

# Gouhei Tanaka

## List of Publications by Year in descending order

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Version: 2024-02-01

91  
papers

2,732  
citations

331670

21  
h-index

189892

50  
g-index

92  
all docs

92  
docs citations

92  
times ranked

2060  
citing authors

#	ARTICLE	IF	CITATIONS
1	Recent advances in physical reservoir computing: A review. <i>Neural Networks</i> , 2019, 115, 100-123.	5.9	951
2	2022 roadmap on neuromorphic computing and engineering. <i>Neuromorphic Computing and Engineering</i> , 2022, 2, 022501.	5.9	217
3	Complex-Valued Multistate Associative Memory With Nonlinear Multilevel Functions for Gray-Level Image Reconstruction. <i>IEEE Transactions on Neural Networks</i> , 2009, 20, 1463-1473.	4.2	165
4	Reservoir Computing With Spin Waves Excited in a Garnet Film. <i>IEEE Access</i> , 2018, 6, 4462-4469.	4.2	135
5	A Mathematical Model of Intermittent Androgen Suppression for Prostate Cancer. <i>Journal of Nonlinear Science</i> , 2008, 18, 593-614.	2.1	125
6	Dynamical robustness in complex networks: the crucial role of low-degree nodes. <i>Scientific Reports</i> , 2012, 2, 232.	3.3	101
7	Mathematical modelling of prostate cancer growth and its application to hormone therapy. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2010, 368, 5029-5044.	3.4	78
8	Synchronization and propagation of bursts in networks of coupled map neurons. <i>Chaos</i> , 2006, 16, 013113.	2.5	74
9	Robustness of multilayer oscillator networks. <i>Physical Review E</i> , 2011, 83, 056208.	2.1	53
10	Dynamical robustness of coupled heterogeneous oscillators. <i>Physical Review E</i> , 2014, 89, 052906.	2.1	51
11	Random and Targeted Interventions for Epidemic Control in Metapopulation Models. <i>Scientific Reports</i> , 2015, 4, 5522.	3.3	39
12	Bifurcation analysis on a hybrid systems model of intermittent hormonal therapy for prostate cancer. <i>Physica D: Nonlinear Phenomena</i> , 2008, 237, 2616-2627.	2.8	38
13	Hybrid pooling for enhancement of generalization ability in deep convolutional neural networks. <i>Neurocomputing</i> , 2019, 333, 76-85.	5.9	33
14	Phase transitions in mixed populations composed of two types of self-oscillatory elements with different periods. <i>Physical Review E</i> , 2010, 82, 035202.	2.1	31
15	Reservoir Computing with Untrained Convolutional Neural Networks for Image Recognition. , 2018, , .		31
16	Efficient recovery of dynamic behavior in coupled oscillator networks. <i>Physical Review E</i> , 2013, 88, 032909.	2.1	27
17	Spin waves propagating through a stripe magnetic domain structure and their applications to reservoir computing. <i>Physical Review Research</i> , 2021, 3, .	3.6	26
18	Robustness of Oscillatory Behavior in Correlated Networks. <i>PLoS ONE</i> , 2015, 10, e0123722.	2.5	25

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19	Oscillation dynamics underlie functional switching of NF- $\kappa$ B for B-cell activation. <i>Npj Systems Biology and Applications</i> , 2016, 2, 16024.	3.0	24
20	Multi-reservoir echo state networks with sequence resampling for nonlinear time-series prediction. <i>Neurocomputing</i> , 2022, 467, 115-129.	5.9	24
21	Crisis-induced intermittency in two coupled chaotic maps: Towards understanding chaotic itinerancy. <i>Physical Review E</i> , 2005, 71, 016219.	2.1	23
22	Epidemic spread on interconnected metapopulation networks. <i>Physical Review E</i> , 2014, 90, 032806.	2.1	22
23	Wave-Based Neuromorphic Computing Framework for Brain-Like Energy Efficiency and Integration. <i>IEEE Nanotechnology Magazine</i> , 2016, 15, 762-769.	2.0	21
24	Spatially Arranged Sparse Recurrent Neural Networks for Energy Efficient Associative Memory. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2020, 31, 24-38.	11.3	21
25	Mathematically modelling and controlling prostate cancer under intermittent hormone therapy. <i>Asian Journal of Andrology</i> , 2012, 14, 270-277.	1.6	19
26	Robustness and fragility in coupled oscillator networks under targeted attacks. <i>Physical Review E</i> , 2017, 95, 012315.	2.1	18
27	A Numerical Exploration of Signal Detector Arrangement in a Spin-Wave Reservoir Computing Device. <i>IEEE Access</i> , 2021, 9, 72637-72646.	4.2	16
28	Interplay between epidemic spread and information propagation on metapopulation networks. <i>Journal of Theoretical Biology</i> , 2017, 420, 18-25.	1.7	15
29	Network structure-based interventions on spatial spread of epidemics in metapopulation networks. <i>Physical Review E</i> , 2020, 102, 062306.	2.1	15
30	Sensitivity versus resonance in two-dimensional spiking-bursting neuron models. <i>Physical Review E</i> , 2007, 75, 041902.	2.1	14
31	Intermittent Androgen Suppression: Estimating Parameters for Individual Patients Based on Initial PSA Data in Response to Androgen Deprivation Therapy. <i>PLoS ONE</i> , 2015, 10, e0130372.	2.5	14
32	Intervention threshold for epidemic control in susceptible-infected-recovered metapopulation models. <i>Physical Review E</i> , 2019, 100, 022302.	2.1	14
33	A Hybrid Pooling Method for Convolutional Neural Networks. <i>Lecture Notes in Computer Science</i> , 2016, , 454-461.	1.3	14
34	Bifurcation analysis of a mathematical model of atopic dermatitis to determine patient-specific effects of treatments on dynamic phenotypes. <i>Journal of Theoretical Biology</i> , 2018, 448, 66-79.	1.7	13
35	Wave-Based Reservoir Computing by Synchronization of Coupled Oscillators. <i>Lecture Notes in Computer Science</i> , 2015, , 198-205.	1.3	13
36	Effects of seasonal variation patterns on recurrent outbreaks in epidemic models. <i>Journal of Theoretical Biology</i> , 2013, 317, 87-95.	1.7	12

