

Nicholas Hutchins

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

127
papers

6,113
citations

39
h-index

76
g-index

132
ext. papers

7,465
ext. citations

3.3
avg, IF

6.27
L-index

#	Paper	IF	Citations
127	Investigation of cold-wire spatial and temporal resolution issues in thermal turbulent boundary layers. <i>International Journal of Heat and Fluid Flow</i> , 2022 , 94, 108926	2.4	0
126	Influence of riblet shapes on the occurrence of Kelvin-Helmholtz rollers. <i>Journal of Fluid Mechanics</i> , 2021 , 913,	3.7	3
125	Spanwise velocity statistics in high-Reynolds-number turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2021 , 913,	3.7	3
124	The effect of cleaning and repainting on the ship drag penalty. <i>Biofouling</i> , 2021 , 37, 372-386	3.3	0
123	Prograde vortices, internal shear layers and the Taylor microscale in high-Reynolds-number turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2021 , 920,	3.7	2
122	Aerosolisation during tracheal intubation and extubation in an operating theatre setting. <i>Anaesthesia</i> , 2021 , 76, 182-188	6.6	31
121	Direct Numerical Simulations of Turbulent Flow Over Various Riblet Shapes in Minimal-Span Channels. <i>Flow, Turbulence and Combustion</i> , 2021 , 107, 1-29	2.5	0
120	Nasal preparation with local anesthetic should be considered an aerosol-generating procedure. <i>International Forum of Allergy and Rhinology</i> , 2021 , 11, 1019-1021	6.3	
119	Non-type behaviour of roughness when in-plane wavelength approaches the boundary layer thickness. <i>Journal of Fluid Mechanics</i> , 2021 , 911,	3.7	3
118	Predicting the Drag of Rough Surfaces. <i>Annual Review of Fluid Mechanics</i> , 2021 , 53, 439-471	2.2	24
117	Aerosolisation in endonasal endoscopic pituitary surgery. <i>Pituitary</i> , 2021 , 24, 499-506	4.3	2
116	Experimental study of a turbulent boundary layer with a rough-to-smooth change in surface conditions at high Reynolds numbers. <i>Journal of Fluid Mechanics</i> , 2021 , 923,	3.7	2
115	Turbulent flow over spanwise-varying roughness in a minimal streamwise channel. <i>Journal of Physics: Conference Series</i> , 2020 , 1522, 012018	0.3	
114	On the mixing length eddies and logarithmic mean velocity profile in wall turbulence. <i>Journal of Fluid Mechanics</i> , 2020 , 887,	3.7	8
113	The effect of spanwise wavelength of surface heterogeneity on turbulent secondary flows. <i>Journal of Fluid Mechanics</i> , 2020 , 894,	3.7	17
112	Near wall coherence in wall-bounded flows and implications for flow control. <i>International Journal of Heat and Fluid Flow</i> , 2020 , 86, 108683	2.4	1
111	Periodicity of large-scale coherence in turbulent boundary layers. <i>International Journal of Heat and Fluid Flow</i> , 2020 , 83, 108575	2.4	2

