

Jc Klewicki

List of Publications by Year in descending order

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79
papers

1,885
citations

304368

22
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276539

41
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82
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82
docs citations

82
times ranked

908
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards Reconciling the Large-Scale Structure of Turbulent Boundary Layers in the Atmosphere and Laboratory. <i>Boundary-Layer Meteorology</i> , 2012, 145, 273-306.	1.2	212
2	Properties of the mean momentum balance in turbulent boundary layer, pipe and channel flows. <i>Journal of Fluid Mechanics</i> , 2005, 522, 303-327.	1.4	199
3	On the logarithmic mean profile. <i>Journal of Fluid Mechanics</i> , 2009, 638, 73-93.	1.4	99
4	Reynolds Number Dependence, Scaling, and Dynamics of Turbulent Boundary Layers. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2010, 132, .	0.8	89
5	On the Lamb vector divergence in Navier-Stokes flows. <i>Journal of Fluid Mechanics</i> , 2008, 610, 261-284.	1.4	86
6	Near-surface particle image velocimetry measurements in a transitionally rough-wall atmospheric boundary layer. <i>Journal of Fluid Mechanics</i> , 2007, 580, 319-338.	1.4	57
7	Streamwise velocity statistics in turbulent boundary layers that spatially develop to high Reynolds number. <i>Experiments in Fluids</i> , 2013, 54, 1.	1.1	57
8	Stress gradient balance layers and scale hierarchies in wall-bounded turbulent flows. <i>Journal of Fluid Mechanics</i> , 2005, 532, 165-189.	1.4	54
9	Reynolds-number-dependent turbulent inertia and onset of log region in pipe flows. <i>Journal of Fluid Mechanics</i> , 2014, 757, 747-769.	1.4	53
10	Multiscaling in the Presence of Indeterminacy: Wall-Induced Turbulence. <i>Multiscale Modeling and Simulation</i> , 2005, 4, 936-959.	0.6	49
11	An experimental investigation of the near-field flow development in coaxial jets. <i>Physics of Fluids</i> , 2003, 15, 1233-1246.	1.6	48
12	Re-examining the logarithmic dependence of the mean velocity distribution in polymer drag reduced wall-bounded flow. <i>Physics of Fluids</i> , 2012, 24, .	1.6	43
13	The transient force profile of low-speed droplet impact: measurements and model. <i>Journal of Fluid Mechanics</i> , 2019, 867, 300-322.	1.4	38
14	Experimental study of turbulent Poiseuille-Couette flow. <i>Physics of Fluids</i> , 2000, 12, 865-875.	1.6	35
15	Time averaging in turbulence settings may reveal an infinite hierarchy of length scales. <i>Discrete and Continuous Dynamical Systems</i> , 2009, 24, 781-807.	0.5	35
16	Scaling heat transfer in fully developed turbulent channel flow. <i>International Journal of Heat and Mass Transfer</i> , 2005, 48, 5284-5296.	2.5	34
17	THIRD MOMENTS AND THE ROLE OF ANISOTROPY FROM VELOCITY SHEAR IN THE SOLAR WIND. <i>Astrophysical Journal</i> , 2011, 736, 44.	1.6	31
18	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.	1.4	28

