Matthew P Juniper

List of Publications by Year
in descending order

99 papers	3,615 citations	126858 33 h-index	138417 58 g-index
100 all docs	100 docs citations	100 times ranked	1477 citing authors

#	Article	IF	Citations
1	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
2	Global modes of viscous heated jets with real gas effects. Journal of Fluid Mechanics, 2022, 936, .	1.4	1
3	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
4	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
5	Joint reconstruction and segmentation of noisy velocity images as an inverse Navierâ€“Stokes problem. Journal of Fluid Mechanics, 2022, 944, .	1.4	4
6	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
7	A data-driven kinematic model of a ducted premixed flame. Proceedings of the Combustion Institute, 2021, 38, 6231-6239.	2.4	9
8	Bayesian Machine Learning for the Prognosis of Combustion Instabilities From Noise. Journal of Engineering for Gas Turbines and Power, 2021, 143, .	0.5	8
9	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
10	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
11	Linear-model-based estimation in wall turbulence: improved stochastic forcing and eddy viscosity terms. Journal of Fluid Mechanics, 2021, 925, .	1.4	16
12	Bifurcation scenario for a two-dimensional static airfoil exhibiting trailing edge stall. Journal of Fluid Mechanics, 2021, 928, .	1.4	8
13	Sensitivity of the Rayleigh criterion in thermoacoustics. Journal of Fluid Mechanics, 2020, 882, .	1.4	20
14	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
15	Flow Simulations Including Iron Nanoparticle Nucleation, Growth and Evaporation for Floating Catalyst CNT Production. Catalysts, 2020, 10, 1383.	1.6	2
16	High Fidelity Model for Self-sustained Oscillations in Heated Jets. , 2020, , .		2
17	Thermoacoustic stabilization of a longitudinal combustor using adjoint methods. Physical Review Fluids, 2020, 5, .	1.0	10
18	Propagation speed of inertial waves in cylindricalÂswirling flows. Journal of Fluid Mechanics, 2019, 879, 85-120.	1.4	14

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19	Combined state and parameter estimation in level-set methods. Journal of Computational Physics, 2019, 399, 108950.	1.9	11
20	Adjoint-based shape optimization of the microchannels in an inkjet printhead. Journal of Fluid Mechanics, 2019, 871, 113-138.	1.4	8
21	Data Assimilation and Optimal Calibration in Nonlinear Models of Flame Dynamics. Journal of Engineering for Gas Turbines and Power, 2019, 141, .	0.5	9
22	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
23	Sensitivity and Nonlinearity of Thermoacoustic Oscillations. Annual Review of Fluid Mechanics, 2018, 50, 661-689.	10.8	203
24	The effect of the flame phase on thermoacoustic instabilities. Combustion and Flame, 2018, 187, 165-184.	2.8	39
25	Adjoint Methods for Elimination of Thermoacoustic Oscillations in a Model Annular Combustor via Small Geometry Modifications. , 2018, , .		3
26	Passive control of global instability in low-density jets. European Journal of Mechanics, B/Fluids, 2018, 72, 311-319.	1.2	7
27	Sensitivity analysis of thermoacoustic instability with adjoint Helmholtz solvers. Physical Review Fluids, 2018, 3, .	1.0	18
28	Multiple-scale thermo-acoustic stability analysis of a coaxial jet combustor. Proceedings of the Combustion Institute, 2017, 36, 3863-3871.	2.4	11
29	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
30	G-equation modelling of thermoacoustic oscillations of partially premixed flames. International Journal of Spray and Combustion Dynamics, 2017, 9, 260-276.	0.4	20
31	Experimental sensitivity analysis of a linearly stable thermoacoustic system via a pulsed forcing technique. Experiments in Fluids, 2017, 58, 1.	1.1	4
32	Experimental Sensitivity Analysis and the Equivalence of Pulsed Forcing and Feedback Control in Thermoacoustic Systems. , 2017, , .		1
33	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
34	Flame Double Input Describing Function analysis. Combustion and Flame, 2016, 171, 87-102.	2.8	27
35	Local stability analysis and eigenvalue sensitivity of reacting bluff-body wakes. Journal of Fluid Mechanics, 2016, 788, 549-575.	1.4	21
36	Weakly nonlinear analysis of thermoacoustic bifurcations in the Rijke tube. Journal of Fluid Mechanics, 2016, 805, 523-550.	1.4	32

