

Clarence Rowley

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

119
papers

9,211
citations

43
h-index

95
g-index

127
ext. papers

11,709
ext. citations

3.6
avg, IF

6.7
L-index

#	Paper	IF	Citations
119	Spectral analysis of nonlinear flows. <i>Journal of Fluid Mechanics</i> , 2009 , 641, 115-127	3.7	1064
118	On dynamic mode decomposition: Theory and applications. <i>Journal of Computational Dynamics</i> , 2014 , 1, 391-421	2.6	587
117	MODEL REDUCTION FOR FLUIDS, USING BALANCED PROPER ORTHOGONAL DECOMPOSITION. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2005 , 15, 997-1013	2	542
116	A DataDriven Approximation of the Koopman Operator: Extending Dynamic Mode Decomposition. <i>Journal of Nonlinear Science</i> , 2015 , 25, 1307-1346	2.8	541
115	Modal Analysis of Fluid Flows: An Overview. <i>AIAA Journal</i> , 2017 , 55, 4013-4041	2.1	508
114	Model reduction for compressible flows using POD and Galerkin projection. <i>Physica D: Nonlinear Phenomena</i> , 2004 , 189, 115-129	3.3	427
113	Variants of Dynamic Mode Decomposition: Boundary Condition, Koopman, and Fourier Analyses. <i>Journal of Nonlinear Science</i> , 2012 , 22, 887-915	2.8	378
112	Turbulence, Coherent Structures, Dynamical Systems and Symmetry 2012 ,		347
111	On self-sustained oscillations in two-dimensional compressible flow over rectangular cavities. <i>Journal of Fluid Mechanics</i> , 2002 , 455, 315-346	3.7	336
110	Model Reduction for Flow Analysis and Control. <i>Annual Review of Fluid Mechanics</i> , 2017 , 49, 387-417	2.2	281
109	DYNAMICS AND CONTROL OF HIGH-REYNOLDS-NUMBER FLOW OVER OPEN CAVITIES. <i>Annual Review of Fluid Mechanics</i> , 2006 , 38, 251-276	2.2	267
108	Detection of Lagrangian coherent structures in three-dimensional turbulence. <i>Journal of Fluid Mechanics</i> , 2007 , 572, 111-120	3.7	230
107	Maximum Power Point Tracking for Photovoltaic Optimization Using Ripple-Based Extremum Seeking Control. <i>IEEE Transactions on Power Electronics</i> , 2010 , 25, 2531-2540	7.2	208
106	Active control of flow-induced cavity oscillations. <i>Progress in Aerospace Sciences</i> , 2008 , 44, 479-502	8.8	173
105	Locomotion of Articulated Bodies in a Perfect Fluid. <i>Journal of Nonlinear Science</i> , 2005 , 15, 255-289	2.8	146
104	Characterizing and correcting for the effect of sensor noise in the dynamic mode decomposition. <i>Experiments in Fluids</i> , 2016 , 57, 1	2.5	141
103	Reduced-order models for control of fluids using the eigensystem realization algorithm. <i>Theoretical and Computational Fluid Dynamics</i> , 2011 , 25, 233-247	2.3	135

