, 2013, 14, .	0.8	0
33	Synchronous dynamics in the presence of short-term plasticity. Physical Review E, 2013, 87, .	0.8	18
34	Emergence of Slow Collective Oscillations in Neural Networks with Spike-Timing Dependent Plasticity. Physical Review Letters, 2013, 110, 208101.	2.9	35
35	Convective Lyapunov spectra. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 254013.	0.7	3
36	Coherent periodic activity in excitatory ErdÃ¶s-Renyi neural networks: The role of network connectivity. Chaos, 2012, 22, 023133.	1.0	29

#	Article	IF	Citations
37	Collective Dynamics in Sparse Networks. Physical Review Letters, 2012, 109, 138103.	2.9	50
38	Synchronization and Complex Dynamics of Oscillators with Delayed Pulse Coupling. Angewandte Chemie - International Edition, 2012, 51, 9489-9490.	7.2	13
39	Splay States in Finite Pulse-Coupled Networks of Excitable Neurons. SIAM Journal on Applied Dynamical Systems, 2012, 11, 864-894.	0.7	13
40	Stability of the splay state in networks of pulse-coupled neurons. Journal of Mathematical Neuroscience, 2012, 2, 12.	2.4	18
41	Coherent periodic activity in excitatory neural networks : the role of network connectivity. BMC Neuroscience, 2011, 12, .	0.8	0
42	Chaos in the Hamiltonian mean-field model. Physical Review E, 2011, 84, 066211.	0.8	26
43	Extensive and Subextensive Chaos in Globally Coupled Dynamical Systems. Physical Review Letters, 2011, 107, 124101.	2.9	33
44	Discrete breathers in a realistic coarse-grained model of proteins. Physical Biology, 2011, 8, 046008.	0.8	15
45	Collective chaos in pulse-coupled neural networks. Europhysics Letters, 2010, 92, 60007.	0.7	112
46	Rate maintenance and resonance in the entorhinal cortex. European Journal of Neuroscience, 2010, 32, 1930-1939.	1.2	3
47	Out-of-Equilibrium versus Dynamical and Thermodynamical Transitions for a Model Protein. Progress of Theoretical Physics Supplement, 2010, 184, 339-350.	0.2	2
48	Unfolding times for proteins in a force clamp. Physical Review E, 2010, 81, 010902.	0.8	16
49	Collective oscillations in disordered neural networks. Physical Review E, 2010, 81, 046119.	0.8	65
50	Stable Chaos. Understanding Complex Systems, 2010, , 103-129.	0.3	13
51	Stochastic dynamics of model proteins on a directed graph. Physical Review E, 2009, 79, 061925.	0.8	6
52	Stability of splay states in globally coupled rotators. Physical Review E, 2009, 80, 036209.	0.8	18
53	Synchronization of spatio-temporal chaos as an absorbing phase transition: a study in 2+1 dimensions. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P12018.	0.9	5
54	Stability criteria for splay states in networks of "generalized" neuronal models. BMC Neuroscience, 2009, 10, .	0.8	0

#	Article	IF	Citations
55	Partial synchronization in diluted neural networks. BMC Neuroscience, 2009, 10, .	0.8	1
56	Changing the Mechanical Unfolding Pathway of FnIII10 by Tuning the Pulling Strength. Biophysical Journal, 2009, 96, 429-441.	0.2	42
57	Free-energy landscape of mechanically unfolded model proteins: Extended Jarzinsky versus inherent structure reconstruction. Physical Review E, 2008, 78, 031907.	0.8	11
58	Chaotic synchronizations of spatially extended systems as nonequilibrium phase transitions. Chaos, 2008, 18, 037125.	1.0	12
59	Reconstructing the Free-Energy Landscape of a Mechanically Unfolded Model Protein. Physical Review Letters, 2007, 99, 168101.	2.9	25
60	Stability of the splay state in pulse-coupled networks. Physical Review E, 2007, 76, 046102.	0.8	72
61	Dynamical phases of the Hindmarsh-Rose neuronal model: Studies of the transition from bursting to spiking chaos. Chaos, 2007, 17, 043128.	1.0	124
62	Stability of splay states for pulse-coupled neuronal networks: finite size versus finite pulse-width effects. BMC Neuroscience, 2007, 8, .	0.8	0
63	Coherent response of the Hodgkinâ€"Huxley neuron in the high-input regime. Neurocomputing, 2007, 70, 1943-1948.	3.5	14
64	Desynchronized stable states in diluted neural networks. Neurocomputing, 2007, 70, 1960-1965.	3.5	11
65	Coherence resonance due to correlated noise in neuronal models. Neurocomputing, 2007, 70, 1970-1976.	3.5	11
66	Desynchronization in diluted neural networks. Physical Review E, 2006, 74, 036203.	0.8	82
67	Dynamical response of the Hodgkin-Huxley model in the high-input regime. Physical Review E, 2006, 73, 041902.	0.8	24
68	Low-frequency fluctuations in vertical cavity lasers: Experiments versus Lang-Kobayashi dynamics. Physical Review A, 2006, 74, .	1.0	41
69	Synchronization of Extended Chaotic Systems with Long-Range Interactions: An Analogy to LÃ©vy-Flight Spreading of Epidemics. Physical Review Letters, 2006, 97, 224101.	2.9	24
70	Asymptotic and effective coarsening exponents in surface growth models. European Physical Journal B, 2006, 53, 401-404.	0.6	5
71	Contact processes with long range interactions. Journal of Statistical Mechanics: Theory and Experiment, 2006, 2006, P08008-P08008.	0.9	17
72	Double Coherence Resonance in Neuron Models Driven by Discrete Correlated Noise. Physical Review Letters, 2006, 97, 238101.	2.9	40