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37	BIFURCATION STRUCTURES OF PERIOD-ADDING PHENOMENA IN AN OCEAN INTERNAL WAVE MODEL. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2003, 13, 3409-3424.	1.7	11
38	Parameter Scaling for Epidemic Size in a Spatial Epidemic Model with Mobile Individuals. PLoS ONE, 2016, 11, e0168127.	2.5	11
39	Photonic Reservoir Computing Based on Laser Dynamics with External Feedback. Lecture Notes in Computer Science, 2016, , 222-230.	1.3	10
40	Computational Efficiency of Multi-Step Learning Echo State Networks for Nonlinear Time Series Prediction. IEEE Access, 2022, 10, 28535-28544.	4.2	9
41	Simulation platform for pattern recognition based on reservoir computing with memristor networks. Scientific Reports, 2022, 12, .	3.3	9
42	Co-evolution dynamics of epidemic and information under dynamical multi-source information and behavioral responses. Knowledge-Based Systems, 2022, 252, 109413.	7.1	9
43	Exploiting Heterogeneous Units for Reservoir Computing with Simple Architecture. Lecture Notes in Computer Science, 2016, , 187-194.	1.3	8
44	Analysis on Characteristics of Multi-Step Learning Echo State Networks for Nonlinear Time Series Prediction. , 2019, , .		8
45	Waveform Classification by Memristive Reservoir Computing. Lecture Notes in Computer Science, 2017, , 457-465.	1.3	8
46	Node-wise robustness against fluctuations of power consumption in power grids. European Physical Journal: Special Topics, 2014, 223, 2549-2559.	2.6	7
47	MULTISTATE ASSOCIATIVE MEMORY WITH PARAMETRICALLY COUPLED MAP NETWORKS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2005, 15, 1395-1410.	1.7	6
48	Dynamics of Reservoir Computing at the Edge of Stability. Lecture Notes in Computer Science, 2016, , 205-212.	1.3	6
49	Robustness of coupled oscillator networks with heterogeneous natural frequencies. Chaos, 2017, 27, 123105.	2.5	6
50	Keynote Speech: Information processing hardware, physical reservoir computing and complex-valued neural networks. , 2019, , .		6
51	Transfer-RLS method and transfer-FORCE learning for simple and fast training of reservoir computing models. Neural Networks, 2021, 143, 550-563.	5.9	6
52	Grazing-induced crises in hybrid dynamical systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 3134-3139.	2.1	5
53	Dimensionality Reduction by Reservoir Computing and Its Application to IoT Edge Computing. Lecture Notes in Computer Science, 2018, , 635-643.	1.3	5
54	Deep Echo State Networks with Multi-Span Features , for Nonlinear Time Series Prediction. , 2020, , .		5

