Beverley J Mckeon

List of Publications by Year
in descending order

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82	5,682	147726	74108
papers	citations	31 h-index	75 g-index

83	83	83	2512
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Variational formulation of resolvent analysis. Physical Review Fluids, 2022, 7, .	1.0	5
2	Stochastic forcing to a linearized Navier-Stokes based model for laminar compressible boundary layers. , 2022, , .		1
3	Amplitude and wall-normal distance variation of small scales in turbulent boundary layers. Physical Review Fluids, 2022, 7, .	1.0	4
4	Kernel learning for robust dynamic mode decomposition: linear and nonlinear disambiguation optimization. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, 20210830.	1.0	19
5	Temporal characteristics of the probability density function of velocity in wall-bounded turbulent flows. Journal of Fluid Mechanics, 2021, 913, .	1.4	5
6	Nonlinear mechanism of the self-sustaining process in the buffer and logarithmic layer of wall-bounded flows. Journal of Fluid Mechanics, 2021, 914, .	1.4	13
7	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
8	Experiments and Modeling of a Compliant Wall Response to a Turbulent Boundary Layer with Dynamic Roughness Forcing. Fluids, 2021, 6, 173.	0.8	4
9	Data-driven resolvent analysis. Journal of Fluid Mechanics, 2021, 918, .	1.4	41
10	Unsteady dynamics in the streamwise-oscillating cylinder wake for forcing frequencies below lock-on. Physical Review Fluids, 2021, 6, .	1.0	6
11	Closing the loop: nonlinear Taylor vortex flow through the lens of resolvent analysis. Journal of Fluid Mechanics, 2021, 924, .	1.4	3
12	Resolvent analysis of stratification effects on wall-bounded shear flows. Physical Review Fluids, 2021, 6, .	1.0	7
13	Tollmien-Schlichting route to elastoinertial turbulence in channel flow. Physical Review Fluids, 2021, 6, .	1.0	17
14	Mean and Unsteady Flow Reconstruction Using Data-Assimilation and Resolvent Analysis. AIAA Journal, 2020, 58, 575-588.	1.5	10
15	Characterization of the Spatio-Temporal Response of a Turbulent Boundary Layer to Dynamic Roughness. Flow, Turbulence and Combustion, 2020, 104, 293-316.	1.4	8
16	Resolvent-based study of compressibility effects on supersonic turbulent boundary layers. Journal of Fluid Mechanics, 2020, 883, .	1.4	20
17	A basis for flow modelling. Journal of Fluid Mechanics, 2020, 904, .	1.4	1
18	Self-sustained elastoinertial Tollmienâ€“Schlichting waves. Journal of Fluid Mechanics, 2020, 897, .	1.4	29

