Chao Tang

List of Publications by Year
in descending order

130 papers	22,558 citations	57681 46 h-index	20023 121 g-index
143 all docs	143 docs citations	143 times ranked	17185 citing authors

#	Article	IF	Citations
1	Cell-to-cell variability in inducible Caspase9-mediated cell death. Cell Death and Disease, 2022, 13, 34.	2.7	5
2	Synthetic robust perfect adaptation achieved by negative feedback coupling with linear weak positive feedback. Nucleic Acids Research, 2022, 50, 2377-2386.	6.5	5
3	Computable early Caenorhabditis elegans embryo with a phase field model. PLoS Computational Biology, 2022, 18, e1009755.	1.5	10
4	Human pluripotent stem-cell-derived islets ameliorate diabetes in non-human primates. Nature Medicine, 2022, 28, 272-282.	15.2	55
5	Chemical Pretreatment Activated a Plastic State Amenable to Direct Lineage Reprogramming. Frontiers in Cell and Developmental Biology, 2022, 10, 865038.	1.8	6
6	A Multiclassifier System to Identify and Subtype Congenital Adrenal Hyperplasia Based on Circulating Steroid Hormones. Journal of Clinical Endocrinology and Metabolism, 2022, 107, e3304-e3312.	1.8	4
7	Whi5 is diluted and protein synthesis does not dramatically increase in pre-<i>Start</i> G1. Molecular Biology of the Cell, 2022, 33, lt1.	0.9	13
8	Quantitative investigation reveals distinct phases in Drosophila sleep. Communications Biology, 2021, 4, 364.	2.0	6
9	Investigating Spatio-Temporal Cellular Interactions in Embryonic Morphogenesis by 4D Nucleus Tracking and Systematic Comparative Analysis â€" Taking Nematodes C. Elegans and C. Briggsae as Examples. , 2021, , .		2
10	Finding gene network topologies for given biological function with recurrent neural network. Nature Communications, 2021, 12, 3125.	5.8	19
11	Redâ€•and Farâ€Redâ€Emitting Zinc Probes with Minimal Phototoxicity for Multiplexed Recording of Orchestrated Insulin Secretion. Angewandte Chemie, 2021, 133, 26050.	1.6	1
12	Short-Term Plasticity Regulates Both Divisive Normalization and Adaptive Responses in Drosophila Olfactory System. Frontiers in Computational Neuroscience, 2021, 15, 730431.	1.2	2
13	Innentitelbild: Redâ€•and Farâ€Redâ€Emitting Zinc Probes with Minimal Phototoxicity for Multiplexed Recording of Orchestrated Insulin Secretion (Angew. Chem. 49/2021). Angewandte Chemie, 2021, 133, 25790-25790.	1.6	0
14	Volume segregation programming in a nematode's early embryogenesis. Physical Review E, 2021, 104, 054409.	0.8	4
15	Why and how the nematodeâ€™s early embryogenesis can be precise and robust: a mechanical perspective. Physical Biology, 2020, 17, 026001.	0.8	9
16	Protocol for Titrating Gene Expression Levels in Budding Yeast. STAR Protocols, 2020, 1, 100082.	0.5	1
17	Chemicals orchestrate reprogramming with hierarchical activation of master transcription factors primed by endogenous Sox17 activation. Communications Biology, 2020, 3, 629.	2.0	7
18	Establishment of a morphological atlas of the Caenorhabditis elegans embryo using deep-learning-based 4D segmentation. Nature Communications, 2020, 11, 6254.	5.8	45

