Daniel Chung

List of Publications by Year
in descending order

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60 papers	2,376 citations	186209 28 h-index	206029 48 g-index
61 all docs	61 docs citations	61 times ranked	1410 citing authors

#	Article	IF	Citations
1	Amplitude and frequency modulation in wall turbulence. Journal of Fluid Mechanics, 2012, 712, 61-91.	1.4	154
2	Large-eddy simulation of large-scale structures in long channel flow. Journal of Fluid Mechanics, 2010, 661, 341-364.	1.4	149
3	A systematic investigation of roughness height and wavelength in turbulent pipe flow in the transitionally rough regime. Journal of Fluid Mechanics, 2015, 771, 743-777.	1.4	140
4	Predicting the Drag of Rough Surfaces. Annual Review of Fluid Mechanics, 2021, 53, 439-471.	10.8	131
5	Large-eddy simulation and wall modelling of turbulent channel flow. Journal of Fluid Mechanics, 2009, 631, 281-309.	1.4	111
6	Direct numerical simulation of stationary homogeneous stratified sheared turbulence. Journal of Fluid Mechanics, 2012, 696, 434-467.	1.4	100
7	A Unified Model for Moist Convective Boundary Layers Based on a Stochastic Eddy-Diffusivity/Mass-Flux Parameterization. Journals of the Atmospheric Sciences, 2013, 70, 1929-1953.	0.6	98
8	Vertical natural convection: application of the unifying theory of thermal convection. Journal of Fluid Mechanics, 2015, 764, 349-361.	1.4	82
9	On the Fidelity of Large-Eddy Simulation of Shallow Precipitating Cumulus Convection. Monthly Weather Review, 2011, 139, 2918-2939.	0.5	79
10	A fast direct numerical simulation method for characterising hydraulic roughness. Journal of Fluid Mechanics, 2015, 773, 418-431.	1.4	77
11	Large-Eddy Simulation of Stratified Turbulence. Part II: Application of the Stretched-Vortex Model to the Atmospheric Boundary Layer. Journals of the Atmospheric Sciences, 2014, 71, 4439-4460.	0.6	75
12	Turbulent flow over transitionally rough surfaces with varying roughness densities. Journal of Fluid Mechanics, 2016, 804, 130-161.	1.4	63
13	Secondary motion in turbulent pipe flow with three-dimensional roughness. Journal of Fluid Mechanics, 2018, 854, 5-33.	1.4	61
14	Direct numerical simulation and large-eddy simulation of stationary buoyancy-driven turbulence. Journal of Fluid Mechanics, 2010, 643, 279-308.	1.4	60
15	An energy-efficient pathway to turbulent drag reduction. Nature Communications, 2021, 12, 5805.	5.8	59
16	Similarity and structure of wall turbulence with lateral wall shear stress variations. Journal of Fluid Mechanics, 2018, 847, 591-613.	1.4	56
17	The minimal-span channel for rough-wall turbulent flows. Journal of Fluid Mechanics, 2017, 816, 5-42.	1.4	54
18	Roughness effects in turbulent forced convection. Journal of Fluid Mechanics, 2019, 861, 138-162.	1.4	51

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19	Large-Eddy Simulation of Stratified Turbulence. Part I: A Vortex-Based Subgrid-Scale Model. Journals of the Atmospheric Sciences, 2014, 71, 1863-1879.	0.6	47
20	Direct numerical simulation of the incompressible temporally developing turbulentÂboundary layer. Journal of Fluid Mechanics, 2016, 796, 437-472.	1.4	47
21	The effect of spanwise wavelength of surface heterogeneity on turbulent secondary flows. Journal of Fluid Mechanics, 2020, 894, .	1.4	47
22	Steady-State Large-Eddy Simulations to Study the Stratocumulus to Shallow Cumulus Cloud Transition. Journals of the Atmospheric Sciences, 2012, 69, 3264-3276.	0.6	44
23	Changes in the boundary-layer structure at theÂedge of the ultimate regime in vertical natural convection. Journal of Fluid Mechanics, 2017, 825, 550-572.	1.4	37
24	Direct numerical simulation of open-channel flow over smooth-to-rough and rough-to-smooth step changes. Journal of Fluid Mechanics, 2019, 866, 450-486.	1.4	37
25	An idealised assessment of Townsendâ€™s outer-layer similarity hypothesis for wall turbulence. Journal of Fluid Mechanics, 2014, 742, .	1.4	35
26	Direct numerical simulation of high aspect ratio spanwise-aligned bars. Journal of Fluid Mechanics, 2018, 843, 126-155.	1.4	34
27	Global and local aspects of entrainment in temporal plumes. Journal of Fluid Mechanics, 2017, 812, 222-250.	1.4	31
28	Flow past a transversely rotating sphere at Reynolds numbers above the laminar regime. Journal of Fluid Mechanics, 2014, 759, 751-781.	1.4	29
29	On the universality of inertial energy in the log layer of turbulent boundary layer and pipe flows. Experiments in Fluids, 2015, 56, 1.	1.1	27
30	Dispersive stresses in turbulent flow over riblets. Journal of Fluid Mechanics, 2021, 917, .	1.4	26
31	Recovery of wall-shear stress to equilibrium flow conditions after a rough-to-smooth step change in turbulent boundary layers. Journal of Fluid Mechanics, 2019, 872, 472-491.	1.4	25
32	Influence of riblet shapes on the occurrence of Kelvinâ€“Helmholtz rollers. Journal of Fluid Mechanics, 2021, 913, .	1.4	22
33	Turbulent natural convection scaling in a vertical channel. International Journal of Heat and Fluid Flow, 2013, 44, 554-562.	1.1	21
34	Bulk scaling in wall-bounded and homogeneous vertical natural convection. Journal of Fluid Mechanics, 2018, 841, 825-850.	1.4	21
35	The smooth-wall-like behaviour of turbulence over drag-altering surfaces: a unifying virtual-origin framework. Journal of Fluid Mechanics, 2021, 915, .	1.4	20
36	Detecting surfaceâ€feeding behavior by rorqual whales in accelerometer data. Marine Mammal Science, 2016, 32, 327-348.	0.9	19