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37	Weakly nonlinear analysis of thermoacoustic instabilities in annular combustors. Journal of Fluid Mechanics, 2016, 805, 52-87.	1.4	52
38	Experimental sensitivity analysis and control of thermoacoustic systems. Journal of Fluid Mechanics, 2016, 787, .	1.4	33
39	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
40	Stability analysis of thermo-acoustic nonlinear eigenproblems in annular combustors. Part I. Sensitivity. Journal of Computational Physics, 2016, 325, 395-410.	1.9	27
41	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
42	Non-normality and nonlinearity in thermoacoustic instabilities. International Journal of Spray and Combustion Dynamics, 2016, 8, 119-146.	0.4	42
43	Nonlinear hydrodynamic and thermoacoustic oscillations of a bluff-body stabilised turbulent premixed flame. Combustion Theory and Modelling, 2016, 20, 131-153.	1.0	23
44	Linear stability and adjoint sensitivity analysis of thermoacoustic networks with premixed flames. Combustion and Flame, 2016, 165, 97-108.	2.8	27
45	Frequency domain and time domain analysis of thermoacoustic oscillations with wave-basedÂacoustics. Journal of Fluid Mechanics, 2015, 775, 387-414.	1.4	39
46	Self-sustained hydrodynamic oscillations in lifted jet diffusion flames: origin and control. Journal of Fluid Mechanics, 2015, 775, 201-222.	1.4	21
47	Adjoint Sensitivity Analysis of Hydrodynamic Stability in a Gas Turbine Fuel Injector. , 2015, , .		3
48	Stability Criteria for Standing and Spinning Waves in Annular Combustors. , 2015, , .		9
49	Heat Release Response to Forced Flow Oscillations of a Low-Order Modelled Laboratory Scale Dump Combustor. , 2015, , .		0
50	State-space realization of a describing function. Nonlinear Dynamics, 2015, 82, 9-28.	2.7	12
51	Nonlinear dynamics of a self-excited thermoacoustic system subjected to acoustic forcing. Proceedings of the Combustion Institute, 2015, 35, 3229-3236.	2.4	89
52	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
53	Modal Stability Theory. Applied Mechanics Reviews, 2014, 66, .	4.5	53
54	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

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55	Adjoint-Based Linear Analysis in Reduced-Order Thermo-Acoustic Models. International Journal of Spray and Combustion Dynamics, 2014, 6, 225-246.	0.4	19
56	Global modes, receptivity, and sensitivity analysis of diffusion flames coupled with duct acoustics. Journal of Fluid Mechanics, 2014, 752, 237-265.	1.4	33
57	The planar X-junction flow: stability analysis and control. Journal of Fluid Mechanics, 2014, 753, 1-28.	1.4	38
58	Second-order perturbation of global modes and implications for spanwise wavy actuation. Journal of Fluid Mechanics, 2014, 755, 314-335.	1.4	27
59	The planar X-junction flow: stability analysis and control â€“ CORRIGENDUM. Journal of Fluid Mechanics, 2014, 753, 560-560.	1.4	0
60	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
61	Nonlinear Phenomena in Thermoacoustic Systems With Premixed Flames. Journal of Engineering for Gas Turbines and Power, 2013, 135, .	0.5	24
62	Finding thermoacoustic limit cycles for a ducted Burke-Schumann flame. Proceedings of the Combustion Institute, 2013, 34, 911-920.	2.4	17
63	Lock-in and quasiperiodicity in hydrodynamically self-excited flames: Experiments and modelling. Proceedings of the Combustion Institute, 2013, 34, 947-954.	2.4	74
64	Nonlinear thermoacoustics of ducted premixed flames: The influence of perturbation convection speed. Combustion and Flame, 2013, 160, 2856-2865.	2.8	55
65	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
66	Structural sensitivity of spiral vortex breakdown. Journal of Fluid Mechanics, 2013, 720, 558-581.	1.4	72
67	Matrix-free continuation of limit cycles for bifurcation analysis of large thermoacoustic systems. Journal of Computational Physics, 2013, 240, 225-247.	1.9	26
68	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
69	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
70	Lock-in and quasiperiodicity in a forced hydrodynamically self-excited jet. Journal of Fluid Mechanics, 2013, 726, 624-655.	1.4	68
71	The two classes of primary modal instability in laminar separation bubbles. Journal of Fluid Mechanics, 2013, 734, .	1.4	46
72	Phase trapping and slipping in a forced hydrodynamically self-excited jet. Journal of Fluid Mechanics, 2013, 735, .	1.4	52