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19	Reconstructing the multicellular structure of a developing metazoan embryo with repulsion-attraction model and cell-cell connection atlas in vivo. Journal of Physics: Conference Series, 2020, 1592, 012020.	0.3	2
20	Chemical perturbations reveal that RUVBL2 regulates the circadian phase in mammals. Science Translational Medicine, 2020, 12, .	5.8	25
21	Multilevel regulation of muscle-specific transcription factor hlh-1 during Caenorhabditis elegans embryogenesis. Development Genes and Evolution, 2020, 230, 265-278.	0.4	3
22	Circulating re-entrant waves promote maturation of hiPSC-derived cardiomyocytes in self-organized tissue ring. Communications Biology, 2020, 3, 122.	2.0	32
23	Analysis of Circulating Waves in Tissue Rings derived from Human Induced Pluripotent Stem Cells. Scientific Reports, 2020, 10, 2984.	1.6	4
24	Critical slowing down and attractive manifold: A mechanism for dynamic robustness in the yeast cell-cycle process. Physical Review E, 2020, 101, 042405.	0.8	3
25	Computational study on ratio-sensing in yeast galactose utilization pathway. PLoS Computational Biology, 2020, 16, e1007960.	1.5	5
26	Cell Cycle Inhibitor Whi5 Records Environmental Information to Coordinate Growth and Division in Yeast. Cell Reports, 2019, 29, 987-994.e5.	2.9	38
27	Network Topologies That Can Achieve Dual Function of Adaptation and Noise Attenuation. Cell Systems, 2019, 9, 271-285.e7.	2.9	56
28	Optimal compressed sensing strategies for an array of nonlinear olfactory receptor neurons with and without spontaneous activity. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 20286-20295.	3.3	14
29	Growth strategy of microbes on mixed carbon sources. Nature Communications, 2019, 10, 1279.	5.8	105
30	Visualization of Genomic Loci in Living Cells with BiFCâ€TALE. Current Protocols in Cell Biology, 2019, 82, e78.	2.3	2
31	Bi-functional biochemical networks. Physical Biology, 2019, 16, 016001.	0.8	7
32	Network Motifs Capable of Decoding Transcription Factor Dynamics. Scientific Reports, 2018, 8, 3594.	1.6	26
33	Early-warning signals of critical transition: Effect of extrinsic noise. Physical Review E, 2018, 97, 032406.	0.8	10
34	Low Cell-Matrix Adhesion Reveals Two Subtypes of Human Pluripotent Stem Cells. Stem Cell Reports, 2018, 11, 142-156.	2.3	37
35	A systematic study of the determinants of protein abundance memory in cell lineage. Science Bulletin, 2018, 63, 1051-1058.	4.3	1
36	Nanog induced intermediate state in regulating stem cell differentiation and reprogramming. BMC Systems Biology, 2018, 12, 22.	3.0	31

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37	Single-Cell RNA-Seq Reveals Dynamic Early Embryonic-like Programs during Chemical Reprogramming. Cell Stem Cell, 2018, 23, 31-45.e7.	5.2	122
38	Live visualization of genomic loci with BiFC-TALE. Scientific Reports, 2017, 7, 40192.	1.6	12
39	Adaptation with transcriptional regulation. Scientific Reports, 2017, 7, 42648.	1.6	25
40	Design of Tunable Oscillatory Dynamics in a Synthetic NF-Î°B Signaling Circuit. Cell Systems, 2017, 5, 460-470.e5.	2.9	39
41	Odor-evoked inhibition of olfactory sensory neurons drives olfactory perception in Drosophila. Nature Communications, 2017, 8, 1357.	5.8	53
42	Adaptation through proportion. Physical Biology, 2016, 13, 046007.	0.8	4
43	Reliable cell cycle commitment in budding yeast is ensured by signal integration. ELife, 2015, 4, .	2.8	67
44	The Center for Quantitative Biology at Peking University. Quantitative Biology, 2015, 3, 1-3.	0.3	0
45	<i>Arabidopsis</i> DET1 degrades HFR1 but stabilizes PIF1 to precisely regulate seed germination. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3817-3822.	3.3	69
46	An Atlas of Network Topologies Reveals Design Principles for Caenorhabditis elegans Vulval Precursor Cell Fate Patterning. PLoS ONE, 2015, 10, e0131397.	1.1	2
47	Community detection for networks with unipartite and bipartite structure. New Journal of Physics, 2014, 16, 093001.	1.2	9
48	Multiple mechanisms determine the order of APC/C substrate degradation in mitosis. Journal of Cell Biology, 2014, 207, 23-39.	2.3	68
49	Costs and Benefits of Mutational Robustness in RNA Viruses. Cell Reports, 2014, 8, 1026-1036.	2.9	49
50	Synergistic and Antagonistic Drug Combinations Depend on Network Topology. PLoS ONE, 2014, 9, e93960.	1.1	99
51	QB: A new inter- and multi-disciplinary forum for modeling, engineering and understanding life. Quantitative Biology, 2013, 1, 1-2.	0.3	7
52	Bridging cross-cultural gaps in scientific exchange through innovative team challenge workshops. Quantitative Biology, 2013, 1, 3-8.	0.3	0
53	Generic properties of random gene regulatory networks. Quantitative Biology, 2013, 1, 253-260.	0.3	15
54	Design Principles of Regulatory Networks: Searching for the Molecular Algorithms of the Cell. Molecular Cell, 2013, 49, 202-212.	4.5	139

