Ian Stewart

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/4195700/publications.pdf

Version: 2024-02-01

155 papers	4,903 citations	279798 23 h-index	102487 66 g-index
184 all docs	184 docs citations	184 times ranked	1905 citing authors

#	Article	IF	Citations
1	Singularities and Groups in Bifurcation Theory. Applied Mathematical Sciences (Switzerland), 1988, , .	0.8	1,514
2	Symmetry in locomotor central pattern generators and animal gaits. Nature, 1999, 401, 693-695.	27.8	361
3	Nonlinear dynamics of networks: the groupoid formalism. Bulletin of the American Mathematical Society, 2006, 43, 305-365.	1.5	287
4	The Symmetry Perspective. , 2002, , .		280
5	Symmetry Groupoids and Patterns of Synchrony in Coupled Cell Networks. SIAM Journal on Applied Dynamical Systems, 2003, 2, 609-646.	1.6	256
6	Patterns of Synchrony in Coupled Cell Networks with Multiple Arrows. SIAM Journal on Applied Dynamical Systems, 2005, 4, 78-100.	1.6	225
7	Hopf Bifurcation in the presence of symmetry. Archive for Rational Mechanics and Analysis, 1985, 87, 107-165.	2.4	221
8	The Lorenz attractor exists. Nature, 2000, 406, 948-949.	27.8	187
9	A modular network for legged locomotion. Physica D: Nonlinear Phenomena, 1998, 115, 56-72.	2.8	178
10	Hexapodal gaits and coupled nonlinear oscillator models. Biological Cybernetics, 1993, 68, 287-298.	1.3	168
11	Coupled cells with internal symmetry: I. Wreath products. Nonlinearity, 1996, 9, 559-574.	1.4	75
12	Deciding the undecidable. Nature, 1991, 352, 664-665.	27.8	67
13	Nonlinear modeling of multistable perception. Systems Research and Behavioral Science, 1978, 23, 318-334.	0.2	59
14	Singularity theory and equivariant bifurcation problems with parameter symmetry. Mathematical Proceedings of the Cambridge Philosophical Society, 1996, 120, 547-578.	0.4	49
15	Geometry: Exotic structures on four-space. Nature, 1986, 322, 310-311.	27.8	44
16	Liapunov stability and adding machines. Ergodic Theory and Dynamical Systems, 1995, 15, 271-290.	0.6	40
17	Algebraic path formulation for equivariant bifurcation problems. Mathematical Proceedings of the Cambridge Philosophical Society, 1998, 124, 275-304.	0.4	37
18	The lattice of balanced equivalence relations of a coupled cell network. Mathematical Proceedings of the Cambridge Philosophical Society, 2007, 143, 165-183.	0.4	37

#	Article	IF	Citations
19	Warning â€" handle with care!. Nature, 1992, 355, 16-17.	27.8	35
20	Recent advances in symmetric and network dynamics. Chaos, 2015, 25, 097612.	2.5	34
21	Linear equivalence and ODE-equivalence for coupled cell networks. Nonlinearity, 2005, 18, 1003-1020.	1.4	31
22	Homeostasis, singularities, and networks. Journal of Mathematical Biology, 2017, 74, 387-407.	1.9	31
23	SYMMETRY AND SYNCHRONY IN COUPLED CELL NETWORKS 1: FIXED-POINT SPACES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2006, 16, 559-577.	1.7	30
24	Analysis of Homeostatic Mechanisms in Biochemical Networks. Bulletin of Mathematical Biology, 2017, 79, 2534-2557.	1.9	29
25	Symmetry-Breaking as an Origin of Species. , 2003, , 3-54.		24
26	Selfâ€"organization in evolution: a mathematical perspective. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2003, 361, 1101-1123.	3.4	22
27	Rigid patterns of synchrony for equilibria and periodic cycles in network dynamics. Chaos, 2016, 26, 094803.	2.5	22
28	Periodic dynamics of coupled cell networks I: rigid patterns of synchrony and phase relations. Dynamical Systems, 2007, 22, 389-450.	0.4	21
29	Spontaneous Symmetry-Breaking in a Network Model for Quadruped Locomotion. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2017, 27, 1730049.	1.7	20
30	Periodic dynamics of coupled cell networks II: cyclic symmetry. Dynamical Systems, 2008, 23, 17-41.	0.4	19
31	Symmetry Groupoids and Admissible Vector Fields for Coupled Cell Networks. Journal of the London Mathematical Society, 2004, 69, 707-736.	1.0	18
32	SYMMETRY AND SYNCHRONY IN COUPLED CELL NETWORKS 2: GROUP NETWORKS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2007, 17, 935-951.	1.7	18
33	Bounded solutions for non-autonomous parabolic equations. Dynamical Systems, 1996, 11, 109-120.	0.7	17
34	Homeostasis in a feed forward loop gene regulatory motif. Journal of Theoretical Biology, 2018, 445, 103-109.	1.7	17
35	The ultimate in undecidability. Nature, 1988, 332, 115-116.	27.8	16
36	Finitely Generated Lie Algebras. Journal of the London Mathematical Society, 1972, s2-5, 697-703.	1.0	14

