# 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 | Modal Analysis of Fluid Flows: An Overview. AIAA Journal, 2017, 55, 4013-4041. | 1.5 | 1,020 |
| 2 | Highâ€“Reynolds Number Wall Turbulence. Annual Review of Fluid Mechanics, 2011, 43, 353-375. | 10.8 | 690 |
| 3 | Wall-bounded turbulent flows at high Reynolds numbers: Recent advances and key issues. Physics of Fluids, 2010, 22, . | 1.6 | 577 |
| 4 | A critical-layer framework for turbulent pipe flow. Journal of Fluid Mechanics, 2010, 658, 336-382. | 1.4 | 460 |
| 5 | Further observations on the mean velocity distribution in fully developed pipe flow. Journal of Fluid Mechanics, 2004, 501, 135-147. | 1.4 | 257 |
| 6 | Scaling of the streamwise velocity component in turbulent pipe flow. Journal of Fluid Mechanics, 2004, 508, 99-131. | 1.4 | 190 |
| 7 | Large-eddy simulation of large-scale structures in long channel flow. Journal of Fluid Mechanics, 2010, 661, 341-364. | 1.4 | 149 |
| 8 | A new friction factor relationship for fully developed pipe flow. Journal of Fluid Mechanics, 2005, 538, 429. | 1.4 | 146 |
| 9 | The engine behind (wall) turbulence: perspectives on scale interactions. Journal of Fluid Mechanics, 2017, 817, . | 1.4 | 146 |
| 10 | Friction factors for smooth pipe flow. Journal of Fluid Mechanics, 2004, 511, 41-44. | 1.4 | 145 |
| 11 | On coherent structure in wall turbulence. Journal of Fluid Mechanics, 2013, 728, 196-238. | 1.4 | 143 |
| 12 | 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 |
| 13 | Interactions within the turbulent boundary layer at high Reynolds number. Journal of Fluid Mechanics, 2011, 666, 573-604. | 1.4 | 114 |
| 14 | Opposition control within the resolvent analysis framework. Journal of Fluid Mechanics, 2014, 749, 597-626. | 1.4 | 69 |
| 15 | Triadic scale interactions in a turbulent boundary layer. Journal of Fluid Mechanics, 2015, 767, . | 1.4 | 69 |
| 16 | Dynamic stall on a pitching and surging airfoil. Experiments in Fluids, 2015, 56, 1. | 1.1 | 66 |
| 17 | Correspondence between Koopman mode decomposition, resolvent mode decomposition, and invariant solutions of the Navier-Stokes equations. Physical Review Fluids, 2016, 1, . | 1.0 | 66 |
| 18 | Critical-Layer Structures and Mechanisms in Elastoinertial Turbulence. Physical Review Letters, 2019, 122, 124503. | 2.9 | 61 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | 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 |
| 20 | A framework for studying the effect of compliant surfaces on wall turbulence. Journal of Fluid Mechanics, 2015, 768, 415-441. | 1.4 | 56 |
| 21 | Phase relationships between large and small scales in the turbulent boundary layer. Experiments in Fluids, 2013, 54, 1. | 1.1 | 55 |
| 22 | A low-order decomposition of turbulent channel flow via resolvent analysis and convex optimization. Physics of Fluids, 2014, 26, . | 1.6 | 54 |
| 23 | Dynamic roughness perturbation of a turbulent boundary layer. Journal of Fluid Mechanics, 2011, 688, 258-296. | 1.4 | 53 |
| 24 | New perspectives on the impulsive roughness-perturbation of a turbulent boundary layer. Journal of Fluid Mechanics, 2011, 677, 179-203. | 1.4 | 41 |
| 25 | Data-driven resolvent analysis. Journal of Fluid Mechanics, 2021, 918, . | 1.4 | 41 |
| 26 | Data assimilation of mean velocity from 2D PIV measurements of flow over an idealized airfoil. Experiments in Fluids, 2017, 58, 1. | 1.1 | 40 |
| 27 | 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 |
| 28 | Non-normality and classification of amplification mechanisms in stability and resolvent analysis. Physical Review Fluids, 2018, 3, . | 1.0 | 39 |
| 29 | 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 |
| 30 | Coherent structures, uniform momentum zones and the streamwise energy spectrum in wall-bounded turbulent flows. Journal of Fluid Mechanics, 2017, 826, . | 1.4 | 32 |
| 31 | Unsteady force measurements in sphere flow from subcritical to supercritical Reynolds numbers. Experiments in Fluids, 2011, 51, 1439-1453. | 1.1 | 31 |
| 32 | Self-sustained elastoinertial Tollmienâ€“Schlichting waves. Journal of Fluid Mechanics, 2020, 897, . | 1.4 | 29 |
| 33 | Time-resolved measurements of coherent structures in the turbulent boundary layer. Experiments in Fluids, 2013, 54, 1. | 1.1 | 22 |
| 34 | 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 |
| 35 | Efficient representation of exact coherent states of the Navierâ€“Stokes equations using resolvent analysis. Fluid Dynamics Research, 2019, 51, 011401. | 0.6 | 21 |
| 36 | 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 |