102	De-biasing the dynamic mode decomposition for applied Koopman spectral analysis of noisy datasets. <i>Theoretical and Computational Fluid Dynamics</i> , 2017 , 31, 349-368	2.3	132
101	A kernel-based method for data-driven koopman spectral analysis. <i>Journal of Computational Dynamics</i> , 2015 , 2, 247-265	2.6	112
100	Dynamic mode decomposition for large and streaming datasets. <i>Physics of Fluids</i> , 2014 , 26, 111701	4.4	110
99	Reconstruction equations and the Karhunen-Loève expansion for systems with symmetry. <i>Physica D: Nonlinear Phenomena</i> , 2000 , 142, 1-19	3.3	106
98	Scaling the propulsive performance of heaving and pitching foils. <i>Journal of Fluid Mechanics</i> , 2017 , 822, 386-397	3.7	100
97	The unsteady three-dimensional wake produced by a trapezoidal pitching panel. <i>Journal of Fluid Mechanics</i> , 2011 , 685, 117-145	3.7	98
96	Modeling of transitional channel flow using balanced proper orthogonal decomposition. <i>Physics of Fluids</i> , 2008 , 20, 034103	4.4	97
95	Fast computation of finite-time Lyapunov exponent fields for unsteady flows. <i>Chaos</i> , 2010 , 20, 017503	3.3	87
94	Feedback control of unstable steady states of flow past a flat plate using reduced-order estimators. <i>Journal of Fluid Mechanics</i> , 2010 , 645, 447-478	3.7	79
93	Linear models for control of cavity flow oscillations. <i>Journal of Fluid Mechanics</i> , 2006 , 547, 317	3.7	78
92	Low-frequency dynamics in a shock-induced separated flow. <i>Journal of Fluid Mechanics</i> , 2016 , 807, 441-477	3.7	75
91	Reduction and reconstruction for self-similar dynamical systems. <i>Nonlinearity</i> , 2003 , 16, 1257-1275	1.7	72
90	Linearly Recurrent Autoencoder Networks for Learning Dynamics. <i>SIAM Journal on Applied Dynamical Systems</i> , 2019 , 18, 558-593	2.8	68
89	Spectral analysis of fluid flows using sub-Nyquist-rate PIV data. <i>Experiments in Fluids</i> , 2014 , 55, 1	2.5	68
88	Reduced-order unsteady aerodynamic models at low Reynolds numbers. <i>Journal of Fluid Mechanics</i> , 2013 , 724, 203-233	3.7	68
87	Discretely Nonreflecting Boundary Conditions for Linear Hyperbolic Systems. <i>Journal of Computational Physics</i> , 2000 , 157, 500-538	4.1	56
86	H2 optimal actuator and sensor placement in the linearised complex Ginzburg-Landau system. <i>Journal of Fluid Mechanics</i> , 2011 , 681, 241-260	3.7	55
85	Motion Planning for an Articulated Body in a Perfect Planar Fluid. <i>SIAM Journal on Applied Dynamical Systems</i> , 2006 , 5, 650-669	2.8	55

84	Empirical state-space representations for Theodorsen's lift model. <i>Journal of Fluids and Structures</i> , 2013 , 38, 174-186	3.1	51
83	Using hyperbolic Lagrangian coherent structures to investigate vortices in bioinspired fluid flows. <i>Chaos</i> , 2010 , 20, 017510	3.3	46
82	Algorithm 945. <i>ACM Transactions on Mathematical Software</i> , 2014 , 40, 1-23	2.3	45
81	Feedback control of flow resonances using balanced reduced-order models. <i>Journal of Sound and Vibration</i> , 2011 , 330, 1567-1581	3.9	45
80	State-space model identification and feedback control of unsteady aerodynamic forces. <i>Journal of Fluids and Structures</i> , 2014 , 50, 253-270	3.1	43
79	Integration of non-time-resolved PIV and time-resolved velocity point sensors for dynamic estimation of velocity fields. <i>Experiments in Fluids</i> , 2013 , 54, 1	2.5	43
78	An improved algorithm for balanced POD through an analytic treatment of impulse response tails. <i>Journal of Computational Physics</i> , 2012 , 231, 5317-5333	4.1	43
77	Feedback control of instabilities in the two-dimensional Blasius boundary layer: The role of sensors and actuators. <i>Physics of Fluids</i> , 2013 , 25, 054106	4.4	43
76	Overview of results from the National Spherical Torus Experiment (NSTX). <i>Nuclear Fusion</i> , 2009 , 49, 104016	3.5	36
75	Extending Data-Driven Koopman Analysis to Actuated Systems. <i>IFAC-PapersOnLine</i> , 2016 , 49, 704-709	0.7	34
74	Vortex dynamics in a pipe T-junction: Recirculation and sensitivity. <i>Physics of Fluids</i> , 2015 , 27, 034107	4.4	32
73	Online Dynamic Mode Decomposition for Time-Varying Systems. <i>SIAM Journal on Applied Dynamical Systems</i> , 2019 , 18, 1586-1609	2.8	31
72	Model Reduction of the Nonlinear Complex Ginzburg-Landau Equation. <i>SIAM Journal on Applied Dynamical Systems</i> , 2010 , 9, 1284-1302	2.8	31
71	Data fusion via intrinsic dynamic variables: An application of data-driven Koopman spectral analysis. <i>Europhysics Letters</i> , 2015 , 109, 40007	1.6	29
70	Clarifying the relationship between efficiency and resonance for flexible inertial swimmers. <i>Journal of Fluid Mechanics</i> , 2018 , 853, 271-300	3.7	29
69	Probabilistic Estimates of Transient Climate Sensitivity Subject to Uncertainty in Forcing and Natural Variability. <i>Journal of Climate</i> , 2011 , 24, 5521-5537	4.4	29
68	Feedback control of slowly-varying transient growth by an array of plasma actuators. <i>Physics of Fluids</i> , 2014 , 26, 024102	4.4	28
67	Feedback control of cavity flow oscillations using simple linear models. <i>Journal of Fluid Mechanics</i> , 2012 , 709, 223-248	3.7	28

