

Hugh M Blackburn

List of Publications by Year in descending order

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81
papers

3,422
citations

147566

31
h-index

143772

57
g-index

81
all docs

81
docs citations

81
times ranked

2009
citing authors

#	ARTICLE	IF	CITATIONS
1	Exact coherent structures in pipe flow in the presence of wall transpiration. <i>Journal of Fluid Mechanics</i> , 2022, 940, .	1.4	1
2	On the origins of steady streaming in precessing fluids. <i>Journal of Fluid Mechanics</i> , 2021, 910, .	1.4	6
3	Distributed vortex-wave interactions: the relation of self-similarity to the attached eddy hypothesis. <i>Journal of Fluid Mechanics</i> , 2021, 924, .	1.4	3
4	On the Boussinesq approximation in arbitrarily accelerating frames of reference. <i>Journal of Fluid Mechanics</i> , 2021, 924, .	1.4	2
5	Siting Wind Turbines Near Cliffs: The Effect of Ruggedness. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2019, 141, .	0.8	2
6	High-Reynolds-number wall-modelled large eddy simulations of turbulent pipe flows using explicit and implicit subgrid stress treatments within a spectral element solver. <i>Computers and Fluids</i> , 2019, 191, 104239.	1.3	2
7	Semtex: A spectral element Fourier solver for the incompressible Navier-Stokes equations in cylindrical or Cartesian coordinates. <i>Computer Physics Communications</i> , 2019, 245, 106804.	3.0	34
8	Data-driven control of the turbulent flow past a cylinder. <i>Journal of Fluids and Structures</i> , 2019, 89, 232-243.	1.5	3
9	On triadic resonance as an instability mechanism in precessing cylinder flow. <i>Journal of Fluid Mechanics</i> , 2018, 841, .	1.4	17
10	Reynolds number effects in pipe flow turbulence of generalized Newtonian fluids. <i>Physical Review Fluids</i> , 2018, 3, .	1.0	13
11	Transition induced by linear and nonlinear perturbation growth in flow past a compressor blade. <i>Journal of Fluid Mechanics</i> , 2017, 820, 604-632.	1.4	12
12	The influence of shear-dependent rheology on turbulent pipe flow. <i>Journal of Fluid Mechanics</i> , 2017, 822, 848-879.	1.4	27
13	The effect of yield stress on pipe flow turbulence for generalised newtonian fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2017, 249, 53-62.	1.0	21
14	Data-driven approach to design of passive flow control strategies. <i>Physical Review Fluids</i> , 2017, 2, .	1.0	12
15	Siting wind turbines near cliffs—the effect of wind direction. <i>Wind Energy</i> , 2016, 19, 1469-1484.	1.9	8
16	A reduced-order model of three-dimensional unsteady flow in a cavity based on the resolvent operator. <i>Journal of Fluid Mechanics</i> , 2016, 798, .	1.4	57
17	Estimation of unsteady aerodynamic forces using pointwise velocity data. <i>Journal of Fluid Mechanics</i> , 2016, 804, .	1.4	21
18	Streamwise-varying steady transpiration control in turbulent pipe flow. <i>Journal of Fluid Mechanics</i> , 2016, 796, 588-616.	1.4	11