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55	Induction of Pluripotency in Mouse Somatic Cells with Lineage Specifiers. Cell, 2013, 153, 963-975.	13.5	272
56	Design Principles of the Yeast G1/S Switch. PLoS Biology, 2013, 11, e1001673.	2.6	51
57	A light-inducible organelle-targeting system for dynamically activating and inactivating signaling in budding yeast. Molecular Biology of the Cell, 2013, 24, 2419-2430.	0.9	90
58	Designing the Scientific Cradle for Quantitative Biologists. ACS Synthetic Biology, 2012, 1, 254-255.	1.9	3
59	Cell cycle synchronization by nutrient modulation. Integrative Biology (United Kingdom), 2012, 4, 328.	0.6	21
60	Hierarchical Modularity and the Evolution of Genetic Interactomes across Species. Molecular Cell, 2012, 46, 691-704.	4.5	185
61	Designing Synthetic Regulatory Networks Capable of Self-Organizing Cell Polarization. Cell, 2012, 151, 320-332.	13.5	163
62	Flux Balance Analysis of Ammonia Assimilation Network in E. coli Predicts Preferred Regulation Point. PLoS ONE, 2011, 6, e16362.	1.1	9
63	Decision making of the p53 network: Death by integration. Journal of Theoretical Biology, 2011, 271, 205-211.	0.8	38
64	Defining Network Topologies that Can Achieve Biochemical Adaptation. Cell, 2009, 138, 760-773.	13.5	1,354
65	A more robust Boolean model describing inhibitor binding. Frontiers of Electrical and Electronic Engineering in China: Selected Publications From Chinese Universities, 2008, 3, 371-375.	0.6	0
66	Finding multiple target optimal intervention in diseaseâ€related molecular network. Molecular Systems Biology, 2008, 4, 228.	3.2	165
67	Robust, Tunable Biological Oscillations from Interlinked Positive and Negative Feedback Loops. Science, 2008, 321, 126-129.	6.0	602
68	Rationalizing translation attenuation in the network architecture of the unfolded protein response. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20280-20285.	3.3	51
69	SCUMBLE: a method for systematic and accurate detection of codon usage bias by maximum likelihood estimation. Nucleic Acids Research, 2008, 36, 3819-3827.	6.5	13
70	Dynamic Simulations on the Arachidonic Acid Metabolic Network. PLoS Computational Biology, 2007, 3, e55.	1.5	90
71	Hydrophobic interaction and hydrogen-bond network for a methane pair in liquid water. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 2626-2630.	3.3	78
72	Function constrains network architecture and dynamics: A case study on the yeast cell cycle Boolean network. Physical Review E, 2007, 75, 051907.	0.8	81