110	Recovery of wall-shear stress to equilibrium flow conditions after a rough-to-smooth step change in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2019 , 872, 472-491	3.7	13
109	Machine-Learnt Turbulence Closures for Low-Pressure Turbines With Unsteady Inflow Conditions. <i>Journal of Turbomachinery</i> , 2019 , 141,	1.8	9
108	Spatial averaging effects on the streamwise and wall-normal velocity measurements in a wall-bounded turbulence using a cross-wire probe. <i>Measurement Science and Technology</i> , 2019 , 30, 085303	3.7	7
107	Simultaneous skin friction and velocity measurements in high Reynolds number pipe and boundary layer flows. <i>Journal of Fluid Mechanics</i> , 2019 , 871, 377-400	3.7	13
106	Direct numerical simulation of open-channel flow over smooth-to-rough and rough-to-smooth step changes. <i>Journal of Fluid Mechanics</i> , 2019 , 866, 450-486	3.7	19
105	Sensitivity of turbulent stresses in boundary layers to cross-wire probe uncertainties in the geometry and calibration procedure. <i>Measurement Science and Technology</i> , 2019 , 30, 085301	2	5
104	Vertical Coherence of Turbulence in the Atmospheric Surface Layer: Connecting the Hypotheses of Townsend and Davenport. <i>Boundary-Layer Meteorology</i> , 2019 , 172, 199-214	3.4	11
103	Heat transfer in rough-wall turbulent thermal convection in the ultimate regime. <i>Physical Review Fluids</i> , 2019 , 4,	2.8	8
102	Roughness and Reynolds Number Effects on the Flow Past a Rough-to-Smooth Step Change. <i>Springer Proceedings in Physics</i> , 2019 , 81-86	0.2	2
101	The meandering behaviour of large-scale structures in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2019 , 865,	3.7	20
100	Turbulent structures in a statistically three-dimensional boundary layer. <i>Journal of Fluid Mechanics</i> , 2019 , 859, 543-565	3.7	23
99	Roughness effects in turbulent forced convection. <i>Journal of Fluid Mechanics</i> , 2019 , 861, 138-162	3.7	19
98	Development and Use of Machine-Learnt Algebraic Reynolds Stress Models for Enhanced Prediction of Wake Mixing in Low-Pressure Turbines. <i>Journal of Turbomachinery</i> , 2019 , 141,	1.8	16
97	Towards fully-resolved PIV measurements in high Reynolds number turbulent boundary layers with DSLR cameras. <i>Journal of Visualization</i> , 2018 , 21, 369-379	1.6	3
96	Direct numerical simulation of high aspect ratio spanwise-aligned bars. <i>Journal of Fluid Mechanics</i> , 2018 , 843, 126-155	3.7	12
95	Revisiting end conduction effects in constant temperature hot-wire anemometry. <i>Experiments in Fluids</i> , 2018 , 59, 1	2.5	2
94	Fully resolved measurements of turbulent boundary layer flows up to. <i>Journal of Fluid Mechanics</i> , 2018 , 851, 391-415	3.7	55
93	Turbulence modifications in a turbulent boundary layer over a rough wall with spanwise-alternating roughness strips. <i>Physics of Fluids</i> , 2018 , 30, 055105	4.4	19

92	Impact of mismatched and misaligned laser light sheet profiles on PIV performance. <i>Experiments in Fluids</i> , 2018 , 59, 1	2.5	5
91	Trajectory of a synthetic jet issuing into high-Reynolds-number turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2018 , 856, 531-551	3.7	8
90	Secondary motion in turbulent pipe flow with three-dimensional roughness. <i>Journal of Fluid Mechanics</i> , 2018 , 854, 5-33	3.7	26
89	Large coherence of spanwise velocity in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2018 , 847, 161-185	3.7	17
88	Similarity and structure of wall turbulence with lateral wall shear stress variations. <i>Journal of Fluid Mechanics</i> , 2018 , 847, 591-613	3.7	30
87	Cross-stream stereoscopic particle image velocimetry of a modified turbulent boundary layer over directional surface pattern. <i>Journal of Fluid Mechanics</i> , 2017 , 813, 412-435	3.7	43
86	Distance-from-the-wall scaling of turbulent motions in wall-bounded flows. <i>Physics of Fluids</i> , 2017 , 29, 020712	4.4	45
85	Reynolds number trend of hierarchies and scale interactions in turbulent boundary layers. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017 , 375,	3	29
84	Computational fluid dynamics study of common stent models inside idealised curved coronary arteries. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2017 , 20, 671-681	2.1	13
83	The minimal-span channel for rough-wall turbulent flows. <i>Journal of Fluid Mechanics</i> , 2017 , 816, 5-42	3.7	28
82	Self-similarity of wall-attached turbulence in boundary layers. <i>Journal of Fluid Mechanics</i> , 2017 , 823,	3.7	51
81	Interfaces of uniform momentum zones in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2017 , 820, 451-478	3.7	32
80	Analysis of the coherent and turbulent stresses of a numerically simulated rough wall pipe. <i>Journal of Physics: Conference Series</i> , 2017 , 822, 012011	0.3	1
79	Skin-friction drag reduction in a high-Reynolds-number turbulent boundary layer via real-time control of large-scale structures. <i>International Journal of Heat and Fluid Flow</i> , 2017 , 67, 30-41	2.4	36
78	Applicability of Taylor's hypothesis in rough- and smooth-wall boundary layers. <i>Journal of Fluid Mechanics</i> , 2017 , 812, 398-417	3.7	23
77	Generalization of the PIV loss-of-correlation formula introduced by Keane and Adrian. <i>Experiments in Fluids</i> , 2017 , 58, 1	2.5	13
76	Haemodynamic effects of incomplete stent apposition in curved coronary arteries. <i>Journal of Biomechanics</i> , 2017 , 63, 164-173	2.9	13
75	Beam stability and warm-up effects of Nd:YAG lasers used in particle image velocimetry. <i>Measurement Science and Technology</i> , 2017 , 28, 065301	2	4