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37	Heat transfer in rough-wall turbulent thermal convection in the ultimate regime. Physical Review Fluids, 2019, 4, .	1.0	18
38	Direct Numerical Simulations of Turbulent Flow Over Various Riblet Shapes in Minimal-Span Channels. Flow, Turbulence and Combustion, 2021, 107, 1-29.	1.4	16
39	A Simple Model for Stratocumulus to Shallow Cumulus Cloud Transitions. Journal of Climate, 2012, 25, 2547-2554.	1.2	15
40	Direct numerical simulations of Taylorâ€“Couette turbulence: the effects of sand grain roughness. Journal of Fluid Mechanics, 2019, 873, 260-286.	1.4	15
41	Direct numerical simulation-based characterization of pseudo-random roughness in minimal channels. Journal of Fluid Mechanics, 2022, 941, .	1.4	15
42	Controlling secondary flow in Taylorâ€“Couette turbulence through spanwise-varying roughness. Journal of Fluid Mechanics, 2020, 883, .	1.4	14
43	Experimental study of a turbulent boundary layer with a rough-to-smooth change in surface conditions at high Reynolds numbers. Journal of Fluid Mechanics, 2021, 923, .	1.4	13
44	Turbulent flow over a long flat plate with uniform roughness. Physical Review Fluids, 2017, 2, .	1.0	11
45	Incompressible variable-density turbulence in an external acceleration field. Journal of Fluid Mechanics, 2017, 827, 506-535.	1.4	10
46	Coriolis effect on centrifugal buoyancy-driven convection in a thin cylindrical shell. Journal of Fluid Mechanics, 2021, 910, .	1.4	10
47	Response of the temporal turbulent boundary layer to decaying free-stream turbulence. Journal of Fluid Mechanics, 2020, 896, .	1.4	8
48	Manipulation of near-wall turbulence by surface slip and permeability. Journal of Physics: Conference Series, 2018, 1001, 012011.	0.3	7
49	Interactions between scales in wall turbulence: phase relationships, amplitude modulation and the importance of critical layers. Journal of Fluid Mechanics, 2021, 914, .	1.4	7
50	Characterizing the turbulent drag properties of rough surfaces with a Taylorâ€“Couette set-up. Journal of Fluid Mechanics, 2021, 919, .	1.4	7
51	Important Parameters for a Predictive Model of ks for Zero-Pressure-Gradient Flows. AIAA Journal, 2022, 60, 5923-5931.	1.5	7
52	Calculation of the mean velocity profile for strongly turbulent Taylorâ€“Couette flow at arbitrary radius ratios. Journal of Fluid Mechanics, 2020, 905, .	1.4	6
53	Transition to ultimate Rayleighâ€“BÃ©nard turbulence revealed through extended self-similarity scaling analysis of the temperature structure functions. Journal of Fluid Mechanics, 2018, 851, .	1.4	5
54	Large-eddy simulation of a stratocumulus cloud. Physical Review Fluids, 2017, 2, .	1.0	5

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55	Important Parameters for a Predictive Model of k_s for Zero Pressure Gradient Flows. , 2022, , .		4
56	The minimal channel: a fast and direct method for characterising roughness. Journal of Physics: Conference Series, 2016, 708, 012010.	0.3	3
57	Navier-Stokesâ€“based linear model for unstably stratified turbulent channel flows. Physical Review Fluids, 2022, 7, .	1.0	3
58	Roughness and Reynolds Number Effects on the Flow Past a Rough-to-Smooth Step Change. Springer Proceedings in Physics, 2019, , 81-86.	0.1	2
59	Analysis of the coherent and turbulent stresses of a numerically simulated rough wall pipe. Journal of Physics: Conference Series, 2017, 822, 012011.	0.3	1
60	Turbulent flow over spanwise-varying roughness in a minimal streamwise channel. Journal of Physics: Conference Series, 2020, 1522, 012018.	0.3	0