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| 37 | On the design of optimal compliant walls for turbulence control. Journal of Turbulence, 2016, 17, 787-806. | 0.5 | 20 |
| 38 | Resolvent-based study of compressibility effects on supersonic turbulent boundary layers. Journal of Fluid Mechanics, 2020, 883, . | 1.4 | 20 |
| 39 | Analysis of Flow Timescales on a Periodically Pitching/Surging Airfoil. AIAA Journal, 2016, 54, 3421-3433. | 1.5 | 19 |
| 40 | Self-similar hierarchies and attached eddies. Physical Review Fluids, 2019, 4, . | 1.0 | 19 |
| 41 | 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 |
| 42 | Effect of Coherent Structures on Aero-Optic Distortion in a Turbulent Boundary Layer. AIAA Journal, 2019, 57, 2828-2839. | 1.5 | 18 |
| 43 | 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 |
| 44 | Tollmien-Schlichting route to elastoinertial turbulence in channel flow. Physical Review Fluids, 2021, 6, . | 1.0 | 17 |
| 45 | Role of parasitic modes in nonlinear closure via the resolvent feedback loop. Physical Review Fluids, 2019, 4, . | 1.0 | 16 |
| 46 | 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 |
| 47 | 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 |
| 48 | On the origin of frequency sparsity in direct numerical simulations of turbulent pipe flow. Physics of Fluids, 2014, 26, . | 1.6 | 14 |
| 49 | Dynamic Roughness for Manipulation and Control of Turbulent Boundary Layers: An Overview. AIAA Journal, 2018, 56, 2178-2193. | 1.5 | 14 |
| 50 | 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 |
| 51 | Phase-relationships between scales in the perturbed turbulent boundary layer. Journal of Turbulence, 2017, 18, 1120-1143. | 0.5 | 13 |
| 52 | 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 |
| 53 | Control of instability by injection rate oscillations in a radial Hele-Shaw cell. Physical Review Fluids, 2020, 5, . | 1.0 | 13 |
| 54 | 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 |

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| 55 | Prediction of resolvent mode shapes in supersonic turbulent boundary layers. International Journal of Heat and Fluid Flow, 2020, 85, 108677. | 1.1 | 11 |
| 56 | Turbulence Amplitude Amplification in an Externally Forced, Subsonic Turbulent Boundary Layer. AIAA Journal, 2019, 57, 3838-3850. | 1.5 | 10 |
| 57 | Computing exact coherent states in channels starting from the laminar profile: A resolvent-based approach. Physical Review E, 2019, 100, 021101. | 0.8 | 10 |
| 58 | Mean and Unsteady Flow Reconstruction Using Data-Assimilation and Resolvent Analysis. AIAA Journal, 2020, 58, 575-588. | 1.5 | 10 |
| 59 | Nonlinear interactions isolated through scale synthesis in experimental wall turbulence. Physical Review Fluids, 2016, 1, . | 1.0 | 10 |
| 60 | On the shape of resolvent modes in wall-bounded turbulence. Journal of Fluid Mechanics, 2019, 877, 682-716. | 1.4 | 9 |
| 61 | 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 |
| 62 | 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 |
| 63 | 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 |
| 64 | Resolvent analysis of stratification effects on wall-bounded shear flows. Physical Review Fluids, 2021, 6, . | 1.0 | 7 |
| 65 | Controlling Turbulence. Science, 2010, 327, 1462-1463. | 6.0 | 6 |
| 66 | Unsteady dynamics in the streamwise-oscillating cylinder wake for forcing frequencies below lock-on. Physical Review Fluids, 2021, 6, . | 1.0 | 6 |
| 67 | Studying the effect of wall cooling in supersonic boundary layer flow using resolvent analysis. , 2020, , . | | 5 |
| 68 | Temporal characteristics of the probability density function of velocity in wall-bounded turbulent flows. Journal of Fluid Mechanics, 2021, 913, . | 1.4 | 5 |
| 69 | Variational formulation of resolvent analysis. Physical Review Fluids, 2022, 7, . | 1.0 | 5 |
| 70 | 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 |
| 71 | Experiments and Modeling of a Compliant Wall Response to a Turbulent Boundary Layer with Dynamic Roughness Forcing. Fluids, 2021, 6, 173. | 0.8 | 4 |
| 72 | On the origin of drag increase in varying-phase opposition control. International Journal of Heat and Fluid Flow, 2020, 85, 108651. | 1.1 | 4 |

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| 73 | Amplitude and wall-normal distance variation of small scales in turbulent boundary layers. Physical Review Fluids, 2022, 7, . | 1.0 | 4 |
| 74 | Modeling Passive Scalar Dynamics in Wall-Bounded Turbulence using Resolvent Analysis. , 2018, , . | | 3 |
| 75 | Closing the loop: nonlinear Taylor vortex flow through the lens of resolvent analysis. Journal of Fluid Mechanics, 2021, 924, . | 1.4 | 3 |
| 76 | Phase Relationships in Presence of a Synthetic Large-Scale in a Turbulent Boundary Layer. , 2014, , . | | 2 |
| 77 | Turbulence Amplitude Modulation in an Externally Forced, Subsonic Turbulent Boundary Layer. , 2016, , . | | 2 |
| 78 | Introduction to Topical Issue on Extreme Flows. Experiments in Fluids, 2016, 57, 1. | 1.1 | 1 |
| 79 | 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 |
| 80 | Phase relationships between velocity, wall pressure, and wall shear stress in a forced turbulent boundary layer. , 2016, , . | | 1 |
| 81 | A basis for flow modelling. Journal of Fluid Mechanics, 2020, 904, . | 1.4 | 1 |
| 82 | Stochastic forcing to a linearized Navier-Stokes based model for laminar compressible boundary layers. , 2022, , . | | 1 |