Beverley J Mckeon

List of Publications by Year in Descending Order

73 papers	3,782 citations	27 h-index	61 g-index
83 ext. papers	4,852 ext. citations	3.7 avg, IF	5.94 L-index

#	Paper	IF	Citations
73	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	2.4	3
72	Experiments and Modeling of a Compliant Wall Response to a Turbulent Boundary Layer with Dynamic Roughness Forcing. *Fluids*, **2021**, 6, 173	1.6	1
71	Data-driven resolvent analysis. *Journal of Fluid Mechanics*, **2021**, 918,	3.7	12
70	Temporal characteristics of the probability density function of velocity in wall-bounded turbulent flows. *Journal of Fluid Mechanics*, **2021**, 913,	3.7	2
69	Unsteady dynamics in the streamwise-oscillating cylinder wake for forcing frequencies below lock-on. *Physical Review Fluids*, **2021**, 6,	2.8	2
68	Tollmien-Schlichting route to elastoinertial turbulence in channel flow. *Physical Review Fluids*, **2021**, 6,	2.8	4
67	Self-sustained elastoinertial Tollmien-Schlichting waves. *Journal of Fluid Mechanics*, **2020**, 897,	3.7	14
66	Measurements of a turbulent boundary layer-compliant surface system in response to targeted, dynamic roughness forcing. *Experiments in Fluids*, **2020**, 61, 1	2.5	1
65	Studying the effect of wall cooling in supersonic boundary layer flow using resolvent analysis **2020**,		1
64	Interaction of forced Orr-Sommerfeld and Squire modes in a low-order representation of turbulent channel flow. *Physical Review Fluids*, **2020**, 5,	2.8	4
63	Control of instability by injection rate oscillations in a radial Hele-Shaw cell. *Physical Review Fluids*, **2020**, 5,	2.8	3
62	On the origin of drag increase in varying-phase opposition control. *International Journal of Heat and Fluid Flow*, **2020**, 85, 108651	2.4	1
61	Prediction of resolvent mode shapes in supersonic turbulent boundary layers. *International Journal of Heat and Fluid Flow*, **2020**, 85, 108677	2.4	0
60	Resolvent-based study of compressibility effects on supersonic turbulent boundary layers. *Journal of Fluid Mechanics*, **2020**, 883,	3.7	5
59	A basis for flow modelling. *Journal of Fluid Mechanics*, **2020**, 904,	3.7	1
58	Mean and Unsteady Flow Reconstruction Using Data-Assimilation and Resolvent Analysis. *AIAA Journal*, **2020**, 58, 575-588	2.1	3
57	Characterization of the Spatio-Temporal Response of a Turbulent Boundary Layer to Dynamic Roughness. *Flow, Turbulence and Combustion*, **2020**, 104, 293-316	2.5	2

56	On the shape of resolvent modes in wall-bounded turbulence. *Journal of Fluid Mechanics*, **2019**, 877, 682-716	3.7	4
55	Computing exact coherent states in channels starting from the laminar profile: A resolvent-based approach. *Physical Review E*, **2019**, 100, 021101	2.4	3
54	Effect of Coherent Structures on Aero-Optic Distortion in a Turbulent Boundary Layer. *AIAA Journal* , **2019**, 57, 2828-2839	2.1	9
53	Critical-Layer Structures and Mechanisms in Elastoinertial Turbulence. *Physical Review Letters*, **2019** , 122, 124503	7.4	37
52	Efficient representation of exact coherent states of the Navier–Stokes equations using resolvent analysis. *Fluid Dynamics Research*, **2019**, 51, 011401	1.2	10
51	Turbulence Amplitude Amplification in an Externally Forced, Subsonic Turbulent Boundary Layer. *AIAA Journal*, **2019**, 57, 3838-3850	2.1	2
50	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	3.7	8
49	Role of parasitic modes in nonlinear closure via the resolvent feedback loop. *Physical Review Fluids*, **2019**, 4,	2.8	9
48	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,	2.8	8
47	Self-similar hierarchies and attached eddies. *Physical Review Fluids*, **2019**, 4,	2.8	9
46	Dynamic Roughness for Manipulation and Control of Turbulent Boundary Layers: An Overview. *AIAA Journal*, **2018**, 56, 2178-2193	2.1	8
45	Non-normality and classification of amplification mechanisms in stability and resolvent analysis. *Physical Review Fluids*, **2018**, 3,	2.8	14
44	Modeling Passive Scalar Dynamics in Wall-Bounded Turbulence using Resolvent Analysis **2018**,		1
43	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,	3	11
42	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,	3	5
41	Data assimilation of mean velocity from 2D PIV measurements of flow over an idealized airfoil. *Experiments in Fluids*, **2017**, 58, 1	2.5	25
40	The engine behind (wall) turbulence: perspectives on scale interactions. *Journal of Fluid Mechanics*, **2017**, 817,	3.7	86
39	Phase-relationships between scales in the perturbed turbulent boundary layer. *Journal of Turbulence*, **2017**, 18, 1120-1143	2.1	7

