Matthew P Juniper

List of Publications by Year
in descending order

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99	3,615	126858	138417
papers	citations	33 h-index	58 g-index

100	100	100	1477
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Applications of the dynamic mode decomposition. Theoretical and Computational Fluid Dynamics, 2011, 25, 249-259.	0.9	418
2	Sensitivity and Nonlinearity of Thermoacoustic Oscillations. Annual Review of Fluid Mechanics, 2018, 50, 661-689.	10.8	203
3	Triggering in the horizontal Rijke tube: non-normality, transient growth and bypass transition. Journal of Fluid Mechanics, 2011, 667, 272-308.	1.4	178
4	STRUCTURE AND DYNAMICS OF CRYOGENIC FLAMES AT SUPERCRITICAL PRESSURE. Combustion Science and Technology, 2006, 178, 161-192.	1.2	126
5	Density ratio effects on reacting bluff-body flow field characteristics. Journal of Fluid Mechanics, 2012, 706, 219-250.	1.4	122
6	Coherent structures in a swirl injector at ReÂ =Â4800 by nonlinear simulations and linear global modes. Journal of Fluid Mechanics, 2016, 792, 620-657.	1.4	118
7	Nonlinear self-excited thermoacoustic oscillations of a ducted premixed flame: bifurcations and routes to chaos. Journal of Fluid Mechanics, 2014, 761, 399-430.	1.4	116
8	Nonlinear dynamics of a self-excited thermoacoustic system subjected to acoustic forcing. Proceedings of the Combustion Institute, 2015, 35, 3229-3236.	2.4	89
9	Azimuthal instabilities in annular combustors: standing and spinning modes. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20130232.	1.0	85
10	The effect of confinement on the stability of two-dimensional shear flows. Journal of Fluid Mechanics, 2006, 565, 171.	1.4	84
11	Sensitivity analysis of a time-delayed thermo-acoustic system via an adjoint-based approach. Journal of Fluid Mechanics, 2013, 719, 183-202.	1.4	81
12	Lock-in and quasiperiodicity in hydrodynamically self-excited flames: Experiments and modelling. Proceedings of the Combustion Institute, 2013, 34, 947-954.	2.4	74
13	Structural sensitivity of spiral vortex breakdown. Journal of Fluid Mechanics, 2013, 720, 558-581.	1.4	72
14	The stability of ducted compound flows and consequences for the geometry of coaxial injectors. Journal of Fluid Mechanics, 2003, 482, 257-269.	1.4	70
15	Lock-in and quasiperiodicity in a forced hydrodynamically self-excited jet. Journal of Fluid Mechanics, 2013, 726, 624-655.	1.4	68
16	The local and global stability of confined planar wakes at intermediate Reynolds number. Journal of Fluid Mechanics, 2011, 686, 218-238.	1.4	59
17	Nonlinear thermoacoustics of ducted premixed flames: The influence of perturbation convection speed. Combustion and Flame, 2013, 160, 2856-2865.	2.8	55
18	Forced synchronization of periodic and aperiodic thermoacoustic oscillations: lock-in, bifurcations and open-loop control. Journal of Fluid Mechanics, 2018, 838, 690-714.	1.4	55