#	Article	IF	Citations
37	Homeostasis with Multiple Inputs. SIAM Journal on Applied Dynamical Systems, 2018, 17, 1816-1832.	1.6	14
38	Structure Theorems for a Class of Locally Finite Lie Algebras. Proceedings of the London Mathematical Society, 1972, s3-24, 79-100.	1.3	13
39	Mathematics: Hermann Grassmann was right. Nature, 1986, 321, 17-17.	27.8	13
40	Sources of uncertainty in deterministic dynamics: an informal overview. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 4705-4729.	3.4	12
41	Symmetry-Breaking in a Rate Model for a Biped Locomotion Central Pattern Generator. Symmetry, 2014, 6, 23-66.	2.2	12
42	DETECTING THE SYMMETRY OF ATTRACTORS FOR SIX OSCILLATORS COUPLED IN A RING. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1995, 05, 209-229.	1.7	11
43	Hopf-steady-state mode interactions with 0(2) symmetry. Dynamical Systems, 1991, 6, 149-171.	0.7	10
44	Symmetry and chaotic data. Nature, 1991, 354, 113-113.	27.8	10
45	Where are the dolphins?. Nature, 2001, 409, 1119-1122.	27.8	10
46	Secondary bifurcations in systems with allâ€“toâ€“all coupling. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2003, 459, 1969-1986.	2.1	10
47	The mathematical tourist. Mathematical Intelligencer, 1995, 17, 52-54.	0.2	9
48	Symmetry methods in mathematical biology. Sao Paulo Journal of Mathematical Sciences, 2015, 9, 1-36.	0.4	9
49	Verbal and Marginal Properties of Non-Associative Algebras. Proceedings of the London Mathematical Society, 1974, s3-28, 129-140.	1.3	8
50	All together now â€¦. Nature, 1991, 350, 557-557.	27.8	8
51	Where drunkards hang out. Nature, 2001, 413, 686-687.	27.8	8
52	SYNCHRONY VERSUS SYMMETRY IN COUPLED CELLS. , 2005, , .		8
53	Liapunov stability and adding machines revisited. Dynamical Systems, 2006, 21, 379-384.	0.4	8
54	Hidden symmetries and pattern formation in Lapwood convection. Dynamical Systems, 1996, 11, 155-192.	0.7	7