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19	Measurements of a turbulent boundary layer-compliant surface system in response to targeted, dynamic roughness forcing. Experiments in Fluids, 2020, 61, 1.	1.1	4
20	Studying the effect of wall cooling in supersonic boundary layer flow using resolvent analysis. , 2020, , .		5
21	Interaction of forced Orr-Sommerfeld and Squire modes in a low-order representation of turbulent channel flow. Physical Review Fluids, 2020, 5, .	1.0	11
22	Control of instability by injection rate oscillations in a radial Hele-Shaw cell. Physical Review Fluids, 2020, 5, .	1.0	13
23	On the origin of drag increase in varying-phase opposition control. International Journal of Heat and Fluid Flow, 2020, 85, 108651.	1.1	4
24	Prediction of resolvent mode shapes in supersonic turbulent boundary layers. International Journal of Heat and Fluid Flow, 2020, 85, 108677.	1.1	11
25	Efficient representation of exact coherent states of the Navierâ€“Stokes equations using resolvent analysis. Fluid Dynamics Research, 2019, 51, 011401.	0.6	21
26	Turbulence Amplitude Amplification in an Externally Forced, Subsonic Turbulent Boundary Layer. AIAA Journal, 2019, 57, 3838-3850.	1.5	10
27	A tale of two airfoils: resolvent-based modelling of an oscillator versus an amplifier from an experimental mean. Journal of Fluid Mechanics, 2019, 881, 51-83.	1.4	22
28	On the shape of resolvent modes in wall-bounded turbulence. Journal of Fluid Mechanics, 2019, 877, 682-716.	1.4	9
29	Computing exact coherent states in channels starting from the laminar profile: A resolvent-based approach. Physical Review E, 2019, 100, 021101.	0.8	10
30	Effect of Coherent Structures on Aero-Optic Distortion in a Turbulent Boundary Layer. AIAA Journal, 2019, 57, 2828-2839.	1.5	18
31	Critical-Layer Structures and Mechanisms in Elastoinertial Turbulence. Physical Review Letters, 2019, 122, 124503.	2.9	61
32	Role of parasitic modes in nonlinear closure via the resolvent feedback loop. Physical Review Fluids, 2019, 4, .	1.0	16
33	Predicting the response of turbulent channel flow to varying-phase opposition control: Resolvent analysis as a tool for flow control design. Physical Review Fluids, 2019, 4, .	1.0	18
34	Self-similar hierarchies and attached eddies. Physical Review Fluids, 2019, 4, .	1.0	19
35	Dynamic Roughness for Manipulation and Control of Turbulent Boundary Layers: An Overview. AIAA Journal, 2018, 56, 2178-2193.	1.5	14
36	Modeling Passive Scalar Dynamics in Wall-Bounded Turbulence using Resolvent Analysis. , 2018, , .		3

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37	Non-normality and classification of amplification mechanisms in stability and resolvent analysis. Physical Review Fluids, 2018, 3, .	1.0	39
38	Scaling and interaction of self-similar modes in models of high Reynolds number wall turbulence. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160089.	1.6	15
39	Phase relations in a forced turbulent boundary layer: implications for modelling of high Reynolds number wall turbulence. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160080.	1.6	7
40	Data assimilation of mean velocity from 2D PIV measurements of flow over an idealized airfoil. Experiments in Fluids, 2017, 58, 1.	1.1	40
41	The engine behind (wall) turbulence: perspectives on scale interactions. Journal of Fluid Mechanics, 2017, 817, .	1.4	146
42	Phase-relationships between scales in the perturbed turbulent boundary layer. Journal of Turbulence, 2017, 18, 1120-1143.	0.5	13
43	Coherent structures, uniform momentum zones and the streamwise energy spectrum in wall-bounded turbulent flows. Journal of Fluid Mechanics, 2017, 826, .	1.4	32
44	Modal Analysis of Fluid Flows: An Overview. AIAA Journal, 2017, 55, 4013-4041.	1.5	1,020
45	A reduced-order model of three-dimensional unsteady flow in a cavity based on the resolvent operator. Journal of Fluid Mechanics, 2016, 798, .	1.4	57
46	Introduction to Topical Issue on Extreme Flows. Experiments in Fluids, 2016, 57, 1.	1.1	1
47	Leading Edge Vortex Development on Pitching and Surging Airfoils: A Study of Vertical Axis Wind Turbines. Springer Proceedings in Physics, 2016, , 581-587.	0.1	1
48	Low-dimensional representations of exact coherent states of the Navier-Stokes equations from the resolvent model of wall turbulence. Physical Review E, 2016, 93, 021102.	0.8	15
49	Analysis of Flow Timescales on a Periodically Pitching/Surging Airfoil. AIAA Journal, 2016, 54, 3421-3433.	1.5	19
50	On the design of optimal compliant walls for turbulence control. Journal of Turbulence, 2016, 17, 787-806.	0.5	20
51	Phase relationships between velocity, wall pressure, and wall shear stress in a forced turbulent boundary layer. , 2016, , .		1
52	Turbulence Amplitude Modulation in an Externally Forced, Subsonic Turbulent Boundary Layer. , 2016, , .		2
53	Nonlinear interactions isolated through scale synthesis in experimental wall turbulence. Physical Review Fluids, 2016, 1, .	1.0	10
54	Correspondence between Koopman mode decomposition, resolvent mode decomposition, and invariant solutions of the Navier-Stokes equations. Physical Review Fluids, 2016, 1, .	1.0	66

