

# Martin Golubitsky

## List of Publications by Year in descending order

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73  
papers

6,733  
citations

172457

29  
h-index

98798

67  
g-index

73  
all docs

73  
docs citations

73  
times ranked

2196  
citing authors

#	ARTICLE	IF	CITATIONS
1	Singularities and Groups in Bifurcation Theory. Applied Mathematical Sciences (Switzerland), 1988, , .	0.8	1,514
2	Singularities and Groups in Bifurcation Theory. Applied Mathematical Sciences (Switzerland), 1985, , .	0.8	926
3	Symmetry in locomotor central pattern generators and animal gaits. Nature, 1999, 401, 693-695.	27.8	361
4	Geometric visual hallucinations, Euclidean symmetry and the functional architecture of striate cortex. Philosophical Transactions of the Royal Society B: Biological Sciences, 2001, 356, 299-330.	4.0	335
5	Nonlinear dynamics of networks: the groupoid formalism. Bulletin of the American Mathematical Society, 2006, 43, 305-365.	1.5	287
6	The Symmetry Perspective. , 2002, , .		280
7	Symmetry Groupoids and Patterns of Synchrony in Coupled Cell Networks. SIAM Journal on Applied Dynamical Systems, 2003, 2, 609-646.	1.6	256
8	Classification and unfoldings of degenerate Hopf bifurcations. Journal of Differential Equations, 1981, 41, 375-415.	2.2	228
9	Patterns of Synchrony in Coupled Cell Networks with Multiple Arrows. SIAM Journal on Applied Dynamical Systems, 2005, 4, 78-100.	1.6	225
10	Hopf Bifurcation in the presence of symmetry. Archive for Rational Mechanics and Analysis, 1985, 87, 107-165.	2.4	221
11	A modular network for legged locomotion. Physica D: Nonlinear Phenomena, 1998, 115, 56-72.	2.8	178
12	Symmetry-increasing bifurcation of chaotic attractors. Physica D: Nonlinear Phenomena, 1988, 32, 423-436.	2.8	156
13	Models of central pattern generators for quadruped locomotion. Journal of Mathematical Biology, 2001, 42, 291-326.	1.9	133
14	Primary instabilities and bicriticality in flow between counter-rotating cylinders. Physics of Fluids, 1988, 31, 776.	1.4	109
15	Symmetry and Stability in Taylor-Couette Flow. SIAM Journal on Mathematical Analysis, 1986, 17, 249-288.	1.9	97
16	Some Curious Phenomena in Coupled Cell Networks. Journal of Nonlinear Science, 2004, 14, 207-236.	2.1	94
17	Central pattern generators for bipedal locomotion. Journal of Mathematical Biology, 2006, 53, 474-489.	1.9	87
18	An Introduction to Catastrophe Theory and Its Applications. SIAM Review, 1978, 20, 352-387.	9.5	81

#	ARTICLE	IF	CITATIONS
19	Heteroclinic cycles involving periodic solutions in mode interactions with $O(2)$ symmetry. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 1989, 113, 315-345.	1.2	81
20	Pattern formation and bistability in flow between counterrotating cylinders. Physica D: Nonlinear Phenomena, 1988, 32, 362-392.	2.8	71
21	The structure of symmetric attractors. Archive for Rational Mechanics and Analysis, 1993, 123, 75-98.	2.4	65
22	Planforms in two and three dimensions. Zeitschrift Fur Angewandte Mathematik Und Physik, 1992, 43, 36-62.	1.4	58
23	Meandering of the Spiral Tip: An Alternative Approach. Journal of Nonlinear Science, 1997, 7, 557-586.	2.1	56
24	Iterates of Maps with Symmetry. SIAM Journal on Mathematical Analysis, 1988, 19, 1259-1270.	1.9	54
25	Interior symmetry and local bifurcation in coupled cell networks. Dynamical Systems, 2004, 19, 389-407.	0.4	45
26	Homogeneous three-cell networks. Nonlinearity, 2006, 19, 2313-2363.	1.4	45
27	Hopf Bifurcation from Rotating Waves and Patterns in Physical Space. Journal of Nonlinear Science, 2000, 10, 69-101.	2.1	43
28	Nilpotent Hopf Bifurcations in Coupled Cell Systems. SIAM Journal on Applied Dynamical Systems, 2006, 5, 205-251.	1.6	42
29	Recent advances in symmetric and network dynamics. Chaos, 2015, 25, 097612.	2.5	34
30	Homeostasis, singularities, and networks. Journal of Mathematical Biology, 2017, 74, 387-407.	1.9	31
31	Target Patterns and Spirals in Planar Reaction-Diffusion Systems. Journal of Nonlinear Science, 2000, 10, 333-354.	2.1	29
32	Analysis of Homeostatic Mechanisms in Biochemical Networks. Bulletin of Mathematical Biology, 2017, 79, 2534-2557.	1.9	29
33	CYCLING CHAOS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1995, 05, 1243-1247.	1.7	28
34	Network periodic solutions: full oscillation and rigid synchrony. Nonlinearity, 2010, 23, 3227-3243.	1.4	27
35	Sensitive Signal Detection Using a Feed-Forward Oscillator Network. Physical Review Letters, 2007, 98, 254101.	7.8	26
36	Synchrony-Breaking Bifurcation at a Simple Real Eigenvalue for Regular Networks 1: 1-Dimensional Cells. SIAM Journal on Applied Dynamical Systems, 2011, 10, 1404-1442.	1.6	23