#	Article	IF	Citations
55	SYMMETRY AND SYNCHRONY IN COUPLED CELL NETWORKS 3. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 363-373.	1.7	7
56	PHASE OSCILLATORS WITH SINUSOIDAL COUPLING INTERPRETED IN TERMS OF PROJECTIVE GEOMETRY. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2011, 21, 1795-1804.	1.7	7
57	The symplectic camel. Nature, 1987, 329, 17-18.	27.8	6
58	The mathematical tourist. Mathematical Intelligencer, 1993, 15, 54-57.	0.2	6
59	The Classification of Bifurcations with Hidden Symmetries. Proceedings of the London Mathematical Society, 2000, 80, 198-234.	1.3	6
60	ENUMERATION OF HOMOGENEOUS COUPLED CELL NETWORKS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2005, 15, 2361-2373.	1.7	6
61	Coordinate changes for network dynamics. Dynamical Systems, 2017, 32, 80-116.	0.4	6
62	Circularly covering clathrin. Nature, 1991, 351, 103-103.	27.8	5
63	Riemann surfaceâ€"crocheted in four colors. Mathematical Intelligencer, 1993, 15, 49-55.	0.2	5
64	ELIMINATION OF MULTIPLE ARROWS AND SELF-CONNECTIONS IN COUPLED CELL NETWORKS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2007, 17, 99-106.	1.7	5
65	EXAMPLES OF FORCED SYMMETRY-BREAKING TO HOMOCLINIC CYCLES IN THREE-DIMENSIONAL EUCLIDEAN-INVARIANT SYSTEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 83-107.	1.7	5
66	Symmetric Networks with Geometric Constraints as Models of Visual Illusions. Symmetry, 2019, 11, 799.	2.2	5
67	Exotic Patterns of Synchrony in Planar Lattice Networks. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2019, 29, 1930003.	1.7	5
68	Symmetries of Quotient Networks for Doubly Periodic Patterns on the Square Lattice. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2019, 29, 1930026.	1.7	5
69	Bounds for the Dimensions of Certain Lie Algebras. Journal of the London Mathematical Society, 1971, s2-3, 731-732.	1.0	4
70	Finitely presented infinite-dimensional simple Lie algebras. Archiv Der Mathematik, 1975, 26, 504-507.	0.5	4
71	Stability of periodic solutions in symmetric Hopf bifurcation. Dynamical Systems, 1988, 2, 149-165.	0.7	4
72	SchrÃ¶dinger's catflap. Nature, 1991, 353, 384-385.	27.8	4

#	Article	IF	Citations
73	3-mode Interactions with O(2) Symmetry and a Model for Taylor-Couette flow. Dynamical Systems, 1991, 6, 267-339.	0.7	4
74	A Hopf bifurcation with spherical symmetry. Zeitschrift Fur Angewandte Mathematik Und Physik, 1992, 43, 793-826.	1.4	4
75	DEGENERATE BIFURCATIONS WITH Z2âŠ•Z2-SYMMETRY. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1999, 09, 1653-1667.	1.7	4
76	AN OPTIMAL LIFTING THEOREM FOR COUPLED CELL NETWORKS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2011, 21, 2481-2487.	1.7	4
77	Input-Output Networks, Singularity Theory, and Homeostasis. Studies in Systems, Decision and Control, 2020, , 31-65.	1.0	4
78	The Frattini Subalgebras of Certain Infinite-Dimensional Soluble Lie Algebras. Journal of the London Mathematical Society, 1975, s2-11, 207-215.	1.0	3
79	The Truth about Venn Diagrams. Mathematical Gazette, 1976, 60, 47.	0.0	3
80	Mathematics: The duellist and the monster. Nature, 1985, 317, 12-13.	27.8	3
81	Hilbert's sixteenth problem. Nature, 1987, 326, 248-248.	27.8	3
82	The hyperbolic phoenix. Nature, 1987, 328, 16-17.	27.8	3
83	The cross-ratio foliation of binary quartic forms. Geometriae Dedicata, 1988, 27, 263.	0.3	3
84	Pyramid power, people power. Nature, 1996, 383, 218-218.	27.8	3
85	Symmetry of Generic Bifurcations in Cubic Domains. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1997, 07, 147-171.	1.7	3
86	Why Do All Triangles Form a Triangle?. American Mathematical Monthly, 2017, 124, 70.	0.3	3
87	Levi Factors of Infinite-Dimensional Lie Algebras. Journal of the London Mathematical Society, 1972, s2-5, 488-488.	1.0	2
88	Mathematics: Five bodies to infinity. Nature, 1984, 312, 398-399.	27.8	2
89	The arithmetic of chaos. Nature, 1987, 329, 670-671.	27.8	2
90	The beat of a fractal drum. Nature, 1988, 333, 206-207.	27.8	2

