Laurette S Tuckerman

List of Publications by Year
in descending order

87	4,039	117625 34	118850 62
papers	citations	h-index	g-index

89	89	89	2112
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Parametric instability of the interface between two fluids. Journal of Fluid Mechanics, 1994, 279, 49-68.	3.4	437
2	Spiral-wave dynamics in a simple model of excitable media: The transition from simple to compound rotation. Physical Review A, 1990, 42, 2489-2492.	2.5	282
3	Asymmetry and Hopf bifurcation in spherical Couette flow. Physics of Fluids, 1995, 7, 80-91.	4.0	205
4	Computational Study of Turbulent Laminar Patterns in Couette Flow. Physical Review Letters, 2005, 94, 014502.	7.8	185
5	Numerical Bifurcation Methods and their Application to Fluid Dynamics: Analysis beyond Simulation. Communications in Computational Physics, 2014, 15, 1-45.	1.7	136
6	Simulation of flow between concentric rotating spheres. Part 1. Steady states. Journal of Fluid Mechanics, 1987, 185, 1-30.	3.4	110
7	Scanning electrochemical microscopy: theory and application of the transient (chronoamperometric) SECM response. Analytical Chemistry, 1991, 63, 1282-1288.	6.5	110
8	Mean flow of turbulentâ€“laminar patterns in plane Couette flow. Journal of Fluid Mechanics, 2007, 576, 109-137.	3.4	110
9	Bifurcation Analysis for Timesteppers. The IMA Volumes in Mathematics and Its Applications, 2000, , 453-466.	0.5	107
10	Bifurcation analysis of the Eckhaus instability. Physica D: Nonlinear Phenomena, 1990, 46, 57-86.	2.8	103
11	A method for exponential propagation of large systems of stiff nonlinear differential equations. Journal of Scientific Computing, 1989, 4, 327-354.	2.3	100
12	Stable Vortexâ€“Bright-Soliton Structures in Two-Component Bose-Einstein Condensates. Physical Review Letters, 2010, 105, 160405.	7.8	99
13	Marangoni convection in binary mixtures with Soret effect. Journal of Fluid Mechanics, 1998, 375, 143-177.	3.4	98
14	Divergence-free velocity fields in nonperiodic geometries. Journal of Computational Physics, 1989, 80, 403-441.	3.8	92
15	Simulation of flow between concentric rotating spheres. Part 2. Transitions. Journal of Fluid Mechanics, 1987, 185, 31-65.	3.4	78
16	Numerical simulation of Faraday waves. Journal of Fluid Mechanics, 2009, 635, 1-26.	3.4	77
17	The 1[ratio]2 mode interaction in exactly counter-rotating von KÃ¡rmÃ¡n swirling flow. Journal of Fluid Mechanics, 2003, 477, .	3.4	73
18	Two-frequency parametric excitation of surface waves. Physical Review E, 1996, 54, 507-513.	2.1	71

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19	Universal continuous transition to turbulence in a planar shear flow. Journal of Fluid Mechanics, 2017, 824, .	3.4	70
20	Crystal growth at long times: Critical behavior at the crossover from diffusion to kinetics-limited regimes. Physical Review A, 1992, 45, 2399-2415.	2.5	67
21	Bifurcation analysis of double-diffusive convection with opposing horizontal thermal and solutal gradients. Physics of Fluids, 1998, 10, 850-858.	4.0	66
22	Patterns in Wall-Bounded Shear Flows. Annual Review of Fluid Mechanics, 2020, 52, 343-367.	25.0	66
23	Bifurcation theory for three-dimensional flow in the wake of a circular cylinder. Physical Review E, 2000, 61, 5247-5252.	2.1	60
24	Dynamical mechanism for the formation of metastable phases. Physical Review Letters, 1991, 67, 1266-1269.	7.8	59
25	Turbulent-laminar patterns in plane Poiseuille flow. Physics of Fluids, 2014, 26, .	4.0	59
26	Stability of periodic arrays of vortices. Physics of Fluids, 1996, 8, 487-495.	4.0	51
27	Prediction of frequencies in thermosolutal convection from mean flows. Physical Review E, 2015, 91, 043009.	2.1	50
28	Stability analysis of perturbed plane Couette flow. Physics of Fluids, 1999, 11, 1187-1195.	4.0	45
29	Grossâ€“Pitaevskii dynamics of Boseâ€“Einstein condensates and superfluid turbulence. Fluid Dynamics Research, 2003, 33, 509-544.	1.3	45
30	Extreme multiplicity in cylindrical Rayleigh-BÃ©nard convection. II. Bifurcation diagram and symmetry classification. Physical Review E, 2010, 81, 036321.	2.1	39
31	Global Bifurcation to Traveling Waves in Axisymmetric Convection. Physical Review Letters, 1988, 61, 408-411.	7.8	38
32	Symmetry-breaking bifurcations in one-dimensional excitable media. Physical Review A, 1992, 46, 5054-5062.	2.5	37
33	Survey of instability thresholds of flow between exactly counter-rotating disks. Journal of Fluid Mechanics, 2004, 511, 45-65.	3.4	35
34	Standing and travelling waves in cylindrical Rayleighâ€“BÃ©nard convection. Journal of Fluid Mechanics, 2006, 559, 279.	3.4	33
35	Extreme multiplicity in cylindrical Rayleigh-BÃ©nard convection. I. Time dependence and oscillations. Physical Review E, 2010, 81, 036320.	2.1	33
36	Turbulentâ€“laminar patterns in shear flows without walls. Journal of Fluid Mechanics, 2016, 791, .	3.4	33