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19	Mean dynamics of transitional boundary-layer flow. <i>Journal of Fluid Mechanics</i> , 2011, 682, 617-651.	1.4	27
20	Spanwise vorticity structure in turbulent boundary layers. <i>International Journal of Heat and Fluid Flow</i> , 1996, 17, 363-376.	1.1	25
21	Temporally optimized spanwise vorticity sensor measurements in turbulent boundary layers. <i>Experiments in Fluids</i> , 2015, 56, 1.	1.1	24
22	Scaling properties of the mean wall-normal velocity in zero-pressure-gradient boundary layers. <i>Physical Review Fluids</i> , 2016, 1, .	1.0	24
23	Emergence of the four layer dynamical regime in turbulent pipe flow. <i>Physics of Fluids</i> , 2012, 24, 045107.	1.6	22
24	Self-similarity in the inertial region of wall turbulence. <i>Physical Review E</i> , 2014, 90, 063015.	0.8	22
25	Mesoscaling of Reynolds Shear Stress in Turbulent Channel and Pipe Flows.. <i>AIAA Journal</i> , 2005, 43, 2350-2353.	1.5	21
26	Normal impact force of Rayleigh jets. <i>Physical Review Fluids</i> , 2019, 4, .	1.0	20
27	On scaling the mean momentum balance and its solutions in turbulent Couette-Poiseuille flow. <i>Journal of Fluid Mechanics</i> , 2007, 573, 371-398.	1.4	19
28	An invariant representation of mean inertia: theoretical basis for a log law in turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2017, 813, 594-617.	1.4	19
29	A uniform momentum zone-vortical fissure model of the turbulent boundary layer. <i>Journal of Fluid Mechanics</i> , 2019, 858, 609-633.	1.4	19
30	Influences of boundary layer scale separation on the vorticity transport contribution to turbulent inertia. <i>Physics of Fluids</i> , 2013, 25, 015108.	1.6	18
31	High-order generalisation of the diagnostic scaling for turbulent boundary layers. <i>Journal of Turbulence</i> , 2016, 17, 664-677.	0.5	18
32	The use of photoactivatable fluorophores in the study of turbulent pipe mixing: effects of inlet geometry. <i>Measurement Science and Technology</i> , 2000, 11, 1235-1250.	1.4	17
33	Mean dynamics of transitional channel flow. <i>Journal of Fluid Mechanics</i> , 2011, 678, 451-481.	1.4	17
34	Finite Reynolds number properties of a turbulent channel flow similarity solution. <i>Physics of Fluids</i> , 2015, 27, .	1.6	17
35	Properties of the mean momentum balance in polymer drag-reduced channel flow. <i>Journal of Fluid Mechanics</i> , 2018, 834, 409-433.	1.4	17
36	Efficacy of single-component MTV to measure turbulent wall-flow velocity derivative profiles at high resolution. <i>Experiments in Fluids</i> , 2017, 58, 1.	1.1	16

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37	A fast data reduction algorithm for molecular tagging velocimetry: the decoupled spatial correlation technique. <i>Measurement Science and Technology</i> , 2000, 11, 1282-1288.	1.4	15
38	Mean momentum balance analysis of rough-wall turbulent boundary layers. <i>Physica D: Nonlinear Phenomena</i> , 2010, 239, 1329-1337.	1.3	15
39	Mean equation based scaling analysis of fully-developed turbulent channel flow with uniform heat generation. <i>International Journal of Heat and Mass Transfer</i> , 2017, 115, 50-61.	2.5	15
40	A comparative study of the velocity and vorticity structure in pipes and boundary layers at friction Reynolds numbers up to. <i>Journal of Fluid Mechanics</i> , 2019, 869, 182-213.	1.4	14
41	Flow field characteristics in the near field region of particle-laden coaxial jets. <i>Experiments in Fluids</i> , 2005, 39, 885-894.	1.1	13
42	A self-sustaining process theory for uniform momentum zones and internal shear layers in high Reynolds number shear flows. <i>Journal of Fluid Mechanics</i> , 2020, 901, .	1.4	13
43	Probing the high mixing efficiency events in a lock-exchange flow through simultaneous velocity and temperature measurements. <i>Physics of Fluids</i> , 2021, 33, .	1.6	13
44	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
45	Mean flow structure in high aspect ratio microchannel flows. <i>Experimental Thermal and Fluid Science</i> , 2010, 34, 1077-1088.	1.5	11
46	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
47	Design and implementation of a hot-wire probe for simultaneous velocity and vorticity vector measurements in boundary layers. <i>Experiments in Fluids</i> , 2017, 58, 1.	1.1	9
48	Experimental Investigation of Droplet Impact on Metal Surfaces in Reduced Ambient Pressure. <i>Procedia Manufacturing</i> , 2017, 10, 730-736.	1.9	9
49	High-fidelity measurements in channel flow with polymer wall injection. <i>Journal of Fluid Mechanics</i> , 2019, 859, 851-886.	1.4	9
50	Wall-Bounded Flows. , 2007, , 871-907.		9
51	Spatial Structure of Negative $\hat{u}\hat{v}$ in a Low Ri Turbulent Boundary Layer. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 1998, 120, 772-777.	0.8	8
52	A self-sustaining process model of inertial layer dynamics in high Reynolds number turbulent wall flows. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20160090.	1.6	8
53	Properties of the inertial sublayer in adverse pressure-gradient turbulent boundary layers. <i>Journal of Fluid Mechanics</i> , 2022, 937, .	1.4	8
54	On the Singular Nature of Turbulent Boundary Layers. <i>Procedia IUTAM</i> , 2013, 9, 69-78.	1.2	7