74	The Effect of Wall Normal Actuation on a Turbulent Boundary Layer. <i>Flow, Turbulence and Combustion</i> , 2017 , 99, 807-821	2.5	0
73	Study of the Streamwise Evolution of Turbulent Boundary Layers to High Reynolds Numbers 2017 , 47-60		1
72	Simulation of a Large-Eddy-Break-up Device (LEBU) in a Moderate Reynolds Number Turbulent Boundary Layer. <i>Flow, Turbulence and Combustion</i> , 2017 , 98, 445-460	2.5	10
71	Influence of a Large-Eddy-Breakup-Device on the Turbulent Interface of Boundary Layers. <i>Flow, Turbulence and Combustion</i> , 2017 , 99, 823-835	2.5	6
70	Reynolds number and roughness effects on turbulent stresses in sandpaper roughness boundary layers. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	7
69	Turbulent flow over a long flat plate with uniform roughness. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	8
68	Scaling of the streamwise turbulence intensity in the context of inner-outer interactions in wall turbulence*. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	44
67	Validating under-resolved turbulence intensities for PIV experiments in canonical wall-bounded turbulence. <i>Experiments in Fluids</i> , 2016 , 57, 1	2.5	21
66	Modelling and operation of sub-miniature constant temperature hot-wire anemometry. <i>Measurement Science and Technology</i> , 2016 , 27, 125301	2	4
65	Comparison of turbulent boundary layers over smooth and rough surfaces up to high Reynolds numbers [ERRATUM]. <i>Journal of Fluid Mechanics</i> , 2016 , 797, 917-917	3.7	1
64	An assessment of the ship drag penalty arising from light calcareous tubeworm fouling. <i>Biofouling</i> , 2016 , 32, 451-64	3.3	36
63	Influence of spatial exclusion on the statistical behavior of attached eddies. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	16
62	Spectral stochastic estimation of high-Reynolds-number wall-bounded turbulence for a refined inner-outer interaction model. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	56
61	Smooth- and rough-wall boundary layer structure from high spatial range particle image velocimetry. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	11
60	The minimal channel: a fast and direct method for characterising roughness. <i>Journal of Physics: Conference Series</i> , 2016 , 708, 012010	0.3	3
59	Turbulent flow over transitionally rough surfaces with varying roughness densities. <i>Journal of Fluid Mechanics</i> , 2016 , 804, 130-161	3.7	34
58	On Large-Scale Friction Control in Turbulent Wall Flow in Low Reynolds Number Channels. <i>Flow, Turbulence and Combustion</i> , 2016 , 97, 811-827	2.5	15
57	Uniform momentum zones in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2016 , 786, 309-331	3.7	65