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19	Triggering in a Thermoacoustic System with Stochastic Noise. International Journal of Spray and Combustion Dynamics, 2011, 3, 225-241.	0.4	54
20	Modal Stability Theory. Applied Mechanics Reviews, 2014, 66, .	4.5	53
21	Forcing of self-excited round jet diffusion flames. Proceedings of the Combustion Institute, 2009, 32, 1191-1198.	2.4	52
22	Phase trapping and slipping in a forced hydrodynamically self-excited jet. Journal of Fluid Mechanics, 2013, 735, .	1.4	52
23	Weakly nonlinear analysis of thermoacoustic instabilities in annular combustors. Journal of Fluid Mechanics, 2016, 805, 52-87.	1.4	52
24	The effect of confinement on the stability of viscous planar jets and wakes. Journal of Fluid Mechanics, 2010, 656, 309-336.	1.4	47
25	The two classes of primary modal instability in laminar separation bubbles. Journal of Fluid Mechanics, 2013, 734, .	1.4	46
26	Adjoint algorithms for the Navierâ€“Stokes equations in the low Mach number limit. Journal of Computational Physics, 2012, 231, 1900-1916.	1.9	44
27	Non-normality and nonlinearity in thermoacoustic instabilities. International Journal of Spray and Combustion Dynamics, 2016, 8, 119-146.	0.4	42
28	The full impulse response of two-dimensional jet/wake flows and implications for confinement. Journal of Fluid Mechanics, 2007, 590, 163-185.	1.4	40
29	Stability analysis of thermo-acoustic nonlinear eigenproblems in annular combustors. Part II. Uncertainty quantification. Journal of Computational Physics, 2016, 325, 411-421.	1.9	40
30	The effect of confinement on the stability of non-swirling round jet/wake flows. Journal of Fluid Mechanics, 2008, 605, 227-252.	1.4	39
31	Frequency domain and time domain analysis of thermoacoustic oscillations with wave-basedÂacoustics. Journal of Fluid Mechanics, 2015, 775, 387-414.	1.4	39
32	The effect of the flame phase on thermoacoustic instabilities. Combustion and Flame, 2018, 187, 165-184.	2.8	39
33	The planar X-junction flow: stability analysis and control. Journal of Fluid Mechanics, 2014, 753, 1-28.	1.4	38
34	The extinction limits of a hydrogen counterflow diffusion flame above liquid oxygen. Combustion and Flame, 2003, 135, 87-96.	2.8	34
35	Global modes, receptivity, and sensitivity analysis of diffusion flames coupled with duct acoustics. Journal of Fluid Mechanics, 2014, 752, 237-265.	1.4	33
36	Experimental sensitivity analysis and control of thermoacoustic systems. Journal of Fluid Mechanics, 2016, 787, .	1.4	33

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37	Weakly nonlinear analysis of thermoacoustic bifurcations in the Rijke tube. Journal of Fluid Mechanics, 2016, 805, 523-550.	1.4	32
38	The structural sensitivity of open shear flows calculated with a local stability analysis. European Journal of Mechanics, B/Fluids, 2015, 49, 426-437.	1.2	30
39	Edge Diffusion Flame Stabilization Behind a Step over a Liquid Reactant. Journal of Propulsion and Power, 2003, 19, 332-341.	1.3	27
40	Second-order perturbation of global modes and implications for spanwise wavy actuation. Journal of Fluid Mechanics, 2014, 755, 314-335.	1.4	27
41	Flame Double Input Describing Function analysis. Combustion and Flame, 2016, 171, 87-102.	2.8	27
42	Stability analysis of thermo-acoustic nonlinear eigenproblems in annular combustors. Part I. Sensitivity. Journal of Computational Physics, 2016, 325, 395-410.	1.9	27
43	Linear stability and adjoint sensitivity analysis of thermoacoustic networks with premixed flames. Combustion and Flame, 2016, 165, 97-108.	2.8	27
44	Matrix-free continuation of limit cycles for bifurcation analysis of large thermoacoustic systems. Journal of Computational Physics, 2013, 240, 225-247.	1.9	26
45	Triggering in Thermoacoustics. International Journal of Spray and Combustion Dynamics, 2012, 4, 217-237.	0.4	25
46	Matrix-free continuation of limit cycles and their bifurcations for a ducted premixed flame. Journal of Fluid Mechanics, 2014, 759, 1-27.	1.4	25
47	Nonlinear Phenomena in Thermoacoustic Systems With Premixed Flames. Journal of Engineering for Gas Turbines and Power, 2013, 135, .	0.5	24
48	The effect of surface tension on the stability of unconfined and confined planar jets and wakes. Journal of Fluid Mechanics, 2009, 633, 71-97.	1.4	23
49	Nonlinear hydrodynamic and thermoacoustic oscillations of a bluff-body stabilised turbulent premixed flame. Combustion Theory and Modelling, 2016, 20, 131-153.	1.0	23
50	Self-sustained hydrodynamic oscillations in lifted jet diffusion flames: origin and control. Journal of Fluid Mechanics, 2015, 775, 201-222.	1.4	21
51	Local stability analysis and eigenvalue sensitivity of reacting bluff-body wakes. Journal of Fluid Mechanics, 2016, 788, 549-575.	1.4	21
52	G-equation modelling of thermoacoustic oscillations of partially premixed flames. International Journal of Spray and Combustion Dynamics, 2017, 9, 260-276.	0.4	20
53	Sensitivity of the Rayleigh criterion in thermoacoustics. Journal of Fluid Mechanics, 2020, 882, .	1.4	20
54	Adjoint-Based Linear Analysis in Reduced-Order Thermo-Acoustic Models. International Journal of Spray and Combustion Dynamics, 2014, 6, 225-246.	0.4	19

