Dwight Barkley

List of Publications by Year in Descending Order

79 papers	4,802 citations	35 h-index	69 g-index
81 ext. papers	5,352 ext. citations	4.7 avg, IF	6 L-index

#	Paper	IF	Citations
79	Extreme events in transitional turbulence.. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2022**, 380, 20210036	3	4
78	Statistical transition to turbulence in plane channel flow. *Physical Review Fluids*, **2020**, 5,	2.8	16
77	A fluid mechanics analysis of the teacup singularity. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2020**, 476, 20200348	2.4	1
76	Patterns in Wall-Bounded Shear Flows. *Annual Review of Fluid Mechanics*, **2020**, 52, 343-367	22	36
75	Taming turbulent fronts by bending pipes. *Journal of Fluid Mechanics*, **2019**, 872, 1-4	3.7	2
74	Modeling shape selection of buckled dielectric elastomers. *Journal of Applied Physics*, **2018**, 123, 065102	2.5	3
73	Self-sustaining process in Taylor-Couette flow. *Physical Review Fluids*, **2018**, 3,	2.8	9
72	Speed and structure of turbulent fronts in pipe flow. *Journal of Fluid Mechanics*, **2017**, 813, 1045-1059	3.7	24
71	Universal continuous transition to turbulence in a planar shear flow. *Journal of Fluid Mechanics*, **2017**, 824,	3.7	48
70	Theoretical perspective on the route to turbulence in a pipe. *Journal of Fluid Mechanics*, **2016**, 803,	3.7	98
69	Turbulent–laminar patterns in shear flows without walls. *Journal of Fluid Mechanics*, **2016**, 791,	3.7	25
68	The rise of fully turbulent flow. *Nature*, **2015**, 526, 550-3	50.4	101
67	Prediction of frequencies in thermosolutal convection from mean flows. *Physical Review E*, **2015**, 91, 043009	2.4	36
66	Asymptotic dynamics of reflecting spiral waves. *Physical Review E*, **2014**, 90, 062902	2.4	6
65	Non-specular reflections in a macroscopic system with wave-particle duality: spiral waves in bounded media. *Chaos*, **2013**, 23, 013134	3.3	11
64	Modeling the transition to turbulence in shear flows. *Journal of Physics: Conference Series*, **2011**, 318, 032001	0.3	13
63	Simplifying the complexity of pipe flow. *Physical Review E*, **2011**, 84, 016309	2.4	75

62	The onset of turbulence in pipe flow. *Science*, **2011**, 333, 192-6	33.3	381
61	Convective instability in inhomogeneous media: Impulse response in the subcritical cylinder wake. *Physics of Fluids*, **2011**, 23, 014104	4.4	11
60	Influence of counter-rotating von K□rm□n flow on cylindrical Rayleigh-B□nard convection. *Physical Review E*, **2010**, 81, 036322	2.4	6
59	Alternative stable scroll waves and conversion of autowave turbulence. *Chaos*, **2010**, 20, 043136	3.3	6
58	Transient growth analysis of flow through a sudden expansion in a circular pipe. *Physics of Fluids*, **2010**, 22, 034101	4.4	60
57	Orbital motion of spiral waves in excitable media. *Physical Review Letters*, **2010**, 104, 058302	7.4	40
56	Distinct large-scale turbulent-laminar states in transitional pipe flow. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 8091-6	11.5	79
55	Computation of the drift velocity of spiral waves using response functions. *Physical Review E*, **2010**, 81, 066202	2.4	42
54	Computational study of subcritical response in flow past a circular cylinder. *Physical Review E*, **2010**, 82, 026315	2.4	14
53	Instability of uniform turbulent plane Couette flow: spectra, probability distribution functions and K □ closure model. *IUTAM Symposium on Cellular, Molecular and Tissue Mechanics*, **2010**, 59-66	0.3	3
52	Computation of the response functions of spiral waves in active media. *Physical Review E*, **2009**, 79, 056702	2.4	44
51	Order parameter in laminar-turbulent patterns. *Springer Proceedings in Physics*, **2009**, 89-91	0.2	1
50	Statistical analysis of the transition to turbulent-laminar banded patterns in plane Couette flow. *Journal of Physics: Conference Series*, **2008**, 137, 012029	0.3	7
49	Convective instability and transient growth in flow over a backward-facing step. *Journal of Fluid Mechanics*, **2008**, 603, 271-304	3.7	119
48	Convective instability and transient growth in steady and pulsatile stenotic flows. *Journal of Fluid Mechanics*, **2008**, 607, 267-277	3.7	56
47	Direct optimal growth analysis for timesteppers. *International Journal for Numerical Methods in Fluids*, **2008**, 57, 1435-1458	1.9	135
46	Barkley model. *Scholarpedia Journal*, **2008**, 3, 1877	1.5	12
45	Mean flow of turbulent□laminar patterns in plane Couette flow. *Journal of Fluid Mechanics*, **2007**, 576, 109-137	3.7	95