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73	A Novel Theoretical Approach to Passive Control of Thermo-Acoustic Oscillations: Application to Ducted Heat Sources. , 2013, , .		0
74	Triggering in Thermoacoustics. International Journal of Spray and Combustion Dynamics, 2012, 4, 217-237.	0.4	25
75	A theoretical approach to the passive control of spiral vortex breakdown. , 2012, , .		1
76	Nonlinear Phenomena in Thermoacoustic Systems With Premixed Flames. , 2012, , .		0
77	Obtaining Bifurcation Diagrams With a Thermoacoustic Network Model. , 2012, , .		11
78	Absolute and Convective Instability in Gas Turbine Fuel Injectors. , 2012, , .		15
79	Triggering in Thermoacoustics. , 2012, , .		0
80	Density ratio effects on reacting bluff-body flow field characteristics. Journal of Fluid Mechanics, 2012, 706, 219-250.	1.4	122
81	Adjoint algorithms for the Navierâ€“Stokes equations in the low Mach number limit. Journal of Computational Physics, 2012, 231, 1900-1916.	1.9	44
82	Transient Growth and Triggering in the Horizontal Rijke Tube. International Journal of Spray and Combustion Dynamics, 2011, 3, 209-223.	0.4	11
83	Triggering in a Thermoacoustic System with Stochastic Noise. International Journal of Spray and Combustion Dynamics, 2011, 3, 225-241.	0.4	54
84	The local and global stability of confined planar wakes at intermediate Reynolds number. Journal of Fluid Mechanics, 2011, 686, 218-238.	1.4	59
85	Triggering in the horizontal Rijke tube: non-normality, transient growth and bypass transition. Journal of Fluid Mechanics, 2011, 667, 272-308.	1.4	178
86	Applications of the dynamic mode decomposition. Theoretical and Computational Fluid Dynamics, 2011, 25, 249-259.	0.9	418
87	The effect of confinement on the stability of viscous planar jets and wakes. Journal of Fluid Mechanics, 2010, 656, 309-336.	1.4	47
88	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
89	Bypass Transition to Sustained Thermoacoustic Oscillations in a Linearly Stable Rijke Tube. , 2010, , .		3
90	Forcing of self-excited round jet diffusion flames. Proceedings of the Combustion Institute, 2009, 32, 1191-1198.	2.4	52

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91	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
92	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
93	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
94	STRUCTURE AND DYNAMICS OF CRYOGENIC FLAMES AT SUPERCRITICAL PRESSURE. Combustion Science and Technology, 2006, 178, 161-192.	1.2	126
95	The effect of confinement on the stability of two-dimensional shear flows. Journal of Fluid Mechanics, 2006, 565, 171.	1.4	84
96	The extinction limits of a hydrogen counterflow diffusion flame above liquid oxygen. Combustion and Flame, 2003, 135, 87-96.	2.8	34
97	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
98	Edge Diffusion Flame Stabilization Behind a Step over a Liquid Reactant. Journal of Propulsion and Power, 2003, 19, 332-341.	1.3	27
99	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