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55	Sensitivity analysis of thermoacoustic instability with adjoint Helmholtz solvers. Physical Review Fluids, 2018, 3, .	1.0	18
56	Finding thermoacoustic limit cycles for a ducted Burke-Schumann flame. Proceedings of the Combustion Institute, 2013, 34, 911-920.	2.4	17
57	Adjoint-based sensitivity analysis of low-order thermoacoustic networks using a wave-based approach. Journal of Computational Physics, 2017, 341, 163-181.	1.9	17
58	Early detection of thermoacoustic instabilities in a cryogenic rocket thrust chamber using combustion noise features and machine learning. Chaos, 2021, 31, 063128.	1.0	17
59	Linear-model-based estimation in wall turbulence: improved stochastic forcing and eddy viscosity terms. Journal of Fluid Mechanics, 2021, 925, .	1.4	16
60	Absolute and Convective Instability in Gas Turbine Fuel Injectors. , 2012, , .		15
61	Experimental sensitivity analysis via a secondary heat source in an oscillating thermoacoustic system. International Journal of Spray and Combustion Dynamics, 2017, 9, 230-240.	0.4	15
62	Propagation speed of inertial waves in cylindricalÂswirling flows. Journal of Fluid Mechanics, 2019, 879, 85-120.	1.4	14
63	State-space realization of a describing function. Nonlinear Dynamics, 2015, 82, 9-28.	2.7	12
64	Transient Growth and Triggering in the Horizontal Rijke Tube. International Journal of Spray and Combustion Dynamics, 2011, 3, 209-223.	0.4	11
65	Obtaining Bifurcation Diagrams With a Thermoacoustic Network Model. , 2012, , .		11
66	A Theoretical Approach for Passive Control of Thermoacoustic Oscillations: Application to Ducted Flames. Journal of Engineering for Gas Turbines and Power, 2013, 135, .	0.5	11
67	Multiple-scale thermo-acoustic stability analysis of a coaxial jet combustor. Proceedings of the Combustion Institute, 2017, 36, 3863-3871.	2.4	11
68	Combined state and parameter estimation in level-set methods. Journal of Computational Physics, 2019, 399, 108950.	1.9	11
69	Thermoacoustic stabilization of a longitudinal combustor using adjoint methods. Physical Review Fluids, 2020, 5, .	1.0	10
70	Stability Criteria for Standing and Spinning Waves in Annular Combustors. , 2015, , .		9
71	A data-driven kinematic model of a ducted premixed flame. Proceedings of the Combustion Institute, 2021, 38, 6231-6239.	2.4	9
72	Data Assimilation and Optimal Calibration in Nonlinear Models of Flame Dynamics. Journal of Engineering for Gas Turbines and Power, 2019, 141, .	0.5	9