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55	A framework for studying the effect of compliant surfaces on wall turbulence. Journal of Fluid Mechanics, 2015, 768, 415-441.	1.4	56
56	Dynamic stall on a pitching and surging airfoil. Experiments in Fluids, 2015, 56, 1.	1.1	66
57	Triadic scale interactions in a turbulent boundary layer. Journal of Fluid Mechanics, 2015, 767, .	1.4	69
58	A low-order decomposition of turbulent channel flow via resolvent analysis and convex optimization. Physics of Fluids, 2014, 26, .	1.6	54
59	Phase Relationships in Presence of a Synthetic Large-Scale in a Turbulent Boundary Layer. , 2014, , .		2
60	On the origin of frequency sparsity in direct numerical simulations of turbulent pipe flow. Physics of Fluids, 2014, 26, .	1.6	14
61	Opposition control within the resolvent analysis framework. Journal of Fluid Mechanics, 2014, 749, 597-626.	1.4	69
62	On the structure and origin of pressure fluctuations in wall turbulence: predictions based on the resolvent analysis. Journal of Fluid Mechanics, 2014, 751, 38-70.	1.4	39
63	Time-resolved measurements of coherent structures in the turbulent boundary layer. Experiments in Fluids, 2013, 54, 1.	1.1	22
64	Phase relationships between large and small scales in the turbulent boundary layer. Experiments in Fluids, 2013, 54, 1.	1.1	55
65	On coherent structure in wall turbulence. Journal of Fluid Mechanics, 2013, 728, 196-238.	1.4	143
66	Model-based scaling of the streamwise energy density in high-Reynolds-number turbulent channels. Journal of Fluid Mechanics, 2013, 734, 275-316.	1.4	117
67	Highâ€“Reynolds Number Wall Turbulence. Annual Review of Fluid Mechanics, 2011, 43, 353-375.	10.8	690
68	New perspectives on the impulsive roughness-perturbation of a turbulent boundary layer. Journal of Fluid Mechanics, 2011, 677, 179-203.	1.4	41
69	The effect of small-amplitude time-dependent changes to the surface morphology of a sphere. Journal of Fluid Mechanics, 2011, 675, 268-296.	1.4	20
70	Interactions within the turbulent boundary layer at high Reynolds number. Journal of Fluid Mechanics, 2011, 666, 573-604.	1.4	114
71	Dynamic roughness perturbation of a turbulent boundary layer. Journal of Fluid Mechanics, 2011, 688, 258-296.	1.4	53
72	A study of the three-dimensional spectral energy distribution in a zero pressure gradient turbulent boundary layer. Experiments in Fluids, 2011, 51, 997-1012.	1.1	38

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73	The effect of a small isolated roughness element on the forces on a sphere in uniform flow. Experiments in Fluids, 2011, 51, 1031-1045.	1.1	13
74	Unsteady force measurements in sphere flow from subcritical to supercritical Reynolds numbers. Experiments in Fluids, 2011, 51, 1439-1453.	1.1	31
75	Large-eddy simulation of large-scale structures in long channel flow. Journal of Fluid Mechanics, 2010, 661, 341-364.	1.4	149
76	A critical-layer framework for turbulent pipe flow. Journal of Fluid Mechanics, 2010, 658, 336-382.	1.4	460
77	Wall-bounded turbulent flows at high Reynolds numbers: Recent advances and key issues. Physics of Fluids, 2010, 22, .	1.6	577
78	Controlling Turbulence. Science, 2010, 327, 1462-1463.	6.0	6
79	A new friction factor relationship for fully developed pipe flow. Journal of Fluid Mechanics, 2005, 538, 429.	1.4	146
80	Friction factors for smooth pipe flow. Journal of Fluid Mechanics, 2004, 511, 41-44.	1.4	145
81	Scaling of the streamwise velocity component in turbulent pipe flow. Journal of Fluid Mechanics, 2004, 508, 99-131.	1.4	190
82	Further observations on the mean velocity distribution in fully developed pipe flow. Journal of Fluid Mechanics, 2004, 501, 135-147.	1.4	257