44	Mean flow and modeling of turbulent-laminar patterns in plane Couette flow. *Springer Proceedings in Physics*, **2007**, 224-226	0.2	
43	Linear analysis of the cylinder wake mean flow. *Europhysics Letters*, **2006**, 75, 750-756	1.6	217
42	The Moment Map: Nonlinear Dynamics of Density Evolution via a Few Moments. *SIAM Journal on Applied Dynamical Systems*, **2006**, 5, 403-434	2.8	15
41	Computation of Spiral Spectra. *SIAM Journal on Applied Dynamical Systems*, **2006**, 5, 157-177	2.8	22
40	Turbulent-Laminar Patterns in Plane Couette Flow **2005**, 107-127		10
39	Confined three-dimensional stability analysis of the cylinder wake. *Physical Review E*, **2005**, 71, 017301	2.4	13
38	Computational study of turbulent laminar patterns in couette flow. *Physical Review Letters*, **2005**, 94, 014502	7.4	165
37	Symmetry Breaking and Turbulence in Perturbed Plane Couette Flow. *Theoretical and Computational Fluid Dynamics*, **2002**, 16, 91-97	2.3	5
36	Large-excitability asymptotics for scroll waves in three-dimensional excitable media. *Physical Review E*, **2002**, 66, 036214	2.4	6
35	Cookbook asymptotics for spiral and scroll waves in excitable media. *Chaos*, **2002**, 12, 636-649	3.3	35
34	Three-dimensional instability in flow over a backward-facing step. *Journal of Fluid Mechanics*, **2002**, 473, 167-190	3.7	249
33	Parametric forcing of scroll-wave patterns in three-dimensional excitable media. *Physica D: Nonlinear Phenomena*, **2001**, 149, 107-122	3.3	14
32	Selection of twisted scroll waves in three-dimensional excitable media. *Physical Review Letters*, **2001**, 86, 175-8	7.4	30
31	Modeling the dynamics of cardiac action potentials. *Physical Review Letters*, **2000**, 85, 884-7	7.4	18
30	Bifurcation theory for three-dimensional flow in the wake of a circular cylinder. *Physical Review E*, **2000**, 61, 5247-52	2.4	47
29	Bifurcation Analysis for Timesteppers. *The IMA Volumes in Mathematics and Its Applications*, **2000**, 453-466	0.5	78
28	Stability analysis of perturbed plane Couette flow. *Physics of Fluids*, **1999**, 11, 1187-1195	4.4	37
27	Linear and Nonlinear Stability Analysis of Perturbed Plane Couette Flow. *Fluid Mechanics and Its Applications*, **1998**, 123-126	0.2	2

26	Stokes preconditioning for the inverse power method **1997**, 75-76		6
25	Fast Simulations of Waves in Three-Dimensional Excitable Media. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **1997**, 07, 2529-2545	2	73
24	Three-dimensional Floquet stability analysis of the wake of a circular cylinder. *Journal of Fluid Mechanics*, **1996**, 322, 215-241	3.7	544
23	Secondary instability in the wake of a circular cylinder. *Physics of Fluids*, **1996**, 8, 1683-1685	4.4	104
22	Periodic forcing of spiral waves in excitable media. *Physical Review E*, **1996**, 54, 4791-4802	2.4	81
21	Instability in a spatially periodic open flow. *Physics of Fluids*, **1995**, 7, 344-358	4.4	38
20	Spiral Meandering **1995**, 163-189		13
19	Euclidean symmetry and the dynamics of rotating spiral waves. *Physical Review Letters*, **1994**, 72, 164-167	7.4	224
18	A dynamical systems approach to spiral wave dynamics. *Chaos*, **1994**, 4, 453-460	3.3	37
17	Linear stability analysis of rotating spiral waves in excitable media. *Physical Review Letters*, **1992**, 68, 2090-2093	7.4	175
16	Symmetry-breaking bifurcations in one-dimensional excitable media. *Physical Review A*, **1992**, 46, 5054-5062	2.6	33
15	Chaotic advection in a complex annular geometry. *Physics of Fluids A, Fluid Dynamics*, **1991**, 3, 1063-1067		3
14	A model for fast computer simulation of waves in excitable media. *Physica D: Nonlinear Phenomena*, **1991**, 49, 61-70	3.3	293
13	Comment on "Bifurcation structure and the Eckhaus instability". *Physical Review Letters*, **1991**, 67, 1051	7.4	7
12	Theory and predictions for finite-amplitude waves in two-dimensional plane Poiseuille flow. *Physics of Fluids A, Fluid Dynamics*, **1990**, 2, 955-970		18
11	Bifurcation analysis of the Eckhaus instability. *Physica D: Nonlinear Phenomena*, **1990**, 46, 57-86	3.3	90
10	Chaos in the Showalter-Noyes-Bar-Eli model of the Belousov-Zhabotinskii reaction. *Journal of Chemical Physics*, **1990**, 92, 3238-3239	3.9	13
9	Thermodynamics of the quasiperiodic parameter set at the borderline of chaos: Experimental results. *Physical Review Letters*, **1990**, 64, 327-331	7.4	11

8	Spiral-wave dynamics in a simple model of excitable media: The transition from simple to compound rotation. *Physical Review A*, **1990**, 42, 2489-2492	2.6	255
7	A Coupled-Map Lattice for Simulating Waves in Excitable Media. *Woodward Conference*, **1990**, 192-197		2
6	Travelling Waves in Axisymmetric Convection. *NATO ASI Series Series B: Physics*, **1990**, 73-75		
5	Traveling waves in axisymmetric convection: The role of sidewall conductivity. *Physica D: Nonlinear Phenomena*, **1989**, 37, 288-294	3.3	18
4	Near-critical behavior for one-parameter families of circle maps. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1988**, 129, 219-222	2.3	13
3	Global bifurcation to traveling waves in axisymmetric convection. *Physical Review Letters*, **1988**, 61, 408-411	7.4	34
2	Slow manifolds and mixed-mode oscillations in the Belousov□habotinskii reaction. *Journal of Chemical Physics*, **1988**, 89, 5547-5559	3.9	47
1	Observations of a torus in a model of the Belousov□habotinskii reaction. *Journal of Chemical Physics*, **1987**, 87, 3812-3820	3.9	32