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55	Spin-up in a tank induced by a rotating bluff body. <i>Journal of Fluid Mechanics</i> , 1999, 388, 49-68.	1.4	6
56	Statistical evidence of an asymptotic geometric structure to the momentum transporting motions in turbulent boundary layers. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20160084.	1.6	6
57	Evaluation of annual radiation and windiness over a playa: possibility of harvesting the solar and wind energies. <i>Journal of Arid Environments</i> , 2002, 52, 555-564.	1.2	5
58	Overview of a Methodology for Scaling the Indeterminate Equations of Wall Turbulence. <i>AIAA Journal</i> , 2006, 44, 2475-2481.	1.5	5
59	Properties of turbulent channel flow similarity solutions. <i>Journal of Fluid Mechanics</i> , 2021, 915, .	1.4	5
60	Stress equation based scaling framework for adverse pressure gradient turbulent boundary layers. <i>International Journal of Heat and Fluid Flow</i> , 2022, 93, 108885.	1.1	5
61	Approach to the 4/3 law for turbulent pipe and channel flows examined through a reformulated scale-by-scale energy budget. <i>Journal of Fluid Mechanics</i> , 2022, 931, .	1.4	5
62	Viscous wall region structure in high and low Reynolds number turbulent boundary layers. , 1996, , .		4
63	Effect of inlet conditions on scalar statistics in pipe mixing. <i>AIChE Journal</i> , 1997, 43, 1947-1954.	1.8	4
64	Connecting vortex regeneration with near-wall stress transport. , 1998, , .		4
65	A heat transfer model of fully developed turbulent channel flow. <i>Journal of Fluid Mechanics</i> , 2020, 884, .	1.4	4
66	Properties of the scalar variance transport equation in turbulent channel flow. <i>Physical Review Fluids</i> , 2019, 4, .	1.0	4
67	Time Resolved Torque of Three-Dimensional Rotating Bluff Bodies in a Cylindrical Tank. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 1998, 120, 23-28.	0.8	4
68	Bounded dissipation predicts finite asymptotic state of near-wall turbulence. <i>Journal of Fluid Mechanics</i> , 2022, 940, .	1.4	4
69	Downstream evolution of junction flow three-component velocity fluctuations through the lens of the diagnostic plot. <i>International Journal of Heat and Fluid Flow</i> , 2020, 85, 108665.	1.1	3
70	An investigation of channel flow with a smooth air-water interface. <i>Experiments in Fluids</i> , 2015, 56, 1.	1.1	2
71	Properties of the kinetic energy budgets in wall-bounded turbulent flows. <i>Physical Review Fluids</i> , 2016, 1, .	1.0	2
72	Reynolds number scaling of pocket events in the viscous sublayer. <i>Physical Review Fluids</i> , 2017, 2, .	1.0	2

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73	Overview of a Methodology for Scaling the Indeterminate Equations of Wall Turbulence (invited). , 2005, , .		1
74	Statistical properties of streamline geometry in turbulent wall-flows. Physical Review Fluids, 2021, 6, .	1.0	1
75	Laboratory realization of an asymptotic wall flow. Journal of Fluid Mechanics, 2021, 918, .	1.4	1
76	Study of Near-field Dispersion through Large Groups of Obstacles. Journal of Asian Architecture and Building Engineering, 2004, 3, 305-309.	1.2	0
77	Statistical structure and mean dynamics of developing turbulent shear-wake flows. Experiments in Fluids, 2013, 54, 1.	1.1	0
78	Experimental Assessment of Symmetry Induced Higher-Moment Scaling Laws in Turbulent Pipe Flow. Springer Proceedings in Physics, 2021, , 167-172.	0.1	0
79	Modified Hierarchy Structure of Rough-Wall Flows. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2010, , 135-141.	0.1	0