

# Daniel Chung

## List of Publications by Year in descending order

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Version: 2024-02-01

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	Important Parameters for a Predictive Model of $k_s$ for Zero Pressure Gradient Flows. , 2022, , .		4
2	Navier-Stokes-based linear model for unstably stratified turbulent channel flows. Physical Review Fluids, 2022, 7, .	1.0	3
3	Direct numerical simulation-based characterization of pseudo-random roughness in minimal channels. Journal of Fluid Mechanics, 2022, 941, .	1.4	15
4	Important Parameters for a Predictive Model of $k_s$ for Zero-Pressure-Gradient Flows. AIAA Journal, 2022, 60, 5923-5931.	1.5	7
5	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
6	Coriolis effect on centrifugal buoyancy-driven convection in a thin cylindrical shell. Journal of Fluid Mechanics, 2021, 910, .	1.4	10
7	Predicting the Drag of Rough Surfaces. Annual Review of Fluid Mechanics, 2021, 53, 439-471.	10.8	131
8	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
9	Influence of riblet shapes on the occurrence of Kelvin-Helmholtz rollers. Journal of Fluid Mechanics, 2021, 913, .	1.4	22
10	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
11	Dispersive stresses in turbulent flow over riblets. Journal of Fluid Mechanics, 2021, 917, .	1.4	26
12	Characterizing the turbulent drag properties of rough surfaces with a Taylor-Couette set-up. Journal of Fluid Mechanics, 2021, 919, .	1.4	7
13	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
14	An energy-efficient pathway to turbulent drag reduction. Nature Communications, 2021, 12, 5805.	5.8	59
15	Controlling secondary flow in Taylor-Couette turbulence through spanwise-varying roughness. Journal of Fluid Mechanics, 2020, 883, .	1.4	14
16	Calculation of the mean velocity profile for strongly turbulent Taylor-Couette flow at arbitrary radius ratios. Journal of Fluid Mechanics, 2020, 905, .	1.4	6
17	Response of the temporal turbulent boundary layer to decaying free-stream turbulence. Journal of Fluid Mechanics, 2020, 896, .	1.4	8
18	Turbulent flow over spanwise-varying roughness in a minimal streamwise channel. Journal of Physics: Conference Series, 2020, 1522, 012018.	0.3	0

#	ARTICLE	IF	CITATIONS
19	The effect of spanwise wavelength of surface heterogeneity on turbulent secondary flows. Journal of Fluid Mechanics, 2020, 894, .	1.4	47
20	Direct numerical simulations of Taylorâ€“Couette turbulence: the effects of sand grain roughness. Journal of Fluid Mechanics, 2019, 873, 260-286.	1.4	15
21	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
22	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
23	Roughness effects in turbulent forced convection. Journal of Fluid Mechanics, 2019, 861, 138-162.	1.4	51
24	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
25	Heat transfer in rough-wall turbulent thermal convection in the ultimate regime. Physical Review Fluids, 2019, 4, .	1.0	18
26	Bulk scaling in wall-bounded and homogeneous vertical natural convection. Journal of Fluid Mechanics, 2018, 841, 825-850.	1.4	21
27	Direct numerical simulation of high aspect ratio spanwise-aligned bars. Journal of Fluid Mechanics, 2018, 843, 126-155.	1.4	34
28	Manipulation of near-wall turbulence by surface slip and permeability. Journal of Physics: Conference Series, 2018, 1001, 012011.	0.3	7
29	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
30	Secondary motion in turbulent pipe flow with three-dimensional roughness. Journal of Fluid Mechanics, 2018, 854, 5-33.	1.4	61
31	Similarity and structure of wall turbulence with lateral wall shear stress variations. Journal of Fluid Mechanics, 2018, 847, 591-613.	1.4	56
32	The minimal-span channel for rough-wall turbulent flows. Journal of Fluid Mechanics, 2017, 816, 5-42.	1.4	54
33	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
34	Global and local aspects of entrainment in temporal plumes. Journal of Fluid Mechanics, 2017, 812, 222-250.	1.4	31
35	Incompressible variable-density turbulence in an external acceleration field. Journal of Fluid Mechanics, 2017, 827, 506-535.	1.4	10
36	Changes in the boundary-layer structure at the edge of the ultimate regime in vertical natural convection. Journal of Fluid Mechanics, 2017, 825, 550-572.	1.4	37