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37	Convection patterns in a spherical fluid shell. Physical Review E, 2011, 83, 046304.	2.1	32
38	Alternating Hexagonal and Striped Patterns in Faraday Surface Waves. Physical Review Letters, 2012, 109, 164501.	7.8	32
39	Hysteresis of dynamos in rotating spherical shell convection. Physical Review Fluids, 2017, 2, .	2.5	30
40	Scaling of the transition to parametrically driven surface waves in highly dissipative systems. Physical Review E, 1997, 55, R3832-R3835.	2.1	29
41	Transient growth in Taylorâ€“Couette flow. Physics of Fluids, 2002, 14, 3475-3484.	4.0	28
42	Couette-Poiseuille flow experiment with zero mean advection velocity: Subcritical transition to turbulence. Physical Review Fluids, 2017, 2, .	2.5	28
43	Numerical simulation of supersquare patterns in Faraday waves. Journal of Fluid Mechanics, 2015, 772, .	3.4	26
44	Statistical transition to turbulence in plane channel flow. Physical Review Fluids, 2020, 5, .	2.5	26
45	Dynamical mechanism for the formation of metastable phases: The case of two nonconserved order parameters. Physical Review A, 1992, 46, 3178-3192.	2.5	25
46	Taylor vortices versus Taylor columns. Journal of Fluid Mechanics, 2014, 750, 1-4.	3.4	25
47	Faraday instability on a sphere: Floquet analysis. Journal of Fluid Mechanics, 2016, 805, 591-610.	3.4	25
48	Bifurcation analysis and frequency prediction in shear-driven cavity flow. Journal of Fluid Mechanics, 2019, 875, 725-757.	3.4	24
49	Steady-state solving via stokes preconditioning; Recursion relations for elliptic operators. , 1989, , 573-577.		19
50	Traveling waves in axisymmetric convection: The role of sidewall conductivity. Physica D: Nonlinear Phenomena, 1989, 37, 288-294.	2.8	18
51	Motion of polymorphonuclear leukocytes: Theory of receptor redistribution and the frictional force on a moving cell. Cell Motility, 1981, 1, 205-235.	1.8	17
52	Thermosolutal and binary fluid convection as a 2Ã—2 matrix problem. Physica D: Nonlinear Phenomena, 2001, 156, 325-363.	2.8	17
53	Self-sustaining process in Taylor-Couette flow. Physical Review Fluids, 2018, 3, .	2.5	17
54	Turbulent cascade, bottleneck, and thermalized spectrum in hyperviscous flows. Physical Review Fluids, 2020, 5, .	2.5	15