56	On the use of the Reynolds decomposition in the intermittent region of turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2016 , 794, 5-16	3.7	16
55	Comparison of turbulent boundary layers over smooth and rough surfaces up to high Reynolds numbers. <i>Journal of Fluid Mechanics</i> , 2016 , 795, 210-240	3.7	79
54	Wall-drag measurements of smooth- and rough-wall turbulent boundary layers using a floating element. <i>Experiments in Fluids</i> , 2016 , 57, 1	2.5	24
53	Inner-outer interactions in rough-wall turbulence. <i>Journal of Turbulence</i> , 2016 , 17, 1159-1178	2.1	22
52	A direct measure of the frequency response of hot-wire anemometers: temporal resolution issues in wall-bounded turbulence. <i>Experiments in Fluids</i> , 2015 , 56, 1	2.5	32
51	Wavelet analysis of wall turbulence to study large-scale modulation of small scales. <i>Experiments in Fluids</i> , 2015 , 56, 1	2.5	53
50	A systematic investigation of roughness height and wavelength in turbulent pipe flow in the transitionally rough regime. <i>Journal of Fluid Mechanics</i> , 2015 , 771, 743-777	3.7	79
49	A fast direct numerical simulation method for characterising hydraulic roughness. <i>Journal of Fluid Mechanics</i> , 2015 , 773, 418-431	3.7	39
48	Evolution of zero-pressure-gradient boundary layers from different tripping conditions. <i>Journal of Fluid Mechanics</i> , 2015 , 783, 379-411	3.7	72
47	An Extended View of the Inner-outer Interaction Model for Wall-bounded Turbulence Using Spectral Linear Stochastic Estimation. <i>Procedia Engineering</i> , 2015 , 126, 24-28		4
46	High spatial range velocity measurements in a high Reynolds number turbulent boundary layer. <i>Physics of Fluids</i> , 2014 , 26, 025117	4.4	38
45	The turbulent/non-turbulent interface and entrainment in a boundary layer. <i>Journal of Fluid Mechanics</i> , 2014 , 742, 119-151	3.7	107
44	The quiescent core of turbulent channel flow. <i>Journal of Fluid Mechanics</i> , 2014 , 751, 228-254	3.7	40
43	A calibration technique to correct sensor drift issues in hot-wire anemometry. <i>Measurement Science and Technology</i> , 2014 , 25, 105304	2	44
42	Roll-modes generated in turbulent boundary layers with passive surface modifications 2014 ,		3
41	Amplitude modulation of all three velocity components in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2014 , 746,	3.7	101
40	Large-Scale Structures in High Reynolds Number Wall-Bounded Turbulence. <i>Springer Proceedings in Physics</i> , 2014 , 75-83	0.2	7
39	Controlling the Large-Scale Motions in a Turbulent Boundary Layer. <i>Lecture Notes in Mechanical Engineering</i> , 2014 , 17-26	0.4	4

38	Spatial averaging of velocity measurements in wall-bounded turbulence: single hot-wires. <i>Measurement Science and Technology</i> , 2013 , 24, 115301	2	5
37	Large-scale spanwise periodicity in a turbulent boundary layer induced by highly ordered and directional surface roughness. <i>International Journal of Heat and Fluid Flow</i> , 2013 , 41, 90-102	2.4	81
36	Estimating wall-shear-stress fluctuations given an outer region input. <i>Journal of Fluid Mechanics</i> , 2013 , 715, 163-180	3.7	98
35	Structure Inclination Angles in the Convective Atmospheric Surface Layer. <i>Boundary-Layer Meteorology</i> , 2013 , 147, 41-50	3.4	36
34	Spatial averaging of streamwise and spanwise velocity measurements in wall-bounded turbulence using π - and ϵ probes. <i>Measurement Science and Technology</i> , 2013 , 24, 115302	2	10
33	Is there a need for fully converged CFD solutions? Global extremum seeking applied to aerodynamic shape optimisation 2013 ,		2
32	Obtaining accurate mean velocity measurements in high Reynolds number turbulent boundary layers using Pitot tubes. <i>Journal of Fluid Mechanics</i> , 2013 , 715, 642-670	3.7	48
31	Amplitude and frequency modulation in wall turbulence. <i>Journal of Fluid Mechanics</i> , 2012 , 712, 61-91	3.7	113
30	Towards Reconciling the Large-Scale Structure of Turbulent Boundary Layers in the Atmosphere and Laboratory. <i>Boundary-Layer Meteorology</i> , 2012 , 145, 273-306	3.4	154
29	Pressure fluctuation in high-Reynolds-number turbulent boundary layer: results from experiments and DNS. <i>Journal of Turbulence</i> , 2012 , 13, N50	2.1	17
28	Caution: tripping hazards. <i>Journal of Fluid Mechanics</i> , 2012 , 710, 1-4	3.7	20
27	The relationship between the velocity skewness and the amplitude modulation of the small scale by the large scale in turbulent boundary layers. <i>Physics of Fluids</i> , 2011 , 23, 121702	4.4	72
26	A wall-shear stress predictive model. <i>Journal of Physics: Conference Series</i> , 2011 , 318, 012003	0.3	8
25	Spatial resolution correction for wall-bounded turbulence measurements. <i>Journal of Fluid Mechanics</i> , 2011 , 676, 41-53	3.7	78
24	A predictive inner/outer model for streamwise turbulence statistics in wall-bounded flows. <i>Journal of Fluid Mechanics</i> , 2011 , 681, 537-566	3.7	128
23	Three-dimensional conditional structure of a high-Reynolds-number turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , 2011 , 673, 255-285	3.7	115
22	Experimental investigation on the drag reducing efficiency of the outer-layer vertical blades. <i>Journal of Marine Science and Technology</i> , 2011 , 16, 390-401	1.7	6
21	Spatial resolution correction for hot-wire anemometry in wall turbulence. <i>Experiments in Fluids</i> , 2011 , 50, 1443-1453	2.5	26