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73	Dynamic Studies of Scaffold-Dependent Mating Pathway in Yeast. Biophysical Journal, 2006, 91, 3986-4001.	0.2	28
74	Robustness and modular design of the Drosophila segment polarity network. Molecular Systems Biology, 2006, 2, 70.	3.2	114
75	Stochastic model of yeast cell-cycle network. Physica D: Nonlinear Phenomena, 2006, 219, 35-39.	1.3	67
76	Gibbs sampling and helix-cap motifs. Nucleic Acids Research, 2005, 33, 5343-5353.	6.5	10
77	Specificity of Trypsin and Chymotrypsin: Loop-Motion-Controlled Dynamic Correlation as a Determinant. Biophysical Journal, 2005, 89, 1183-1193.	0.2	104
78	Correlation between sequence hydrophobicity and surface-exposure pattern of database proteins. Protein Science, 2004, 13, 752-762.	3.1	90
79	Flexibility of Î²-sheets: Principal component analysis of database protein structures. Proteins: Structure, Function and Bioinformatics, 2004, 55, 91-98.	1.5	43
80	Designability and thermal stability of protein structures. Polymer, 2004, 45, 699-705.	1.8	35
81	The yeast cell-cycle network is robustly designed. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 4781-4786.	3.3	953
82	Flexibility of Î±-Helices: Results of a Statistical Analysis of Database Protein Structures. Journal of Molecular Biology, 2003, 327, 229-237.	2.0	62
83	Structure space of model proteins: A principal component analysis. Journal of Chemical Physics, 2003, 118, 4277-4284.	1.2	8
84	Origin of scaling behavior of protein packing density: A sequential Monte Carlo study of compact long chain polymers. Journal of Chemical Physics, 2003, 118, 6102-6109.	1.2	56
85	Statistical mechanics of RNA folding: Importance of alphabet size. Physical Review E, 2003, 68, 041904.	0.8	11
86	Designability of Â-helical proteins. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 11163-11168.	3.3	28
87	Fast tree search for enumeration of a lattice model of protein folding. Journal of Chemical Physics, 2002, 116, 352.	1.2	29
88	Identifying proteins of high designability via surface-exposure patterns. Proteins: Structure, Function and Bioinformatics, 2002, 47, 295-304.	1.5	14
89	Emergence of highly designable protein-backbone conformations in an off-lattice model. Proteins: Structure, Function and Bioinformatics, 2002, 47, 506-512.	1.5	42
90	Designability of protein structures: A lattice-model study using the Miyazawa-Jernigan matrix. Proteins: Structure, Function and Bioinformatics, 2002, 49, 403-412.	1.5	60

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91	The designability of protein structures. Journal of Molecular Graphics and Modelling, 2001, 19, 157-167.	1.3	56
92	Exact solution of a stochastic directed sandpile model. Physical Review E, 2001, 63, 026111.	0.8	28
93	Simple models of the protein folding problem. Physica A: Statistical Mechanics and Its Applications, 2000, 288, 31-48.	1.2	35
94	Symmetry and designability for lattice protein models. Journal of Chemical Physics, 2000, 113, 8329-8336.	1.2	37
95	1/fNoise in Bak-Tang-Wiesenfeld Models on Narrow Stripes. Physical Review Letters, 1999, 83, 2449-2452.	2.9	34
96	Designability, thermodynamic stability, and dynamics in protein folding: A lattice model study. Journal of Chemical Physics, 1999, 110, 1252-1262.	1.2	82
97	Incommensurability in the frustrated two-dimensionalXYmodel. Physical Review B, 1999, 60, 3163-3168.	1.1	26
98	Low-energy excitations and phase transitions in the frustrated two-dimensionalXYmodel. Physical Review B, 1998, 58, 6591-6607.	1.1	9
99	Nature of Driving Force for Protein Folding: A Result From Analyzing the Statistical Potential. Physical Review Letters, 1997, 79, 765-768.	2.9	195
100	Domain Walls and Phase Transitions in the Frustrated Two-DimensionalXYModel. Physical Review Letters, 1997, 79, 451-454.	2.9	17
101	Nature of Phase Transitions of Superconducting Wire Networks in a Magnetic Field. Physical Review Letters, 1996, 76, 2989-2992.	2.9	62
102	Peak effect in superconductors: melting of Larkin domains. Europhysics Letters, 1996, 35, 597-602.	0.7	42
103	Correction of partial-volume effects in phase-contrast flow measurements. Journal of Magnetic Resonance Imaging, 1995, 5, 175-180.	1.9	50
104	Tang, Feng, and Golubovic Reply:. Physical Review Letters, 1995, 74, 3500-3500.	2.9	1
105	Phases of Josephson Junction Ladders. Physical Review Letters, 1995, 75, 3930-3933.	2.9	44
106	Dynamics of a driven single flux line in superconductors. Physical Review B, 1995, 51, 8457-8461.	1.1	1
107	Self-Organized Criticality in Nonconserved Systems. Physical Review Letters, 1995, 74, 742-745.	2.9	112
108	Dynamics and noise spectra of a driven single flux line in superconductors. Physical Review Letters, 1994, 72, 1264-1267.	2.9	23

