Hugh M Blackburn

List of Publications by Year
in descending order

81	3,422	147566 31	143772 57
papers	citations	h-index	g-index

81	81	81	2009
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A study of two-dimensional flow past an oscillating cylinder. Journal of Fluid Mechanics, 1999, 385, 255-286.	1.4	316
2	Topology of fine-scale motions in turbulent channel flow. Journal of Fluid Mechanics, 1996, 310, 269-292.	1.4	238
3	Formulation of a Galerkin spectral elementâ€“Fourier method for three-dimensional incompressible flows in cylindrical geometries. Journal of Computational Physics, 2004, 197, 759-778.	1.9	173
4	Direct optimal growth analysis for timesteppers. International Journal for Numerical Methods in Fluids, 2008, 57, 1435-1458.	0.9	172
5	Three-dimensional instabilities and transition of steady and pulsatile axisymmetric stenotic flows. Journal of Fluid Mechanics, 2005, 533, .	1.4	164
6	Convective instability and transient growth in flow over a backward-facing step. Journal of Fluid Mechanics, 2008, 603, 271-304.	1.4	142
7	A COMPLEMENTARY NUMERICAL AND PHYSICAL INVESTIGATION OF VORTEX-INDUCED VIBRATION. Journal of Fluids and Structures, 2001, 15, 481-488.	1.5	109
8	Turbulent pipe flow of shear-thinning fluids. Journal of Non-Newtonian Fluid Mechanics, 2004, 118, 33-48.	1.0	107
9	On three-dimensional quasiperiodic Floquet instabilities of two-dimensional bluff body wakes. Physics of Fluids, 2003, 15, L57-L60.	1.6	102
10	The influence of pipe length on turbulence statistics computed from direct numerical simulation data. Physics of Fluids, 2010, 22, .	1.6	101
11	Symmetry breaking of two-dimensional time-periodic wakes. Journal of Fluid Mechanics, 2005, 522, 395-411.	1.4	95
12	The effect of free-stream turbulence on sectional lift forces on a circular cylinder. Journal of Fluid Mechanics, 1996, 306, 267-292.	1.4	75
13	Direct numerical simulation of turbulent non-Newtonian flow using a spectral element method. Applied Mathematical Modelling, 2006, 30, 1229-1248.	2.2	75
14	Lock-in behavior in simulated vortex-induced vibration. Experimental Thermal and Fluid Science, 1996, 12, 184-189.	1.5	74
15	Transient growth analysis of flow through a sudden expansion in a circular pipe. Physics of Fluids, 2010, 22, .	1.6	67
16	Spectral element filtering techniques for large eddy simulation with dynamic estimation. Journal of Computational Physics, 2003, 186, 610-629.	1.9	66
17	Convective instability and transient growth in steady and pulsatile stenotic flows. Journal of Fluid Mechanics, 2008, 607, 267-277.	1.4	65
18	The interaction of helical tip and root vortices in a wind turbine wake. Physics of Fluids, 2013, 25, .	1.6	64