66	Strike point control for the National Spherical Torus Experiment (NSTX). <i>Nuclear Fusion</i> , 2010 , 50, 105010-3	3	28
65	Dynamical models for control of cavity oscillations 2001 ,		27
64	Low-dimensional models of a temporally evolving free shear layer. <i>Journal of Fluid Mechanics</i> , 2009 , 618, 113-134	3.7	26
63	POD based models of self-sustained oscillations in the flow past an open cavity 2000 ,		26
62	Low-Dimensional Models for Control of Leading-Edge Vortices: Equilibria and Linearized Models 2007 ,		24
61	Uncertainty Quantification for Airfoil Icing Using Polynomial Chaos Expansions. <i>Journal of Aircraft</i> , 2015 , 52, 1404-1411	1.6	22
60	Riccati-less approach for optimal control and estimation: an application to two-dimensional boundary layers. <i>Journal of Fluid Mechanics</i> , 2013 , 731, 394-417	3.7	22
59	Identifying finite-time coherent sets from limited quantities of Lagrangian data. <i>Chaos</i> , 2015 , 25, 087408-3	3.3	22
58	Unsteady High-Angle-of-Attack Aerodynamic Models of a Generic Jet Transport. <i>Journal of Aircraft</i> , 2015 , 52, 890-895	1.6	22
57	Snapshot-Based Balanced Truncation for Linear Time-Periodic Systems. <i>IEEE Transactions on Automatic Control</i> , 2010 , 55, 469-473	5.9	21
56	Models and Control of Fish-Like Locomotion. <i>Experimental Mechanics</i> , 2010 , 50, 1355-1360	2.6	20
55	Long-time uncertainty propagation using generalized polynomial chaos and flow map composition. <i>Journal of Computational Physics</i> , 2014 , 274, 783-802	4.1	19
54	. <i>IEEE Transactions on Automatic Control</i> , 2013 , 58, 1068-1073	5.9	18
53	Reduced-Order Modeling of Channel Flow Using Traveling POD and Balanced POD 2006 ,		18
52	Lift Enhancement for Low-Aspect-Ratio Wings with Periodic Excitation. <i>AIAA Journal</i> , 2010 , 48, 1785-1790-1	1	17
51	Plasma modelling results and shape control improvements for NSTX. <i>Nuclear Fusion</i> , 2011 , 51, 113024	3.3	17
50	Low-Dimensional Models for Feedback Stabilization of Unstable Steady States 2008 ,		17
49	Vortex breakdown, linear global instability and sensitivity of pipe bifurcation flows. <i>Journal of Fluid Mechanics</i> , 2017 , 815, 257-294	3.7	16

48	Improving Separation Control with Noise-Robust Variants of Dynamic Mode Decomposition 2016 ,		16
47	Low-Dimensional State-Space Representations for Classical Unsteady Aerodynamic Models 2011 ,		16
46	Parameter-Varying Aerodynamics Models for Aggressive Pitching-Response Prediction. <i>AIAA Journal</i> , 2017 , 55, 693-701	2.1	15
45	Control of Forced and Self-Sustained Oscillations in the Flow Past a Cavity 2003 ,		15
44	Modeling the Unsteady Aerodynamic Forces on Small-Scale Wings 2009 ,		14
43	Reduced-order models for flow control: balanced models and Koopman modes. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2010 , 43-50	0.3	13
42	Data-Driven Model Predictive Control using Interpolated Koopman Generators. <i>SIAM Journal on Applied Dynamical Systems</i> , 2020 , 19, 2162-2193	2.8	13
41	Koopman spectral analysis of separated flow over a finite-thickness flat plate with elliptical leading edge 2011 ,		12
40	Unsteady Aerodynamic Forces on Small-Scale Wings: Experiments, Simulations, and Models 2008 ,		12
39	Cavity Flow Control Simulations and Experiments 2005 ,		12
38	Koopman Operators for Estimation and Control of Dynamical Systems. <i>Annual Review of Control, Robotics, and Autonomous Systems</i> , 2021 , 4, 59-87	11.8	12
37	Control of a canonical separated flow 2013 ,		11
36	A Data-Driven Modeling Framework for Predicting Forces and Pressures on a Rapidly Pitching Airfoil 2015 ,		10
35	Recent Progress in Closed-Loop Control of Cavity Tones 2006 ,		10
34	Adaptive separation control of a laminar boundary layer using online dynamic mode decomposition. <i>Journal of Fluid Mechanics</i> , 2020 , 903,	3.7	10
33	Simultaneous feedback control of plasma rotation and stored energy on NSTX-U using neoclassical toroidal viscosity and neutral beam injection. <i>Physics of Plasmas</i> , 2017 , 24, 056101	2.1	9
32	Distributed flexibility in inertial swimmers. <i>Journal of Fluid Mechanics</i> , 2020 , 888,	3.7	9
31	Experimental Implementation of Modal Approaches for Autonomous Reattachment of Separated Flows 2018 ,		9