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55	Bifurcations of rotating waves in rotating spherical shell convection. Physical Review E, 2015, 92, 053015.	2.1	13
56	Turbulent-Laminar Patterns in Plane Couette Flow. , 2005, , 107-127.		11
57	Extreme events in transitional turbulence. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20210036.	3.4	11
58	Laplacian Preconditioning for the Inverse Arnoldi Method. Communications in Computational Physics, 2015, 18, 1336-1351.	1.7	10
59	Poloidalâ€“toroidal decomposition in a finite cylinder. I: Influence matrices for the magnetohydrodynamic equations. Journal of Computational Physics, 2007, 227, 1523-1543.	3.8	9
60	Computing Optimal Forcing Using Laplace Preconditioning. Communications in Computational Physics, 2017, 22, 1508-1532.	1.7	9
61	Faraday instability on a sphere: numerical simulation. Journal of Fluid Mechanics, 2019, 870, 433-459.	3.4	9
62	Spirals and ribbons in counter-rotating Taylor-Couette flow: Frequencies from mean flows and heteroclinic orbits. Physical Review Fluids, 2019, 4, .	2.5	9
63	Transformations of matrices into banded form. Journal of Computational Physics, 1989, 84, 360-376.	3.8	8
64	Comment on â€˜â€˜Bifurcation structure and the Eckhaus instabilityâ€™â€™. Physical Review Letters, 1991, 67, 1051-1051.	7.8	8
65	Statistical analysis of the transition to turbulent-laminar banded patterns in plane Couette flow. Journal of Physics: Conference Series, 2008, 137, 012029.	0.4	8
66	Influence of counter-rotating von KÃ¡rmÃ¡n flow on cylindrical Rayleigh-BÃ©nard convection. Physical Review E, 2010, 81, 036322.	2.1	8
67	Frequency prediction from exact or self-consistent mean flows. Physical Review Fluids, 2021, 6, .	2.5	8
68	Stokes preconditioning for the inverse power method. , 1997, , 75-76.		7
69	Poloidalâ€“toroidal decomposition in a finite cylinder. Journal of Computational Physics, 2007, 227, 1544-1566.	3.8	7
70	Amplitudes from eigenvalues. Fluid Dynamics Research, 2012, 44, 031202.	1.3	6
71	Order-of-Magnitude Speedup for Steady States and Traveling Waves via Stokes Preconditioning in Channelflow and Openpipeflow. Computational Methods in Applied Sciences (Springer), 2019, , 3-31.	0.3	6
72	Instability of uniform turbulent plane Couette flow: spectra, probability distribution functions and K â€“ Î© closure model. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2010, , 59-66.	0.2	6

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73	Symmetry Breaking and Turbulence in Perturbed Plane Couette Flow. Theoretical and Computational Fluid Dynamics, 2002, 16, 91-97.	2.2	5
74	Transient Growth in Exactly Counter-Rotating Couette-Taylor Flow. Theoretical and Computational Fluid Dynamics, 2002, 16, 43-48.	2.2	5
75	GeoFlow: On symmetry-breaking bifurcations of heated spherical shell convection. Journal of Physics: Conference Series, 2008, 137, 012027.	0.4	4
76	Coinciding local bifurcations in the Navier-Stokes equations. Europhysics Letters, 2021, 135, 24002.	2.0	3
77	Computational Challenges of Nonlinear Systems. Advances in Dynamics, Patterns, Cognition, 2020, , 249-277.	0.3	3
78	Order parameter in laminar-turbulent patterns. Springer Proceedings in Physics, 2009, , 89-91.	0.2	2
79	Numerical methods for bifurcation problems. Nonlinear Phenomena and Complex Systems, 2004, , 75-83.	0.0	2
80	Linear and Nonlinear Stability Analysis of Perturbed Plane Couette Flow. Fluid Mechanics and Its Applications, 1998, , 123-126.	0.2	2
81	Ricocheting inclined layer convection states. Journal of Fluid Mechanics, 2020, 900, .	3.4	1
82	Causes and Correlations of Masterâ€™s Degree Statistics. Physics Today, 2004, 57, 17-17.	0.3	0
83	A General Methodology for Studying the Hydrodynamic Stability of Flows in Enclosures. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2003, , 38-55.	0.3	0
84	Binary fluid convection as a 2 x 2 matrix problem. Nonlinear Phenomena and Complex Systems, 2004, , 353-359.	0.0	0
85	Mean flow and modeling of turbulent-laminar patterns in plane Couette flow. Springer Proceedings in Physics, 2007, , 224-226.	0.2	0
86	Bifurcation Analysis of the Eckhaus Instability. Woodward Conference, 1990, , 321-324.	0.3	0
87	Travelling Waves in Axisymmetric Convection. NATO ASI Series Series B: Physics, 1990, , 73-75.	0.2	0