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109	Accuracy of phase-contrast flow measurements in the presence of partial-volume effects. Journal of Magnetic Resonance Imaging, 1993, 3, 377-385.	1.9	276
110	SOC and the Bean critical state. Physica A: Statistical Mechanics and Its Applications, 1993, 194, 315-320.	1.2	47
111	Patterns and scaling properties in a ballistic deposition model. Physical Review Letters, 1993, 71, 2769-2772.	2.9	18
112	Earthquakes as a Complex Phenomenon. Woodward Conference, 1992, , 209-220.	0.3	0
113	A forest-fire model and some thoughts on turbulence. Physics Letters, Section A: General, Atomic and Solid State Physics, 1990, 147, 297-300.	0.9	388
114	Droplet model for autocorrelation functions in an Ising ferromagnet. Physical Review A, 1989, 40, 995-1003.	1.0	27
115	Comment on "Relaxation at the Angle of Repose". Physical Review Letters, 1989, 62, 110-110.	2.9	6
116	A physicist's sandbox. Journal of Statistical Physics, 1989, 54, 1441-1458.	0.5	52
117	Earthquakes as a selfâ€organized critical phenomenon. Journal of Geophysical Research, 1989, 94, 15635-15637.	3.3	1,020
118	Are Earthquakes, Fractals, and 1/f Noise Self-organized Critical Phenomena?. Springer Series in Synergetics, 1989, , 274-279.	0.2	2
119	Mean field theory of self-organized critical phenomena. Journal of Statistical Physics, 1988, 51, 797-802.	0.5	151
120	Critical Exponents and Scaling Relations for Self-Organized Critical Phenomena. Physical Review Letters, 1988, 60, 2347-2350.	2.9	360
121	Self-organized criticality. Physical Review A, 1988, 38, 364-374.	1.0	3,730
122	Scale Invariant Spatial and Temporal Fluctuations in Complex Systems. , 1988, , 329-335.		5
123	Self-organized Critical Phenomena. Series on Directions in Condensed Matter Physics, 1988, , 238-256.	0.1	0
124	Phase organization. Physical Review Letters, 1987, 58, 1161-1164.	2.9	98
125	Critical wave functions and a Cantor-set spectrum of a one-dimensional quasicrystal model. Physical Review B, 1987, 35, 1020-1033.	1.1	662
126	Self-organized criticality: An explanation of the 1/fnoise. Physical Review Letters, 1987, 59, 381-384.	2.9	6,415

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127	Viscous flows in two dimensions. Reviews of Modern Physics, 1986, 58, 977-999.	16.4	674
128	Global scaling properties of the spectrum for a quasiperiodic schrÃ¶dinger equation. Physical Review B, 1986, 34, 2041-2044.	1.1	165
129	Diffusion-limited aggregation and the Saffman-Taylor problem. Physical Review A, 1985, 31, 1977-1979.	1.0	181
130	Localization Problem in One Dimension: Mapping and Escape. Physical Review Letters, 1983, 50, 1870-1872.	2.9	1,018