30	Overview of physics results from NSTX. <i>Nuclear Fusion</i> , 2011 , 51, 094011	3.3	9
29	Maximum power point tracking for photovoltaic optimization using extremum seeking 2009 ,		9
28	Optimal back-extrapolation method for estimating plasma volume in humans using the indocyanine green dilution method. <i>Theoretical Biology and Medical Modelling</i> , 2014 , 11, 33	2.3	8
27	Supersonic Cavity Response to Open-Loop Forcing 2007 , 230-243		8
26	Closed-Loop Control of Leading Edge Vorticity on a 3D Wing: Simulations and Low-Dimensional Models 2008 ,		7
25	Unsteady Aerodynamic Models for Agile Flight at Low Reynolds Number 2010 ,		6
24	MODEL REDUCTION FOR FLUIDS, USING BALANCED PROPER ORTHOGONAL DECOMPOSITION. <i>World Scientific Series on Nonlinear Science, Series B</i> , 2006 , 301-317	0.3	6
23	Identifying Dynamic Modes of Separated Flow Subject to ZNMF-Based Control from Surface Pressure Measurements 2017 ,		5
22	Feedback Control of Transitional Channel Flow using Balanced Proper Orthogonal Decomposition 2008 ,		5
21	Template-Based Stabilization of Relative Equilibria in Systems with Continuous Symmetry. <i>Journal of Nonlinear Science</i> , 2007 , 17, 109-143	2.8	5
20	Connections between resonance and nonlinearity in swimming performance of a flexible heaving plate. <i>Journal of Fluid Mechanics</i> , 2020 , 888,	3.7	4
19	Fluid flow control applications of H2 optimal actuator and sensor placement 2014 ,		4
18	Integration of non-time-resolved PIV and time-resolved velocity point sensors for dynamic estimation of time-resolved velocity fields 2012 ,		4
17	Reduced-order model based feedback control of the modified Hasegawa-Wakatani model. <i>Physics of Plasmas</i> , 2013 , 20, 042501	2.1	4
16	Correction: Modal Analysis of Fluid Flows: An Overview. <i>AIAA Journal</i> , 2020 , 58, AU9-AU9	2.1	4
15	Feedback Control of High-Lift State for A Low-Aspect-Ratio Wing 2010 ,		3
14	Lie-Poisson integrators: A Hamiltonian, variational approach. <i>International Journal for Numerical Methods in Engineering</i> , 2009 , 82, n/a-n/a	2.4	3
13	Low-Dimensional Models of a Temporally Evolving Free Shear Layer 2006 ,		3

12	Lock-On to a High-Lift State with Oscillatory Forcing in a Three-Dimensional Wake Flow. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2010 , 81-93	0.3	3
11	Analysis of amplification mechanisms and cross-frequency interactions in nonlinear flows via the harmonic resolvent. <i>Journal of Fluid Mechanics</i> , 2020 , 900,	3.7	3
10	Reactive control of isolated unsteady streaks in a laminar boundary layer. <i>Journal of Fluid Mechanics</i> , 2016 , 795, 808-846	3.7	3
9	Reduced Order Estimation of the Speckle Electric Field History for Space-based Coronagraphs. <i>Astrophysical Journal</i> , 2019 , 881, 126	4.7	2
8	An adaptive-covariance-rank algorithm for the unscented Kalman filter 2010 ,		2
7	Low-dimensional Linearized Models for Systems with Periodic Orbits, with Application to the Ginzburg-Landau Equation 2008 ,		2
6	2006 ,		2
5	An efficient approximation of the Kalman filter for multiple systems coupled via low-dimensional stochastic input. <i>Automatica</i> , 2020 , 117, 108972	5.7	1
4	Unsteady Aerodynamic Response Modeling: A Parameter-Varying Approach 2015 ,		1
3	Linear Unsteady Aerodynamic Models from Wind Tunnel Measurements 2011 ,		1
2	Excess dNTPs Trigger Oscillatory Surface Flow in the Early Drosophila Embryo. <i>Biophysical Journal</i> , 2020 , 118, 2349-2353	2.9	1
1	Low-Order Models for Control of Fluids: Balanced Models and the Koopman Operator 2016 , 60-67		