

Nicholas Hutchins

List of Publications by Citations

Source: <https://exaly.com/author-pdf/7946602/nicholas-hutchins-publications-by-citations.pdf>

Version: 2024-04-20

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

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	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
126	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
125	Large-scale influences in near-wall turbulence. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2007 , 365, 647-64	3	375
124	Hot-wire spatial resolution issues in wall-bounded turbulence. <i>Journal of Fluid Mechanics</i> , 2009 , 635, 103-136	3.7	328
123	Predictive model for wall-bounded turbulent flow. <i>Science</i> , 2010 , 329, 193-6	33.3	278
122	A comparison of turbulent pipe, channel and boundary layer flows. <i>Journal of Fluid Mechanics</i> , 2009 , 632, 431-442	3.7	229
121	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
120	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
119	A predictive inner-layer model for streamwise turbulence statistics in wall-bounded flows. <i>Journal of Fluid Mechanics</i> , 2011 , 681, 537-566	3.7	128
118	Inclined cross-stream stereo particle image velocimetry measurements in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2005 , 541, 21	3.7	128
117	High Reynolds number effects in wall turbulence. <i>International Journal of Heat and Fluid Flow</i> , 2010 , 31, 418-428	2.4	117
116	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
115	Amplitude and frequency modulation in wall turbulence. <i>Journal of Fluid Mechanics</i> , 2012 , 712, 61-91	3.7	113
114	The turbulent/non-turbulent interface and entrainment in a boundary layer. <i>Journal of Fluid Mechanics</i> , 2014 , 742, 119-151	3.7	107
113	Amplitude modulation of all three velocity components in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2014 , 746,	3.7	101
112	Estimating wall-shear-stress fluctuations given an outer region input. <i>Journal of Fluid Mechanics</i> , 2013 , 715, 163-180	3.7	98
111	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

110	Simultaneous orthogonal-plane particle image velocimetry measurements in a turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , 2006 , 560, 53	3.7	86
109	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
108	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
107	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
106	Spatial resolution correction for wall-bounded turbulence measurements. <i>Journal of Fluid Mechanics</i> , 2011 , 676, 41-53	3.7	78
105	Evolution of zero-pressure-gradient boundary layers from different tripping conditions. <i>Journal of Fluid Mechanics</i> , 2015 , 783, 379-411	3.7	72
104	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
103	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
102	Uniform momentum zones in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2016 , 786, 309-331	3.7	65
101	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
100	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
99	Fully resolved measurements of turbulent boundary layer flows up to. <i>Journal of Fluid Mechanics</i> , 2018 , 851, 391-415	3.7	55
98	Wavelet analysis of wall turbulence to study large-scale modulation of small scales. <i>Experiments in Fluids</i> , 2015 , 56, 1	2.5	53
97	Self-similarity of wall-attached turbulence in boundary layers. <i>Journal of Fluid Mechanics</i> , 2017 , 823,	3.7	51
96	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
95	Distance-from-the-wall scaling of turbulent motions in wall-bounded flows. <i>Physics of Fluids</i> , 2017 , 29, 020712	4.4	45
94	A calibration technique to correct sensor drift issues in hot-wire anemometry. <i>Measurement Science and Technology</i> , 2014 , 25, 105304	2	44
93	Comparison of turbulent channel and pipe flows with varying Reynolds number. <i>Experiments in Fluids</i> , 2011 , 51, 1261-1281	2.5	44

92	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
91	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
90	The quiescent core of turbulent channel flow. <i>Journal of Fluid Mechanics</i> , 2014 , 751, 228-254	3.7	40
89	A fast direct numerical simulation method for characterising hydraulic roughness. <i>Journal of Fluid Mechanics</i> , 2015 , 773, 418-431	3.7	39
88	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
87	High spatial range velocity measurements in a high Reynolds number turbulent boundary layer. <i>Physics of Fluids</i> , 2014 , 26, 025117	4.4	38
86	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
85	An assessment of the ship drag penalty arising from light calcareous tubeworm fouling. <i>Biofouling</i> , 2016 , 32, 451-64	3.3	36
84	Structure Inclination Angles in the Convective Atmospheric Surface Layer. <i>Boundary-Layer Meteorology</i> , 2013 , 147, 41-50	3.4	36
83	Turbulent flow over transitionally rough surfaces with varying roughness densities. <i>Journal of Fluid Mechanics</i> , 2016 , 804, 130-161	3.7	34
82	Interfaces of uniform momentum zones in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2017 , 820, 451-478	3.7	32
81	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
80	Aerosolisation during tracheal intubation and extubation in an operating theatre setting. <i>Anaesthesia</i> , 2021 , 76, 182-188	6.6	31
79	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
78	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
77	The minimal-span channel for rough-wall turbulent flows. <i>Journal of Fluid Mechanics</i> , 2017 , 816, 5-42	3.7	28
76	Spatial resolution correction for hot-wire anemometry in wall turbulence. <i>Experiments in Fluids</i> , 2011 , 50, 1443-1453	2.5	26
75	Secondary motion in turbulent pipe flow with three-dimensional roughness. <i>Journal of Fluid Mechanics</i> , 2018 , 854, 5-33	3.7	26