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19	Symmetry breaking of the flow in a cylinder driven by a rotating end wall. Physics of Fluids, 2000, 12, 2698.	1.6	60
20	The primary and secondary instabilities of flow generated by an oscillating circular cylinder. Journal of Fluid Mechanics, 2006, 550, 359.	1.4	60
21	A reduced-order model of three-dimensional unsteady flow in a cavity based on the resolvent operator. Journal of Fluid Mechanics, 2016, 798, .	1.4	57
22	Modulated rotating waves in an enclosed swirling flow. Journal of Fluid Mechanics, 2002, 465, 33-58.	1.4	46
23	Bifurcations in systems with Z2 spatio-temporal and O(2) spatial symmetry. Physica D: Nonlinear Phenomena, 2004, 189, 247-276.	1.3	46
24	On quasiperiodic and subharmonic Floquet wake instabilities. Physics of Fluids, 2010, 22, .	1.6	44
25	Instability modes and transition of pulsatile stenotic flow: pulse-period dependence. Journal of Fluid Mechanics, 2007, 573, 57-88.	1.4	39
26	The onset of three-dimensional standing and modulated travelling waves in a periodically driven cavity flow. Journal of Fluid Mechanics, 2003, 497, 289-317.	1.4	38
27	Semtex: A spectral elementâ€“Fourier solver for the incompressible Navierâ€“Stokes equations in cylindrical or Cartesian coordinates. Computer Physics Communications, 2019, 245, 106804.	3.0	34
28	Simulation of suspension of solids in a liquid in a mixing tank using SPH and comparison with physical modelling experiments. Progress in Computational Fluid Dynamics, 2007, 7, 91.	0.1	33
29	Three-dimensional instability and state selection in an oscillatory axisymmetric swirling flow. Physics of Fluids, 2002, 14, 3983-3996.	1.6	32
30	Two-dimensional Floquet stability analysis of the flow produced by an oscillating circular cylinder in quiescent fluid. European Journal of Mechanics, B/Fluids, 2004, 23, 99-106.	1.2	31
31	Global parametric solutions of scalar transport. Journal of Computational Physics, 2008, 227, 3032-3057.	1.9	31
32	Lower branch equilibria in Couette flow: the emergence of canonical states for arbitrary shear flows. Journal of Fluid Mechanics, 2013, 726, .	1.4	31
33	Nonlinear optimal suppression of vortex shedding from a circular cylinder. Journal of Fluid Mechanics, 2015, 775, 241-265.	1.4	30
34	Triadic resonances in precessing rapidly rotating cylinder flows. Journal of Fluid Mechanics, 2015, 778, .	1.4	29
35	Mutual inductance of two helical vortices. Journal of Fluid Mechanics, 2015, 774, 298-310.	1.4	28
36	The importance of rheology characterization in predicting turbulent pipe flow of generalized Newtonian fluids. Journal of Non-Newtonian Fluid Mechanics, 2016, 232, 11-21.	1.0	28

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37	Transient growth and bypass transition in stenotic flow with a physiological waveform. Theoretical and Computational Fluid Dynamics, 2011, 25, 31-42.	0.9	27
38	The influence of shear-dependent rheology on turbulent pipe flow. Journal of Fluid Mechanics, 2017, 822, 848-879.	1.4	27
39	Mass and momentum transport from a sphere in steady and oscillatory flows. Physics of Fluids, 2002, 14, 3997-4011.	1.6	24
40	The influence of pipe length on thermal statistics computed from DNS of turbulent heat transfer. International Journal of Heat and Fluid Flow, 2011, 32, 1083-1097.	1.1	22
41	Emergence of the four layer dynamical regime in turbulent pipe flow. Physics of Fluids, 2012, 24, 045107.	1.6	22
42	Estimation of unsteady aerodynamic forces using pointwise velocity data. Journal of Fluid Mechanics, 2016, 804, .	1.4	21
43	The effect of yield stress on pipe flow turbulence for generalised newtonian fluids. Journal of Non-Newtonian Fluid Mechanics, 2017, 249, 53-62.	1.0	21
44	Bluff-body propulsion produced by combined rotary and translational oscillation. Physics of Fluids, 1999, 11, 4-6.	1.6	19
45	Stability of steady flow through an axially corrugated pipe. Physics of Fluids, 2011, 23, .	1.6	19
46	Calculation of global optimal initial and boundary perturbations for the linearised incompressible Navierâ€“Stokes equations. Journal of Computational Physics, 2013, 235, 258-273.	1.9	19
47	Adapting the spectral vanishing viscosity method for large-eddy simulations in cylindrical configurations. Journal of Computational Physics, 2012, 231, 3389-3405.	1.9	17
48	Turbulent pipe flow at Reï„ â‰ˆ 1000 : A comparison of wall-resolved large-eddy simulation, direct numerical simulation and hot-wire experiment. Computers and Fluids, 2015, 122, 26-33.	1.3	17
49	On triadic resonance as an instability mechanism in precessing cylinder flow. Journal of Fluid Mechanics, 2018, 841, .	1.4	17
50	SECTIONAL LIFT FORCES FOR AN OSCILLATING CIRCULAR CYLINDER IN SMOOTH AND TURBULENT FLOWS. Journal of Fluids and Structures, 1997, 11, 413-431.	1.5	16
51	Optimal inflow boundary condition perturbations in steady stenotic flow. Journal of Fluid Mechanics, 2012, 705, 306-321.	1.4	16
52	On the origin of frequency sparsity in direct numerical simulations of turbulent pipe flow. Physics of Fluids, 2014, 26, .	1.6	14
53	Reynolds number effects in pipe flow turbulence of generalized Newtonian fluids. Physical Review Fluids, 2018, 3, .	1.0	13
54	Non-normal dynamics of time-evolving co-rotatingÂvortex pairs. Journal of Fluid Mechanics, 2012, 701, 430-459.	1.4	12