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19	The importance of rheology characterization in predicting turbulent pipe flow of generalized Newtonian fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 232, 11-21.	1.0	28
20	Experimental and numerical investigation of a strongly-forced precessing cylinder flow. <i>International Journal of Heat and Fluid Flow</i> , 2016, 61, 68-74.	1.1	5
21	Mutual inductance of two helical vortices. <i>Journal of Fluid Mechanics</i> , 2015, 774, 298-310.	1.4	28
22	Nonlinear optimal suppression of vortex shedding from a circular cylinder. <i>Journal of Fluid Mechanics</i> , 2015, 775, 241-265.	1.4	30
23	Triadic resonances in precessing rapidly rotating cylinder flows. <i>Journal of Fluid Mechanics</i> , 2015, 778, .	1.4	29
24	On scaling pipe flows with sinusoidal transversely corrugated walls: analysis of data from the laminar to the low-Reynolds-number turbulent regime. <i>Journal of Fluid Mechanics</i> , 2015, 779, 245-274.	1.4	12
25	Floquet and transient growth stability analysis of a flow through a compressor passage. <i>Aerospace Science and Technology</i> , 2015, 44, 116-124.	2.5	7
26	Optimal suppression of flow perturbations using boundary control. <i>Computers and Fluids</i> , 2015, 121, 133-144.	1.3	1
27	On the use of matrix-free shift-invert strategies for global flow instability analysis. <i>Aerospace Science and Technology</i> , 2015, 44, 69-76.	2.5	10
28	Turbulent pipe flow at $Re_{\tau} \approx 1000$: A comparison of wall-resolved large-eddy simulation, direct numerical simulation and hot-wire experiment. <i>Computers and Fluids</i> , 2015, 122, 26-33.	1.3	17
29	Comparison of thermal scaling properties between turbulent pipe and channel flows via DNS. <i>International Journal of Thermal Sciences</i> , 2015, 89, 43-57.	2.6	12
30	Validation Criteria for DNS of Turbulent Heat Transfer in Pipe Flow. <i>Procedia Engineering</i> , 2014, 90, 599-604.	1.2	2
31	On the origin of frequency sparsity in direct numerical simulations of turbulent pipe flow. <i>Physics of Fluids</i> , 2014, 26, .	1.6	14
32	Scaling properties of the equation for passive scalar transport in wall-bounded turbulent flows. <i>International Journal of Heat and Mass Transfer</i> , 2014, 70, 779-792.	2.5	11
33	The structure of primary instability modes in the steady wake and separation bubble of a square cylinder. <i>Physics of Fluids</i> , 2014, 26, .	1.6	11
34	Calculation of global optimal initial and boundary perturbations for the linearised incompressible Navier-Stokes equations. <i>Journal of Computational Physics</i> , 2013, 235, 258-273.	1.9	19
35	Lower branch equilibria in Couette flow: the emergence of canonical states for arbitrary shear flows. <i>Journal of Fluid Mechanics</i> , 2013, 726, .	1.4	31
36	The interaction of helical tip and root vortices in a wind turbine wake. <i>Physics of Fluids</i> , 2013, 25, .	1.6	64

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37	Emergence of the four layer dynamical regime in turbulent pipe flow. <i>Physics of Fluids</i> , 2012, 24, 045107.	1.6	22
38	Optimal inflow boundary condition perturbations in steady stenotic flow. <i>Journal of Fluid Mechanics</i> , 2012, 705, 306-321.	1.4	16
39	Non-normal dynamics of time-evolving co-rotating vortex pairs. <i>Journal of Fluid Mechanics</i> , 2012, 701, 430-459.	1.4	12
40	Adapting the spectral vanishing viscosity method for large-eddy simulations in cylindrical configurations. <i>Journal of Computational Physics</i> , 2012, 231, 3389-3405.	1.9	17
41	The influence of pipe length on thermal statistics computed from DNS of turbulent heat transfer. <i>International Journal of Heat and Fluid Flow</i> , 2011, 32, 1083-1097.	1.1	22
42	Transient growth and bypass transition in stenotic flow with a physiological waveform. <i>Theoretical and Computational Fluid Dynamics</i> , 2011, 25, 31-42.	0.9	27
43	Modulated waves in a periodically driven annular cavity. <i>Journal of Fluid Mechanics</i> , 2011, 667, 336-357.	1.4	7
44	Stability of steady flow through an axially corrugated pipe. <i>Physics of Fluids</i> , 2011, 23, .	1.6	19
45	Transient growth analysis of flow through a sudden expansion in a circular pipe. <i>Physics of Fluids</i> , 2010, 22, .	1.6	67
46	On quasiperiodic and subharmonic Floquet wake instabilities. <i>Physics of Fluids</i> , 2010, 22, .	1.6	44
47	The influence of pipe length on turbulence statistics computed from direct numerical simulation data. <i>Physics of Fluids</i> , 2010, 22, .	1.6	101
48	Global parametric solutions of scalar transport. <i>Journal of Computational Physics</i> , 2008, 227, 3032-3057.	1.9	31
49	Direct optimal growth analysis for timesteppers. <i>International Journal for Numerical Methods in Fluids</i> , 2008, 57, 1435-1458.	0.9	172
50	Convective instability and transient growth in flow over a backward-facing step. <i>Journal of Fluid Mechanics</i> , 2008, 603, 271-304.	1.4	142
51	Convective instability and transient growth in steady and pulsatile stenotic flows. <i>Journal of Fluid Mechanics</i> , 2008, 607, 267-277.	1.4	65
52	Simulation of suspension of solids in a liquid in a mixing tank using SPH and comparison with physical modelling experiments. <i>Progress in Computational Fluid Dynamics</i> , 2007, 7, 91.	0.1	33
53	Instability modes and transition of pulsatile stenotic flow: pulse-period dependence. <i>Journal of Fluid Mechanics</i> , 2007, 573, 57-88.	1.4	39
54	The primary and secondary instabilities of flow generated by an oscillating circular cylinder. <i>Journal of Fluid Mechanics</i> , 2006, 550, 359.	1.4	60