74	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
73	Predicting the Drag of Rough Surfaces. <i>Annual Review of Fluid Mechanics</i> , 2021 , 53, 439-471	2.2	24
72	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
71	Turbulent structures in a statistically three-dimensional boundary layer. <i>Journal of Fluid Mechanics</i> , 2019 , 859, 543-565	3.7	23
70	Inner-outer interactions in rough-wall turbulence. <i>Journal of Turbulence</i> , 2016 , 17, 1159-1178	2.1	22
69	Validating under-resolved turbulence intensities for PIV experiments in canonical wall-bounded turbulence. <i>Experiments in Fluids</i> , 2016 , 57, 1	2.5	21
68	Caution: tripping hazards. <i>Journal of Fluid Mechanics</i> , 2012 , 710, 1-4	3.7	20
67	The meandering behaviour of large-scale structures in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2019 , 865,	3.7	20
66	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
65	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
64	Roughness effects in turbulent forced convection. <i>Journal of Fluid Mechanics</i> , 2019 , 861, 138-162	3.7	19
63	The effect of spanwise wavelength of surface heterogeneity on turbulent secondary flows. <i>Journal of Fluid Mechanics</i> , 2020 , 894,	3.7	17
62	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
61	Large coherence of spanwise velocity in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2018 , 847, 161-185	3.7	17
60	Influence of spatial exclusion on the statistical behavior of attached eddies. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	16
59	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
58	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
57	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

56	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
55	Generalization of the PIV loss-of-correlation formula introduced by Keane and Adrian. <i>Experiments in Fluids</i> , 2017 , 58, 1	2.5	13
54	Haemodynamic effects of incomplete stent apposition in curved coronary arteries. <i>Journal of Biomechanics</i> , 2017 , 63, 164-173	2.9	13
53	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
52	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
51	Direct numerical simulation of high aspect ratio spanwise-aligned bars. <i>Journal of Fluid Mechanics</i> , 2018 , 843, 126-155	3.7	12
50	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
49	Smooth- and rough-wall boundary layer structure from high spatial range particle image velocimetry. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	11
48	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
47	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
46	Machine-Learnt Turbulence Closures for Low-Pressure Turbines With Unsteady Inflow Conditions. <i>Journal of Turbomachinery</i> , 2019 , 141,	1.8	9
45	On the mixing length eddies and logarithmic mean velocity profile in wall turbulence. <i>Journal of Fluid Mechanics</i> , 2020 , 887,	3.7	8
44	A wall-shear stress predictive model. <i>Journal of Physics: Conference Series</i> , 2011 , 318, 012003	0.3	8
43	Turbulent flow over a long flat plate with uniform roughness. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	8
42	Heat transfer in rough-wall turbulent thermal convection in the ultimate regime. <i>Physical Review Fluids</i> , 2019 , 4,	2.8	8
41	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
40	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
39	Reynolds number and roughness effects on turbulent stresses in sandpaper roughness boundary layers. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	7

38	Large-Scale Structures in High Reynolds Number Wall-Bounded Turbulence. <i>Springer Proceedings in Physics</i> , 2014 , 75-83	0.2	7
37	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
36	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
35	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
34	Spatial averaging of velocity measurements in wall-bounded turbulence: single hot-wires. <i>Measurement Science and Technology</i> , 2013 , 24, 115301	2	5
33	Impact of mismatched and misaligned laser light sheet profiles on PIV performance. <i>Experiments in Fluids</i> , 2018 , 59, 1	2.5	5
32	Modelling and operation of sub-miniature constant temperature hot-wire anemometry. <i>Measurement Science and Technology</i> , 2016 , 27, 125301	2	4
31	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
30	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
29	EXPERIMENTAL STUDY OF WALL TURBULENCE: IMPLICATIONS FOR CONTROL. <i>Lecture Notes Series, Institute for Mathematical Sciences</i> , 2005 , 207-246	0.1	4
28	Controlling the Large-Scale Motions in a Turbulent Boundary Layer. <i>Lecture Notes in Mechanical Engineering</i> , 2014 , 17-26	0.4	4
27	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
26	Roll-modes generated in turbulent boundary layers with passive surface modifications 2014 ,		3
25	Influence of riblet shapes on the occurrence of Kelvin-Helmholtz rollers. <i>Journal of Fluid Mechanics</i> , 2021 , 913,	3.7	3
24	Spanwise velocity statistics in high-Reynolds-number turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2021 , 913,	3.7	3
23	The minimal channel: a fast and direct method for characterising roughness. <i>Journal of Physics: Conference Series</i> , 2016 , 708, 012010	0.3	3
22	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
21	Revisiting end conduction effects in constant temperature hot-wire anemometry. <i>Experiments in Fluids</i> , 2018 , 59, 1	2.5	2

20	Is there a need for fully converged CFD solutions? Global extremum seeking applied to aerodynamic shape optimisation 2013 ,		2
19	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
18	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
17	Spatial resolution correction for wall-bounded turbulence measurements		2
16	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
15	Periodicity of large-scale coherence in turbulent boundary layers. <i>International Journal of Heat and Fluid Flow</i> , 2020 , 83, 108575	2.4	2
14	Aerosolisation in endonasal endoscopic pituitary surgery. <i>Pituitary</i> , 2021 , 24, 499-506	4.3	2
13	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
12	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
11	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
10	Study of the Streamwise Evolution of Turbulent Boundary Layers to High Reynolds Numbers 2017 , 47-60		1
9	Reynolds Number Dependence of the Amplitude Modulated Near-Wall Cycle. <i>ERCOFTAC Series</i> , 2011 , 105-112	0.1	1
8	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
7	The Effect of Wall Normal Actuation on a Turbulent Boundary Layer. <i>Flow, Turbulence and Combustion</i> , 2017 , 99, 807-821	2.5	0
6	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
5	Fully mapped energy spectra in a high Reynolds number turbulent boundary layer 2007 , 349-351		0
4	The effect of cleaning and repainting on the ship drag penalty. <i>Biofouling</i> , 2021 , 37, 372-386	3.3	0
3	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

- | | | |
|---|---|-----|
| 2 | Turbulent flow over spanwise-varying roughness in a minimal streamwise channel. <i>Journal of Physics: Conference Series</i> , 2020 , 1522, 012018 | 0.3 |
| 1 | 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 |