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55	On scaling pipe flows with sinusoidal transversely corrugated walls: analysis of data from the laminar to the low-Reynolds-number turbulent regime. Journal of Fluid Mechanics, 2015, 779, 245-274.	1.4	12
56	Comparison of thermal scaling properties between turbulent pipe and channel flows via DNS. International Journal of Thermal Sciences, 2015, 89, 43-57.	2.6	12
57	Transition induced by linear and nonlinear perturbation growth in flow past a compressor blade. Journal of Fluid Mechanics, 2017, 820, 604-632.	1.4	12
58	Data-driven approach to design of passive flow control strategies. Physical Review Fluids, 2017, 2, .	1.0	12
59	Scaling properties of the equation for passive scalar transport in wall-bounded turbulent flows. International Journal of Heat and Mass Transfer, 2014, 70, 779-792.	2.5	11
60	The structure of primary instability modes in the steady wake and separation bubble of a square cylinder. Physics of Fluids, 2014, 26, .	1.6	11
61	Streamwise-varying steady transpiration control in turbulent pipe flow. Journal of Fluid Mechanics, 2016, 796, 588-616.	1.4	11
62	Dispersion and diffusion in coated tubes of arbitrary cross-section. Computers and Chemical Engineering, 2001, 25, 313-322.	2.0	10
63	Three-dimensional modes in a periodically driven elongated cavity. Physical Review E, 2005, 71, 026305.	0.8	10
64	On the use of matrix-free shift-invert strategies for global flow instability analysis. Aerospace Science and Technology, 2015, 44, 69-76.	2.5	10
65	Siting wind turbines near cliffsâ€"the effect of wind direction. Wind Energy, 2016, 19, 1469-1484.	1.9	8
66	Lift on an oscillating cylinder in smooth and turbulent flow. Journal of Wind Engineering and Industrial Aerodynamics, 1992, 41, 79-90.	1.7	7
67	Modulated waves in a periodically driven annular cavity. Journal of Fluid Mechanics, 2011, 667, 336-357.	1.4	7
68	Floquet and transient growth stability analysis of a flow through a compressor passage. Aerospace Science and Technology, 2015, 44, 116-124.	2.5	7
69	On the origins of steady streaming in precessing fluids. Journal of Fluid Mechanics, 2021, 910, .	1.4	6
70	A hybrid method for simulation of axial flow impeller driven mixing vessels. Applied Mathematical Modelling, 2000, 24, 795-805.	2.2	5
71	Experimental and numerical investigation of a strongly-forced precessing cylinder flow. International Journal of Heat and Fluid Flow, 2016, 61, 68-74.	1.1	5
72	Cross flow response of slender circular-cylindrical structures: Prediction models and recent experimental results. Journal of Wind Engineering and Industrial Aerodynamics, 1993, 49, 167-176.	1.7	4

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73	Data-driven control of the turbulent flow past a cylinder. Journal of Fluids and Structures, 2019, 89, 232-243.	1.5	3
74	Distributed vortex-wave interactions: the relation of self-similarity to the attached eddy hypothesis. Journal of Fluid Mechanics, 2021, 924, .	1.4	3
75	Validation Criteria for DNS of Turbulent Heat Transfer in Pipe Flow. Procedia Engineering, 2014, 90, 599-604.	1.2	2
76	Siting Wind Turbines Near Cliffs: The Effect of Ruggedness. Journal of Fluids Engineering, Transactions of the ASME, 2019, 141, .	0.8	2
77	High-Reynolds-number wall-modelled large eddy simulations of turbulent pipe flows using explicit and implicit subgrid stress treatments within a spectral element solver. Computers and Fluids, 2019, 191, 104239.	1.3	2
78	On the Boussinesq approximation in arbitrarily accelerating frames of reference. Journal of Fluid Mechanics, 2021, 924, .	1.4	2
79	Sidewall boundary layer instabilities in confined swirling flow. Journal of Turbulence, 2001, 2, N9.	0.5	1
80	Optimal suppression of flow perturbations using boundary control. Computers and Fluids, 2015, 121, 133-144.	1.3	1
81	Exact coherent structures in pipe flow in the presence of wall transpiration. Journal of Fluid Mechanics, 2022, 940, .	1.4	1