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73	Adjoint-based shape optimization of the microchannels in an inkjet printhead. Journal of Fluid Mechanics, 2019, 871, 113-138.	1.4	8
74	Bayesian Machine Learning for the Prognosis of Combustion Instabilities From Noise. Journal of Engineering for Gas Turbines and Power, 2021, 143, .	0.5	8
75	Bifurcation scenario for a two-dimensional static airfoil exhibiting trailing edge stall. Journal of Fluid Mechanics, 2021, 928, .	1.4	8
76	Passive control of global instability in low-density jets. European Journal of Mechanics, B/Fluids, 2018, 72, 311-319.	1.2	7
77	Shape sensitivity of eigenvalues in hydrodynamic stability, with physical interpretation for the flow around a cylinder. European Journal of Mechanics, B/Fluids, 2020, 80, 80-91.	1.2	7
78	The effect of damkÃ¶hler number on the stand-off distance of cross-flow flames. Combustion Theory and Modelling, 2003, 7, 563-577.	1.0	6
79	Comments on Point:Counterpoint: Artificial limbs do/do not make artificially fast running speeds possible. Journal of Applied Physiology, 2010, 108, 1016-1018.	1.2	6
80	Assimilation of Experimental Data to Create a Quantitatively Accurate Reduced-Order Thermoacoustic Model. Journal of Engineering for Gas Turbines and Power, 2021, 143, .	0.5	6
81	Generating a physics-based quantitatively-accurate model of an electrically-heated Rijke tube with Bayesian inference. Journal of Sound and Vibration, 2022, 535, 117096.	2.1	5
82	Experimental sensitivity analysis of a linearly stable thermoacoustic system via a pulsed forcing technique. Experiments in Fluids, 2017, 58, 1.	1.1	4
83	Joint reconstruction and segmentation of noisy velocity images as an inverse Navierâ€“Stokes problem. Journal of Fluid Mechanics, 2022, 944, .	1.4	4
84	Bypass Transition to Sustained Thermoacoustic Oscillations in a Linearly Stable Rijke Tube. , 2010, , .		3
85	Adjoint Sensitivity Analysis of Hydrodynamic Stability in a Gas Turbine Fuel Injector. , 2015, , .		3
86	Adjoint Methods for Elimination of Thermoacoustic Oscillations in a Model Annular Combustor via Small Geometry Modifications. , 2018, , .		3
87	Flow Simulations Including Iron Nanoparticle Nucleation, Growth and Evaporation for Floating Catalyst CNT Production. Catalysts, 2020, 10, 1383.	1.6	2
88	High Fidelity Model for Self-sustained Oscillations in Heated Jets. , 2020, , .		2
89	A theoretical approach to the passive control of spiral vortex breakdown. , 2012, , .		1
90	Experimental Sensitivity Analysis and the Equivalence of Pulsed Forcing and Feedback Control in Thermoacoustic Systems. , 2017, , .		1

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91	Shape Optimization of Thermoacoustic Systems Using a Two-Dimensional Adjoint Helmholtz Solver. Journal of Engineering for Gas Turbines and Power, 2021, 143, .	0.5	1
92	Reducing Uncertainty in the Onset of Combustion Instabilities Using Dynamic Pressure Information and Bayesian Neural Networks. Journal of Engineering for Gas Turbines and Power, 2022, 144, .	0.5	1
93	Global modes of viscous heated jets with real gas effects. Journal of Fluid Mechanics, 2022, 936, .	1.4	1
94	Thermoacoustic stabilization of combustors with gradient-augmented Bayesian optimization and adjoint models. International Journal of Spray and Combustion Dynamics, 2022, 14, 266-272.	0.4	1
95	Nonlinear Phenomena in Thermoacoustic Systems With Premixed Flames. , 2012, , .		0
96	Triggering in Thermoacoustics. , 2012, , .		0
97	A Novel Theoretical Approach to Passive Control of Thermo-Acoustic Oscillations: Application to Ducted Heat Sources. , 2013, , .		0
98	The planar X-junction flow: stability analysis and control â€“ CORRIGENDUM. Journal of Fluid Mechanics, 2014, 753, 560-560.	1.4	0
99	Heat Release Response to Forced Flow Oscillations of a Low-Order Modelled Laboratory Scale Dump Combustor. , 2015, , .		0