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55	Direct numerical simulation of turbulent non-Newtonian flow using a spectral element method. Applied Mathematical Modelling, 2006, 30, 1229-1248.	2.2	75
56	Three-dimensional modes in a periodically driven elongated cavity. Physical Review E, 2005, 71, 026305.	0.8	10
57	Three-dimensional instabilities and transition of steady and pulsatile axisymmetric stenotic flows. Journal of Fluid Mechanics, 2005, 533, .	1.4	164
58	Symmetry breaking of two-dimensional time-periodic wakes. Journal of Fluid Mechanics, 2005, 522, 395-411.	1.4	95
59	Turbulent pipe flow of shear-thinning fluids. Journal of Non-Newtonian Fluid Mechanics, 2004, 118, 33-48.	1.0	107
60	Formulation of a Galerkin spectral element-Fourier method for three-dimensional incompressible flows in cylindrical geometries. Journal of Computational Physics, 2004, 197, 759-778.	1.9	173
61	Bifurcations in systems with Z_2 spatio-temporal and $O(2)$ spatial symmetry. Physica D: Nonlinear Phenomena, 2004, 189, 247-276.	1.3	46
62	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
63	Spectral element filtering techniques for large eddy simulation with dynamic estimation. Journal of Computational Physics, 2003, 186, 610-629.	1.9	66
64	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
65	On three-dimensional quasiperiodic Floquet instabilities of two-dimensional bluff body wakes. Physics of Fluids, 2003, 15, L57-L60.	1.6	102
66	Mass and momentum transport from a sphere in steady and oscillatory flows. Physics of Fluids, 2002, 14, 3997-4011.	1.6	24
67	Three-dimensional instability and state selection in an oscillatory axisymmetric swirling flow. Physics of Fluids, 2002, 14, 3983-3996.	1.6	32
68	Modulated rotating waves in an enclosed swirling flow. Journal of Fluid Mechanics, 2002, 465, 33-58.	1.4	46
69	Sidewall boundary layer instabilities in confined swirling flow. Journal of Turbulence, 2001, 2, N9.	0.5	1
70	Dispersion and diffusion in coated tubes of arbitrary cross-section. Computers and Chemical Engineering, 2001, 25, 313-322.	2.0	10
71	A COMPLEMENTARY NUMERICAL AND PHYSICAL INVESTIGATION OF VORTEX-INDUCED VIBRATION. Journal of Fluids and Structures, 2001, 15, 481-488.	1.5	109
72	Symmetry breaking of the flow in a cylinder driven by a rotating end wall. Physics of Fluids, 2000, 12, 2698.	1.6	60

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73	A hybrid method for simulation of axial flow impeller driven mixing vessels. Applied Mathematical Modelling, 2000, 24, 795-805.	2.2	5
74	A study of two-dimensional flow past an oscillating cylinder. Journal of Fluid Mechanics, 1999, 385, 255-286.	1.4	316
75	Bluff-body propulsion produced by combined rotary and translational oscillation. Physics of Fluids, 1999, 11, 4-6.	1.6	19
76	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
77	Topology of fine-scale motions in turbulent channel flow. Journal of Fluid Mechanics, 1996, 310, 269-292.	1.4	238
78	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
79	Lock-in behavior in simulated vortex-induced vibration. Experimental Thermal and Fluid Science, 1996, 12, 184-189.	1.5	74
80	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
81	Lift on an oscillating cylinder in smooth and turbulent flow. Journal of Wind Engineering and Industrial Aerodynamics, 1992, 41, 79-90.	1.7	7