20	Comparison of turbulent channel and pipe flows with varying Reynolds number. <i>Experiments in Fluids</i> , 2011 , 51, 1261-1281	2.5	44
19	Reynolds Number Dependence of the Amplitude Modulated Near-Wall Cycle. <i>ERCOFTAC Series</i> , 2011 , 105-112	0.1	1
18	Predictive model for wall-bounded turbulent flow. <i>Science</i> , 2010 , 329, 193-6	33.3	278
17	High Reynolds number effects in wall turbulence. <i>International Journal of Heat and Fluid Flow</i> , 2010 , 31, 418-428	2.4	117
16	A High Reynolds Number Turbulent Boundary Layer with Regular Braille-Type Roughness. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2010 , 69-75	0.3	2
15	Comparison of large-scale amplitude modulation in turbulent boundary layers, pipes, and channel flows. <i>Physics of Fluids</i> , 2009 , 21, 111703	4.4	72
14	A comparison of turbulent pipe, channel and boundary layer flows. <i>Journal of Fluid Mechanics</i> , 2009 , 632, 431-442	3.7	229
13	Large-scale amplitude modulation of the small-scale structures in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2009 , 628, 311-337	3.7	443
12	Hot-wire spatial resolution issues in wall-bounded turbulence. <i>Journal of Fluid Mechanics</i> , 2009 , 635, 103-136	3.7	328
11	Use of direct numerical simulation (DNS) data to investigate spatial resolution issues in measurements of wall-bounded turbulence. <i>Measurement Science and Technology</i> , 2009 , 20, 115401	2	39
10	Study of the Log-Layer Structure in Wall Turbulence Over a Very Large Range of Reynolds Number. <i>Flow, Turbulence and Combustion</i> , 2008 , 81, 115-130	2.5	57
9	Evidence of very long meandering features in the logarithmic region of turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2007 , 579, 1-28	3.7	762
8	Large-scale influences in near-wall turbulence. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2007 , 365, 647-64	3	375
7	Some predictions of the attached eddy model for a high Reynolds number boundary layer. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2007 , 365, 807-22	3	86
6	Fully mapped energy spectra in a high Reynolds number turbulent boundary layer 2007 , 349-351		0
5	Simultaneous orthogonal-plane particle image velocimetry measurements in a turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , 2006 , 560, 53	3.7	86
4	Inclined cross-stream stereo particle image velocimetry measurements in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2005 , 541, 21	3.7	128
3	Investigation of large-scale coherence in a turbulent boundary layer using two-point correlations. <i>Journal of Fluid Mechanics</i> , 2005 , 524, 57-80	3.7	168

2	EXPERIMENTAL STUDY OF WALL TURBULENCE: IMPLICATIONS FOR CONTROL. <i>Lecture Notes Series, Institute for Mathematical Sciences</i> , 2005 , 207-246	0.1	4
1	Spatial resolution correction for wall-bounded turbulence measurements		2