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37	Network periodic solutions: patterns of phase-shift synchrony. <i>Nonlinearity</i> , 2012, 25, 1045-1074.	1.4	23
38	Bifurcations on hemispheres. <i>Journal of Nonlinear Science</i> , 1991, 1, 201-223.	2.1	22
39	Rigid patterns of synchrony for equilibria and periodic cycles in network dynamics. <i>Chaos</i> , 2016, 26, 094803.	2.5	22
40	Winding Numbers and Average Frequencies in Phase Oscillator Networks. <i>Journal of Nonlinear Science</i> , 2006, 16, 201-231.	2.1	21
41	Feed-forward networks, center manifolds, and forcing. <i>Discrete and Continuous Dynamical Systems</i> , 2012, 32, 2913-2935.	0.9	21
42	Hopf-Hopf mode interactions with $O(2)$ symmetry. <i>Dynamical Systems</i> , 1986, 1, 255-292.	0.7	19
43	Infinitesimal homeostasis in three-node input-output networks. <i>Journal of Mathematical Biology</i> , 2020, 80, 1163-1185.	1.9	19
44	Derived Patterns in Binocular Rivalry Networks. <i>Journal of Mathematical Neuroscience</i> , 2013, 3, 6.	2.4	17
45	Homeostasis in a feed forward loop gene regulatory motif. <i>Journal of Theoretical Biology</i> , 2018, 445, 103-109.	1.7	17
46	Reduction and Dynamics of a Generalized Rivalry Network with Two Learned Patterns. <i>SIAM Journal on Applied Dynamical Systems</i> , 2012, 11, 1270-1309.	1.6	16
47	The Abelian Hopf $\langle i \rangle H \langle /i \rangle \bmod \langle i \rangle K \langle /i \rangle$ Theorem. <i>SIAM Journal on Applied Dynamical Systems</i> , 2010, 9, 283-291.	1.6	14
48	Homeostasis with Multiple Inputs. <i>SIAM Journal on Applied Dynamical Systems</i> , 2018, 17, 1816-1832.	1.6	14
49	Spatiotemporal Symmetries in the Disynaptic Canal-Neck Projection. <i>SIAM Journal on Applied Mathematics</i> , 2007, 67, 1396-1417.	1.8	13
50	The Feed-Forward Chain as a Filter-Amplifier Motif. , 2009, , 95-120.		13
51	The structure of infinitesimal homeostasis in input-output networks. <i>Journal of Mathematical Biology</i> , 2021, 82, 62.	1.9	11
52	Modulated rotating waves in $O(2)$ mode interactions. <i>Dynamical Systems</i> , 1988, 3, 159-175.	0.7	10
53	STABILITY COMPUTATIONS FOR NILPOTENT HOPF BIFURCATIONS IN COUPLED CELL SYSTEMS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2007, 17, 2595-2603.	1.7	10
54	Network Symmetry and Binocular Rivalry Experiments. <i>Journal of Mathematical Neuroscience</i> , 2014, 4, 12.	2.4	10

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55	Geometry of resonance tongues. , 2007, , .		10
56	SYNCHRONY VERSUS SYMMETRY IN COUPLED CELLS. , 2005, , .		8
57	Dimorphism by Singularity Theory in a Model for River Ecology. Bulletin of Mathematical Biology, 2017, 79, 1051-1069.	1.9	6
58	Coordinate changes for network dynamics. Dynamical Systems, 2017, 32, 80-116.	0.4	6
59	Symmetry of generalized rivalry network models determines patterns of interocular grouping in four-location binocular rivalry. Journal of Neurophysiology, 2019, 122, 1989-1999.	1.8	6
60	Normal Forms and Unfoldings of Singular Strategy Functions. Dynamic Games and Applications, 2015, 5, 180-213.	1.9	5
61	Symmetry types and phase-shift synchrony in networks. Physica D: Nonlinear Phenomena, 2016, 320, 9-18.	2.8	5
62	Homeostasis despite instability. Mathematical Biosciences, 2018, 300, 130-137.	1.9	5
63	Symmetric Networks with Geometric Constraints as Models of Visual Illusions. Symmetry, 2019, 11, 799.	2.2	5
64	Bifurcations on Fully Inhomogeneous Networks. SIAM Journal on Applied Dynamical Systems, 2020, 19, 366-411.	1.6	5
65	Symmetry and pattern formation for a planar layer of nematic liquid crystal. Journal of Mathematical Physics, 2003, 44, 4201.	1.1	4
66	Singularity theory of fitness functions under dimorphism equivalence. Journal of Mathematical Biology, 2016, 73, 525-573.	1.9	4
67	Input-Output Networks, Singularity Theory, and Homeostasis. Studies in Systems, Decision and Control, 2020, , 31-65.	1.0	4
68	Synchrony in Lattice Differential Equations. Series in Contemporary Applied Mathematics, 2007, , 43-56.	0.8	3
69	BURSTING IN COUPLED CELL SYSTEMS. , 2005, , 201-221.		2
70	Coincidence of Homeostasis and Bifurcation in Feedforward Networks. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2019, 29, 1930037.	1.7	2
71	SYMMETRY AND PATTERN FORMATION ON THE VISUAL CORTEX. World Scientific Series on Nonlinear Science, Series B, 2004, , 3-19.	0.2	2
72	BIPEDAL LOCOMOTION. , 2005, , .		2

#	ARTICLE	IF	CITATIONS
73	Classification of infinitesimal homeostasis in four-node input-output networks. Journal of Mathematical Biology, 2022, 84, 25.	1.9	2