38	Coherent structures, uniform momentum zones and the streamwise energy spectrum in wall-bounded turbulent flows. *Journal of Fluid Mechanics*, **2017**, 826,	3.7	21
37	Modal Analysis of Fluid Flows: An Overview. *AIAA Journal*, **2017**, 55, 4013-4041	2.1	508
36	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	2.4	11
35	Analysis of Flow Timescales on a Periodically Pitching/Surging Airfoil. *AIAA Journal*, **2016**, 54, 3421-3433	2.1	13
34	On the design of optimal compliant walls for turbulence control. *Journal of Turbulence*, **2016**, 17, 787-806	2.1	14
33	Turbulence Amplitude Modulation in an Externally Forced, Subsonic Turbulent Boundary Layer **2016**,		2
32	Nonlinear interactions isolated through scale synthesis in experimental wall turbulence. *Physical Review Fluids*, **2016**, 1,	2.8	9
31	Correspondence between Koopman mode decomposition, resolvent mode decomposition, and invariant solutions of the Navier-Stokes equations. *Physical Review Fluids*, **2016**, 1,	2.8	51
30	A reduced-order model of three-dimensional unsteady flow in a cavity based on the resolvent operator. *Journal of Fluid Mechanics*, **2016**, 798,	3.7	34
29	Leading Edge Vortex Development on Pitching and Surging Airfoils: A Study of Vertical Axis Wind Turbines. *Springer Proceedings in Physics*, **2016**, 581-587	0.2	0
28	Dynamic stall on a pitching and surging airfoil. *Experiments in Fluids*, **2015**, 56, 1	2.5	44
27	Triadic scale interactions in a turbulent boundary layer. *Journal of Fluid Mechanics*, **2015**, 767,	3.7	46
26	A framework for studying the effect of compliant surfaces on wall turbulence. *Journal of Fluid Mechanics*, **2015**, 768, 415-441	3.7	43
25	Opposition control within the resolvent analysis framework. *Journal of Fluid Mechanics*, **2014**, 749, 597-626	3.7	42
24	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	3.7	27
23	A low-order decomposition of turbulent channel flow via resolvent analysis and convex optimization. *Physics of Fluids*, **2014**, 26, 051701	4.4	33
22	Phase Relationships in Presence of a Synthetic Large-Scale in a Turbulent Boundary Layer **2014**,		1
21	On the origin of frequency sparsity in direct numerical simulations of turbulent pipe flow. *Physics of Fluids*, **2014**, 26, 101703	4.4	11

20	Time-resolved measurements of coherent structures in the turbulent boundary layer. *Experiments in Fluids*, **2013**, 54, 1	2.5	17
19	Phase relationships between large and small scales in the turbulent boundary layer. *Experiments in Fluids*, **2013**, 54, 1	2.5	42
18	On coherent structure in wall turbulence. *Journal of Fluid Mechanics*, **2013**, 728, 196-238	3.7	111
17	Model-based scaling of the streamwise energy density in high-Reynolds-number turbulent channels. *Journal of Fluid Mechanics*, **2013**, 734, 275-316	3.7	80
16	High Reynolds Number Wall Turbulence. *Annual Review of Fluid Mechanics*, **2011**, 43, 353-375	22	506
15	New perspectives on the impulsive roughness-perturbation of a turbulent boundary layer. *Journal of Fluid Mechanics*, **2011**, 677, 179-203	3.7	36
14	The effect of small-amplitude time-dependent changes to the surface morphology of a sphere. *Journal of Fluid Mechanics*, **2011**, 675, 268-296	3.7	17
13	Interactions within the turbulent boundary layer at high Reynolds number. *Journal of Fluid Mechanics*, **2011**, 666, 573-604	3.7	98
12	Dynamic roughness perturbation of a turbulent boundary layer. *Journal of Fluid Mechanics*, **2011**, 688, 258-296	3.7	36
11	A study of the three-dimensional spectral energy distribution in a zero pressure gradient turbulent boundary layer. *Experiments in Fluids*, **2011**, 51, 997-1012	2.5	30
10	The effect of a small isolated roughness element on the forces on a sphere in uniform flow. *Experiments in Fluids*, **2011**, 51, 1031-1045	2.5	11
9	Unsteady force measurements in sphere flow from subcritical to supercritical Reynolds numbers. *Experiments in Fluids*, **2011**, 51, 1439-1453	2.5	23
8	A critical-layer framework for turbulent pipe flow. *Journal of Fluid Mechanics*, **2010**, 658, 336-382	3.7	275
7	Wall-bounded turbulent flows at high Reynolds numbers: Recent advances and key issues. *Physics of Fluids*, **2010**, 22, 065103	4.4	471
6	Applied physics. Controlling turbulence. *Science*, **2010**, 327, 1462-3	33.3	5
5	Large-eddy simulation of large-scale structures in long channel flow. *Journal of Fluid Mechanics*, **2010**, 661, 341-364	3.7	126
4	A new friction factor relationship for fully developed pipe flow. *Journal of Fluid Mechanics*, **2005**, 538, 429	3.7	116
3	Friction factors for smooth pipe flow. *Journal of Fluid Mechanics*, **2004**, 511, 41-44	3.7	120

2	Scaling of the streamwise velocity component in turbulent pipe flow. *Journal of Fluid Mechanics*, **2004**, 508, 99-131	3.7	165
1	Further observations on the mean velocity distribution in fully developed pipe flow. *Journal of Fluid Mechanics*, **2004**, 501, 135-147	3.7	209