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55	HP-ESN: Echo State Networks Combined with Hodrick-Prescott Filter for Nonlinear Time-Series Prediction. , 2020, , .		5
56	Hopfield-Type Associative Memory with Sparse Modular Networks. Lecture Notes in Computer Science, 2014, , 255-262.	1.3	5
57	Complex-Valued Neural Networks: Advances and Applications [Book Review]. IEEE Computational Intelligence Magazine, 2013, 8, 77-79.	3.2	4
58	Regularity and randomness in modular network structures for neural associative memories. , 2015, , .		4
59	Wave-based neuromorphic computing framework for brain-like energy efficiency and integration. , 2015, , .		4
60	Dynamical Robustness of Complex Biological Networks. , 2015, , 29-53.		4
61	Simulation Study of Physical Reservoir Computing by Nonlinear Deterministic Time Series Analysis. Lecture Notes in Computer Science, 2017, , 639-647.	1.3	4
62	Complex-Valued Neural Networks for Wave-Based Realization of Reservoir Computing. Lecture Notes in Computer Science, 2017, , 449-456.	1.3	4
63	Two-Step FORCE Learning Algorithm for Fast Convergence in Reservoir Computing. Lecture Notes in Computer Science, 2020, , 459-469.	1.3	4
64	A Pruning Method Based on Weight Variation Information for Feedforward Neural Networks. IFAC-PapersOnLine, 2015, 48, 221-226.	0.9	3
65	Public opinion formation with the spiral of silence on complex social networks. Nonlinear Theory and Its Applications IEICE, 2015, 6, 15-25.	0.6	3
66	Dynamics of an HBV Model with Drug Resistance Under Intermittent Antiviral Therapy. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2015, 25, 1540011.	1.7	3
67	Smoothing effect for spatially distributed renewable resources and its impact on power grid robustness. Chaos, 2017, 27, 033104.	2.5	3
68	Bifurcation mechanism for emergence of spontaneous oscillations in coupled heterogeneous excitable units. Physical Review E, 2018, 98, .	2.1	3
69	Proposal of Carrier-Wave Reservoir Computing. Lecture Notes in Computer Science, 2018, , 616-624.	1.3	3
70	Comparing catch-up vaccination programs based on analysis of 2012-13 rubella outbreak in Kawasaki City, Japan. PLoS ONE, 2020, 15, e0237312.	2.5	3
71	Prediction of Molecular Packing Motifs in Organic Crystals by Neural Graph Fingerprints. Lecture Notes in Computer Science, 2018, , 26-34.	1.3	3
72	Computational Performance of Echo State Networks with Dynamic Synapses. Lecture Notes in Computer Science, 2016, , 264-271.	1.3	3

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73	Application Identification of Network Traffic by Reservoir Computing. Communications in Computer and Information Science, 2019, , 389-396.	0.5	3
74	A Hybrid Systems Approach to Hormonal Therapy of Prostate Cancer and its Nonlinear Dynamics. AIP Conference Proceedings, 2007, , .	0.4	2
75	Long-term fluctuations in globally coupled phase oscillators with general coupling: Finite size effects. Chaos, 2012, 22, 013133.	2.5	2
76	Finite-size scaling in globally coupled phase oscillators with a general coupling scheme. Progress of Theoretical and Experimental Physics, 2014, 2014, 23A07-0.	6.6	2
77	Wave-based device scaling concept for brain-like energy efficiency and integration. , 2015, , .		2
78	In a Spin-Wave Reservoir for Machine Learning. , 2019, , .		2
79	Spatial distribution of information effective for logic function learning in spin-wave reservoir computing chip utilizing spatiotemporal physical dynamics. , 2020, , .		2
80	Estimation and prediction of ellipsoidal molecular shapes in organic crystals based on ellipsoid packing. PLoS ONE, 2020, 15, e0239933.	2.5	2
81	Dynamical modeling of chronic myeloid leukemia progression and the development of mutations. , 2012, , .		1
82	Echo State Network with Adversarial Training. Lecture Notes in Computer Science, 2019, , 82-88.	1.3	1
83	Guest Editorial Special Issue on New Frontiers in Extremely Efficient Reservoir Computing. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 2571-2574.	11.3	1
84	Collective skipping: Aperiodic phase locking in ensembles of bursting oscillators. Europhysics Letters, 2007, 78, 10003.	2.0	0
85	Complex-valued multistate associative memory with nonlinear multilevel functions for gray-level image reconstruction. , 2008, , .		0
86	Nonstandard scaling law of fluctuations in finite-size systems of globally coupled oscillators. Physical Review E, 2013, 88, 024102.	2.1	0
87	A hybrid model for hepatitis B virus**This research is partially supported by NSFC (Nos. 11401448,) Tj ETQq1 1 0.784314 rgBT /Overl... Scientist Program of SIBS of CAS (No.2009CSP002), Shanghai Pujiang Program, and National Center for Mathematics and Interdisciplinary Sciences of CAS.. IFAC-PapersOnLine. 2015. 48. 37-40.	0.9	0
88	Dynamics of Cellular Systems and Bifurcation Theory. Seibutsu Butsuri, 2016, 56, 340-344.	0.1	0
89	partial-FORCE: A fast and robust online training method for recurrent neural networks. , 2021, , .		0
90	Backpropagation Learning Algorithm for Multilayer Phasor Neural Networks. Lecture Notes in Computer Science, 2009, , 484-493.	1.3	0

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91	A Multi-Reservoir Echo State Network with Multiple-Size Input Time Slices for Nonlinear Time-Series Prediction. Lecture Notes in Computer Science, 2021, , 28-39.	1.3	0