#	Article	IF	Citations
73	Exploring the energy landscape of model proteins: A metric criterion for the determination of dynamical connectivity. Physical Review E, 2005, 72, 051929.	0.8	11
74	Nonlinearly driven transverse synchronization in coupled chaotic systems. Physica D: Nonlinear Phenomena, 2005, 208, 191-208.	1.3	9
75	SPIRAL INSTABILITIES IN PERIODICALLY FORCED EXTENDED OSCILLATORY MEDIA. , 2005, , .		0
76	First-order microcanonical transitions in finite mean-field models. Europhysics Letters, 2004, 66, 645-651.	0.7	54
77	Nonlinear analysis of the Eckhaus instability: modulated amplitude waves and phase chaos with nonzero average phase gradient. Physica D: Nonlinear Phenomena, 2003, 174, 152-167.	1.3	18
78	From multiplicative noise to directed percolation in wetting transitions. Physical Review E, 2003, 68, 065102.	0.8	22
79	Doppler Effect of Nonlinear Waves and Superspirals in Oscillatory Media. Physical Review Letters, 2003, 91, 108302.	2.9	19
80	Relationship between directed percolation and the synchronization transition in spatially extended systems. Physical Review E, 2003, 67, 046217.	0.8	24
81	Thermally activated processes in polymer dynamics. Physical Review E, 2003, 68, 061111.	0.8	12
82	Thin front propagation in steady and unsteady cellular flows. Physics of Fluids, 2003, 15, 679-688.	1.6	45
83	First- and second-order clustering transitions for a system with infinite-range attractive interaction. Physical Review E, 2002, 66, 025103.	0.8	24
84	Front propagation in chaotic and noisy reaction-diffusion systems: a discrete-time map approach. European Physical Journal B, 2002, 25, 333-343.	0.6	5
85	Coarsening process in one-dimensional surface growth models. European Physical Journal B, 2002, 25, 519-529.	0.6	4
86	The Hamiltonian Mean Field Model: From Dynamics to Statistical Mechanics and Back. Lecture Notes in Physics, 2002, , 458-487.	0.3	28
87	Title is missing!. European Physical Journal B, 2002, 25, 519-529.	0.6	5
88	Modulated amplitude waves and defect formation in the one-dimensional complex Ginzburg–Landau equation. Physica D: Nonlinear Phenomena, 2001, 160, 127-148.	1.3	51
89	A dynamical approach to protein folding. Journal of Biological Physics, 2001, 27, 181-203.	0.7	19
90	Transition to stochastic synchronization in spatially extended systems. Physical Review E, 2001, 63, 036226.	0.8	43