#	Article	IF	Citations
91	Lowering the volume. Nature, 1989, 338, 375-376.	27.8	2
92	Mock theta conjectures. Nature, 1989, 339, 341-341.	27.8	2
93	The mathematical tourist. Mathematical Intelligencer, 1995, 17, 34-36.	0.2	2
94	The Mathematical Tourist. Mathematical Intelligencer, 1995, 17, 34-34.	0.2	2
95	Bye-Bye Bourbaki Paradigm Shifts in Mathematics. Mathematical Gazette, 1995, 79, 496.	0.0	2
96	A gathering of groups. Nature, 2000, 403, 719-720.	27.8	2
97	Special issue for Martin Golubitsky. Dynamical Systems, 2017, 32, 1-3.	0.4	2
98	Symmetries of Quotient Networks for Doubly Periodic Patterns on the Hexagonal Lattice. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2020, 30, 2030004.	1.7	2
99	Balanced Colorings and Bifurcations in Rivalry and Opinion Networks. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2021, 31, 2130019.	1.7	2
100	Overdetermined constraints and rigid synchrony patterns for network equilibria. Portugaliae Mathematica, 2020, 77, 163-196.	0.4	2
101	Mathematics: The power of positive thinking. Nature, 1985, 315, 539-539.	27.8	1
102	Mathematics: Classical continued fractals. Nature, 1985, 318, 512-512.	27.8	1
103	Mathematics for young people: The royal institution masterclasses. Mathematical Intelligencer, 1985, 7, 59-64.	0.2	1
104	Mathematics: Demystifying the monster. Nature, 1986, 319, 621-622.	27.8	1
105	Mathematics: Counting costs of calculation. Nature, 1986, 321, 812-813.	27.8	1
106	Mathematics: The Waring experience. Nature, 1986, 323, 674-674.	27.8	1
107	Mathematics: One hundred per cent proof. Nature, 1986, 324, 406-407.	27.8	1
108	Joins of ideals of subideals of Lie algebras. Archiv Der Mathematik, 1986, 47, 222-228.	0.5	1

#	Article	IF	Citations
109	Gases exist â€" official!. Nature, 1987, 327, 105-106.	27.8	1
110	Yinâ€"yang and the art of noise. Nature, 1988, 335, 394-394.	27.8	1
111	Big whorls do have little whorls. Nature, 1989, 338, 18-19.	27.8	1
112	symmetry breakthrough. Nature, 1989, 341, 389-390.	27.8	1
113	The mathematical tourist. Mathematical Intelligencer, 1990, 12, 39-39.	0.2	1
114	Justifying the means. Nature, 1991, 354, 185-186.	27.8	1
115	Fending for themselves. Nature, 1994, 371, 452-452.	27.8	1
116	The mathematical tourist. Mathematical Intelligencer, 1996, 18, 52-56.	0.2	1
117	Cooking the Classics. Mathematical Intelligencer, 2011, 33, 61-71.	0.2	1
118	Traces of Symmetric Chaos. Science, 2000, 288, 55e-55.	12.6	1
119	Unpredictability: The Broken Dice and Other Mathematical Tales of Chance . Ivar Ekeland. University of Chicago Press, Chicago, 1993. vi, 183 pp., illus. $19.95 or Â£15.95. Translated from the French edition (1991) by Carol Volk.. Science, 1994, 265, 271-271.	12.6	1
120	Lie Algebras having Large Cartan Subalgebras. Bulletin of the London Mathematical Society, 1979, 11, 124-128.	0.8	0
121	Mathematics: Three conjectures in one blow. Nature, 1984, 310, 729-730.	27.8	0
122	Bifurcation and hysteresis varieties for the thermal-chainbranching model II: positive modal parameter. Mathematical Proceedings of the Cambridge Philosophical Society, 1984, 96, 331-349.	0.4	0
123	Mathematics: How bent is a knot?. Nature, 1985, 314, 132-132.	27.8	0
124	Mathematics: Feigenbaum's fixed function. Nature, 1985, 314, 675-675.	27.8	0
125	Mathematics: The Bierberbach gambit. Nature, 1985, 316, 213-214.	27.8	0
126	Mathematical topology: Solving a knotty problem. Nature, 1985, 317, 290-290.	27.8	0