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37	Turbulent flow over a long flat plate with uniform roughness. <i>Physical Review Fluids</i> , 2017, 2, .	1.0	11
38	Large-eddy simulation of a stratocumulus cloud. <i>Physical Review Fluids</i> , 2017, 2, .	1.0	5
39	The minimal channel: a fast and direct method for characterising roughness. <i>Journal of Physics: Conference Series</i> , 2016, 708, 012010.	0.3	3
40	Turbulent flow over transitionally rough surfaces with varying roughness densities. <i>Journal of Fluid Mechanics</i> , 2016, 804, 130-161.	1.4	63
41	Direct numerical simulation of the incompressible temporally developing turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , 2016, 796, 437-472.	1.4	47
42	Detecting surface-feeding behavior by orqual whales in accelerometer data. <i>Marine Mammal Science</i> , 2016, 32, 327-348.	0.9	19
43	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.	1.4	140
44	A fast direct numerical simulation method for characterising hydraulic roughness. <i>Journal of Fluid Mechanics</i> , 2015, 773, 418-431.	1.4	77
45	On the universality of inertial energy in the log layer of turbulent boundary layer and pipe flows. <i>Experiments in Fluids</i> , 2015, 56, 1.	1.1	27
46	Vertical natural convection: application of the unifying theory of thermal convection. <i>Journal of Fluid Mechanics</i> , 2015, 764, 349-361.	1.4	82
47	Large-Eddy Simulation of Stratified Turbulence. Part II: Application of the Stretched-Vortex Model to the Atmospheric Boundary Layer. <i>Journals of the Atmospheric Sciences</i> , 2014, 71, 4439-4460.	0.6	75
48	Flow past a transversely rotating sphere at Reynolds numbers above the laminar regime. <i>Journal of Fluid Mechanics</i> , 2014, 759, 751-781.	1.4	29
49	Large-Eddy Simulation of Stratified Turbulence. Part I: A Vortex-Based Subgrid-Scale Model. <i>Journals of the Atmospheric Sciences</i> , 2014, 71, 1863-1879.	0.6	47
50	An idealised assessment of Townsend's outer-layer similarity hypothesis for wall turbulence. <i>Journal of Fluid Mechanics</i> , 2014, 742, .	1.4	35
51	Turbulent natural convection scaling in a vertical channel. <i>International Journal of Heat and Fluid Flow</i> , 2013, 44, 554-562.	1.1	21
52	A Unified Model for Moist Convective Boundary Layers Based on a Stochastic Eddy-Diffusivity/Mass-Flux Parameterization. <i>Journals of the Atmospheric Sciences</i> , 2013, 70, 1929-1953.	0.6	98
53	Steady-State Large-Eddy Simulations to Study the Stratocumulus to Shallow Cumulus Cloud Transition. <i>Journals of the Atmospheric Sciences</i> , 2012, 69, 3264-3276.	0.6	44
54	A Simple Model for Stratocumulus to Shallow Cumulus Cloud Transitions. <i>Journal of Climate</i> , 2012, 25, 2547-2554.	1.2	15

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55	Amplitude and frequency modulation in wall turbulence. <i>Journal of Fluid Mechanics</i> , 2012, 712, 61-91.	1.4	154
56	Direct numerical simulation of stationary homogeneous stratified sheared turbulence. <i>Journal of Fluid Mechanics</i> , 2012, 696, 434-467.	1.4	100
57	On the Fidelity of Large-Eddy Simulation of Shallow Precipitating Cumulus Convection. <i>Monthly Weather Review</i> , 2011, 139, 2918-2939.	0.5	79
58	Direct numerical simulation and large-eddy simulation of stationary buoyancy-driven turbulence. <i>Journal of Fluid Mechanics</i> , 2010, 643, 279-308.	1.4	60
59	Large-eddy simulation of large-scale structures in long channel flow. <i>Journal of Fluid Mechanics</i> , 2010, 661, 341-364.	1.4	149
60	Large-eddy simulation and wall modelling of turbulent channel flow. <i>Journal of Fluid Mechanics</i> , 2009, 631, 281-309.	1.4	111