#	Article	IF	Citations
91	Linear and nonlinear information flow in spatially extended systems. Physical Review E, 2001, 63, 056201.	0.8	18
92	Coarsening in surface growth models without slope selection. Journal of Physics A, 2000, 33, L77-L82.	1.6	14
93	Modulated Amplitude Waves and the Transition from Phase to Defect Chaos. Physical Review Letters, 2000, 85, 86-89.	2.9	59
94	NOISE-DRIVEN SYNCHRONIZATION IN COUPLED MAP LATTICES. , 2000, , .		2
95	Equilibrium and dynamical properties of two-dimensional N-body systems with long-range attractive interactions. Physical Review E, 1999, 59, 2746-2763.	0.8	72
96	Comment on "Lyapunov Exponent of a Many Body System and Its Transport Coefficients" Physical Review Letters, 1999, 83, 2676-2676.	2.9	10
97	AN INTEGRATION SCHEME FOR REACTION–DIFFUSION MODELS. International Journal of Modern Physics C, 1999, 10, 1039-1050.	0.8	2
98	Localization and equipartition of energy in the β-FPU chain: Chaotic breathers. Physica D: Nonlinear Phenomena, 1998, 121, 109-126.	1.3	154
99	Anomalous diffusion as a signature of a collapsing phase in two-dimensional self-gravitating systems. Physical Review E, 1998, 57, R6233-R6236.	0.8	38
100	Lyapunov exponents from node-counting arguments. European Physical Journal Special Topics, 1998, 08, Pr6-263-Pr6-270.	0.2	9
101	Analytical estimation of the maximal Lyapunov exponent in oscillator chains. European Physical Journal Special Topics, 1998, 08, Pr6-147-Pr6-156.	0.2	5
102	Studies of phase turbulence in the one-dimensional complex Ginzburg-Landau equation. Physical Review E, 1997, 55, 5073-5081.	0.8	24
103	Comment on "Universal Scaling Law for the Largest Lyapunov Exponent in Coupled Map Lattices" Physical Review Letters, 1997, 78, 1391-1391.	2.9	14
104	Disturbance propagation in chaotic extended systems with long-range coupling. Physical Review E, 1997, 55, R3805-R3808.	0.8	32
105	Entropy potential and Lyapunov exponents. Chaos, 1997, 7, 701-709.	1.0	7
106	Modulational estimate for the maximal Lyapunov exponent in Fermi-Pasta-Ulam chains. Physical Review E, 1997, 56, R6229-R6232.	0.8	36
107	Chronotopic Lyapunov analysis: II. Toward a unified approach. Journal of Statistical Physics, 1997, 88, 31-45.	0.5	15
108	A novel integration scheme for partial differential equations: An application to the complex Ginzburg-Landau equation. Physica D: Nonlinear Phenomena, 1997, 103, 605-610.	1.3	3

#	Article	IF	Citations
109	Single-particle motion in liquid sodium: thermal crossover between two dynamical regimes. Journal of Non-Crystalline Solids, 1996, 205-207, 299-303.	1.5	12
110	Single particle motion in a dense liquid: A competition of mode coupling effects. Journal of Non-Crystalline Solids, 1996, 205-207, 402-407.	1.5	20
111	Chronotopic Lyapunov analysis. I. A detailed characterization of 1D systems. Journal of Statistical Physics, 1996, 82, 1429-1452.	0.5	30
112	Proton dynamics in supercooled water by molecular dynamics simulations and quasielastic neutron scattering. Journal of Chemical Physics, 1996, 104, 4223-4232.	1.2	62
113	Order Parameter for the Transition from Phase to Amplitude Turbulence. Physical Review Letters, 1996, 77, 1047-1050.	2.9	34
114	Single-particle dynamics in simple liquids. Physica Scripta, 1995, T57, 13-17.	1.2	16
115	Microscopic dynamics in liquid lithium. Physical Review E, 1995, 51, 3126-3138.	0.8	44
116	Error propagation in extended chaotic systems. Journal of Physics A, 1995, 28, 4533-4541.	1.6	37
117	Disturbance propagation in coupled map lattices. , 1995, , 537-543.		2
118	Linear and Non-Linear Mechanisms of Information Propagation. Europhysics Letters, 1994, 28, 545-550.	0.7	26
119	Longitudinal collective modes in liquid water. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 817-824.	0.4	4
120	Anomalous Sound Dispersion in Liquid Water. , 1994, , 81-84.		0
121	MD Simulations of Stretched TIP4P-Water in the Supercooled Regime. , 1994, , 77-80.		0
122	Evolution from ordinary to fast sound in water at room temperature. Chemical Physics Letters, 1993, 209, 408-416.	1.2	23
123	Liquid alkali metals: microscopic dynamics and transport coefficients. Journal of Non-Crystalline Solids, 1993, 156-158, 43-47.	1.5	13
124	Liquid alkali metals at the melting point: Structural and dynamical properties. Physical Review B, 1993, 47, 3011-3020.	1.1	82
125	Fast sound in liquid water. Physical Review E, 1993, 47, 1677-1684.	0.8	77
126	Molecular dynamics results for stretched water. Journal of Chemical Physics, 1993, 99, 8095-8104.	1.2	54

#	Article	IF	Citations
127	Microscopic dynamics in liquid alkali metals. Physical Review A, 1992, 46, 2159-2162.	1.0	81
128	Periodic orbits in coupled HÃ©non maps: Lyapunov and multifractal analysis. Chaos, 1992, 2, 293-300.	1.0	42
129	Towards a statistical mechanics of spatiotemporal chaos. Physical Review Letters, 1992, 69, 3421-3424.	2.9	15
130	Fractal dimension of spatially extended systems. Physica D: Nonlinear Phenomena, 1991, 53, 85-101.	1.3	33
131	Lyapunov spectra of coupled map lattices. Physics Letters, Section A: General, Atomic and Solid State Physics, 1990, 143, 365-368.	0.9	35
132	Fractal Dimensions in Coupled Map Lattices. NATO ASI Series Series B: Physics, 1989, , 409-424.	0.2	1
133	Analysis and simulation of waves in reaction-diffusion systems. , 0, , .		0