#	Article	IF	Citations
127	Dynamical systems: Attraction in a new idea. Nature, 1985, 317, 573-574.	27.8	0
128	Topology: The PoincarÃ© conjecture proved. Nature, 1986, 320, 217-218.	27.8	0
129	Mathematics: The class number problem. Nature, 1986, 321, 474-474.	27.8	0
130	Geometry: Non-euclidean kaleidoscopes. Nature, 1986, 323, 114-114.	27.8	0
131	Mathematics: Singular flying pancakes. Nature, 1986, 323, 397-397.	27.8	0
132	The battle of the biquadrates. Nature, 1987, 328, 384-384.	27.8	0
133	Geometry finds factors faster. Nature, 1987, 325, 199-199.	27.8	0
134	Are mathematicians logical?. Nature, 1987, 325, 386-387.	27.8	0
135	The three-sphere strikes back. Nature, 1987, 325, 579-580.	27.8	0
136	The area of the plane. Nature, 1987, 326, 826-827.	27.8	0
137	A. N. Kolmogorov (1903â€“1987). Nature, 1987, 330, 314-314.	27.8	0
138	Highly distributed processing. Nature, 1989, 337, 13-13.	27.8	0
139	The mathematical tourist. Mathematical Intelligencer, 1990, 12, 49-49.	0.2	0
140	The mathematical tourist. Mathematical Intelligencer, 1990, 12, 52-52.	0.2	0
141	BROKEN SYMMETRY AND THE FORMATION OF SPIRAL PATTERNS IN FLUIDS. , 1992, , 187-220.		0
142	The mathematical tourist. Mathematical Intelligencer, 1993, 15, 53-62.	0.2	0
143	Reprints of Books Previously Reviewed. Science, 1994, 265, 271-271.	12.6	0
144	The mathematical tourist. Mathematical Intelligencer, 1995, 17, 58-61.	0.2	0

#	Article	IF	Citations
145	For freewheelers and wannabees. Nature, 1996, 383, 43-43.	27.8	0
146	The Ultimate in Technology Transfer. Mathematical Gazette, 1996, 80, 163.	0.0	0
147	Systems With Emergent Dynamics. AIP Conference Proceedings, 2002, , .	0.4	0
148	SchrÃ¶dinger's mousetrap. Nature, 2005, 433, 200-201.	27.8	0
149	Play it again, Psam. Nature, 2005, 433, 556-556.	27.8	0
150	Life: porridge would be just right for each universe. Nature, 2006, 444, 1002-1002.	27.8	0
151	A NEW MECHANISM FOR INTERMITTENCY IN RINGS OF CELLS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 675-687.	1.7	0
152	A generalized Noetherian condition for Lie algebras. Journal of Algebra and Its Applications, 2019, 18, 1950146.	0.4	0
153	Generalised Chain Conditions, Prime Ideals, and Classes of Locally Finite Lie Algebras. Algebra Colloquium, 2021, 28, 63-86.	0.2	0
154	HETEROCLINIC CYCLES AND WREATH PRODUCT SYMMETRIES. , 2001, , .		0
155	Finite Characterization of the Coarsest Balanced Coloring of a Network. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2020, 30, 2050212.	1.7	0