Zhen-Hua Wan

List of Publications by Year
in descending order

62 papers	**685** citations	516710 **16** h-index	677142 **22** g-index
62 all docs	**62** docs citations	**62** times ranked	**429** citing authors

#	Article	IF	Citations
1	Flow reversals in two-dimensional thermal convection in tilted cells. Journal of Fluid Mechanics, 2018, 849, 355-372.	3.4	44
2	Non-Oberbeck-Boussinesq effects due to large temperature differences in a differentially heated square cavity filled with air. International Journal of Heat and Mass Transfer, 2019, 128, 479-491.	4.8	39
3	Flow reversals in Rayleighâ€"BÃ©nard convection with non-Oberbeckâ€"Boussinesq effects. Journal of Fluid Mechanics, 2016, 798, 628-642.	3.4	35
4	Dynamic mode decomposition of forced spatially developed transitional jets. European Journal of Mechanics, B/Fluids, 2015, 51, 16-26.	2.5	32
5	From Rayleighâ€"BÃ©nard convection to porous-media convection: how porosity affects heat transfer and flow structure. Journal of Fluid Mechanics, 2020, 895, .	3.4	32
6	Multiple states and heat transfer in two-dimensional tilted convection with large aspect ratios. Physical Review Fluids, 2018, 3, .	2.5	31
7	Effect of sidewall on heat transfer and flow structure in Rayleighâ€"BÃ©nard convection. Journal of Fluid Mechanics, 2019, 881, 218-243.	3.4	22
8	On non-Oberbeckâ€"Boussinesq effects in Rayleighâ€"BÃ©nard convection of air for large temperature differences. Journal of Fluid Mechanics, 2020, 889, .	3.4	21
9	Penetrative turbulent Rayleighâ€"BÃ©nard convection in two and three dimensions. Journal of Fluid Mechanics, 2019, 870, 718-734.	3.4	20
10	Two mode coupling of the ablative Rayleigh-Taylor instabilities. Physics of Plasmas, 2019, 26, .	1.9	20
11	Noise control of subsonic flow past open cavities based on porous floors. Physics of Fluids, 2020, 32, .	4.0	20
12	On the near-wall structures and statistics of fluctuating pressure in compressible turbulent channel flows. Physics of Fluids, 2020, 32, .	4.0	20
13	Linear and weakly nonlinear analysis of Rayleighâ€"BÃ©nard convection of perfect gas with non-Oberbeckâ€"Boussinesq effects. Journal of Fluid Mechanics, 2018, 845, 141-169.	3.4	19
14	Absolute and convective instabilities in electrohydrodynamic flow subjected to a Poiseuille flow: a linear analysis. Journal of Fluid Mechanics, 2019, 862, 816-844.	3.4	19
15	Large eddy simulation of flow development and noise generation of free and swirling jets. Physics of Fluids, 2013, 25, .	4.0	17
16	Flow organization and heat transfer in two-dimensional tilted convection with aspect ratio 0.5. Physics of Fluids, 2019, 31, .	4.0	17
17	Mode transition and oscillation suppression in supersonic cavity flow. Applied Mathematics and Mechanics (English Edition), 2016, 37, 941-956.	3.6	14
18	Instability waves and aerodynamic noise in a subsonic transitional turbulent jet. European Journal of Mechanics, B/Fluids, 2016, 57, 192-203.	2.5	14

#	ARTICLE	IF	CITATIONS
19	Thermal Convection in a Tilted Rectangular Cell with Aspect Ratio 0.5. Chinese Physics Letters, 2017, 34, 104401.	3.3	13
20	Numerical investigation of the bevelled effects on shock structure and screech noise in planar supersonic jets. Physics of Fluids, 2020, 32, 086103.	4.0	13
21	Heat transport enhancement and scaling law transition in two-dimensional Rayleigh-Bénard convection with rectangular-type roughness. International Journal of Heat and Mass Transfer, 2018, 121, 872-883.	4.8	12
22	A reverse transition route from inertial to elasticity-dominated turbulence in viscoelastic Taylor–Couette flow. Journal of Fluid Mechanics, 2021, 927, .	3.4	12
23	Onset of fully compressible convection in a rapidly rotating spherical shell. Journal of Fluid Mechanics, 2019, 873, 1090-1115.	3.4	11
24	Effect of Mach number on the mode transition for supersonic cavity flows. Aerospace Science and Technology, 2020, 106, 106101.	4.8	11
25	Accelerating CFD simulation with high order finite difference method on curvilinear coordinates for modern GPU clusters. Advances in Aerodynamics, 2022, 4, .	2.5	11
26	Model reduction for supersonic cavity flow using proper orthogonal decomposition (POD) and Galerkin projection. Applied Mathematics and Mechanics (English Edition), 2017, 38, 723-736.	3.6	10
27	Convective amplification of stimulated Raman rescattering in a picosecond laser plasma interaction regime. Matter and Radiation at Extremes, 2021, 6, 015901.	3.9	10
28	Linear instability analysis of convection in a laterally heated cylinder. Journal of Fluid Mechanics, 2014, 747, 447-459.	3.4	9
29	Space-time correlations of velocity in a Mach 0.9 turbulent round jet. Physics of Fluids, 2019, 31, .	4.0	9
30	Robustness of the hybrid DRP–WENO scheme for shock flow computations. International Journal for Numerical Methods in Fluids, 2012, 70, 985-1003.	1.6	8
31	Instability waves and low-frequency noise radiation in the subsonic chevron jet. Acta Mechanica Sinica/Lixue Xuebao, 2018, 34, 421-430.	3.4	8
32	Nonlinear saturation of bubble evolution in a two-dimensional single-mode stratified compressible Rayleigh-Taylor instability. Physical Review Fluids, 2022, 7, .	2.5	8
33	Noise reduction mechanisms for insert-type serrations of the NACA-0012 airfoil. Journal of Fluid Mechanics, 2022, 941, .	3.4	8
34	Sound generation by different vortex interactions in mixing layers. , 2012, , .		6
35	Numerical Simulation of Shock Bubble Interaction with Different Mach Numbers. Chinese Physics Letters, 2015, 32, 034701.	3.3	6
36	Bifurcation analysis of laminar isothermal planar opposed-jet flow. Computers and Fluids, 2016, 140, 72-80.	2.5	6

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37	Multiscale Simulations of Polymer Flow Between Two Parallel Plates. Journal of Fluids Engineering, Transactions of the ASME, 2021, 143, .	1.5	6
38	Origin of Rebound Suppression for Dilute Polymer Solution Droplets on Superhydrophobic Substrate. Langmuir, 2021, 37, 7565-7572.	3.5	6
39	Rayleigh-Bénard convection in a vertical annular container near the convection threshold. Physical Review E, 2014, 89, 043014.	2.1	5
40	Coherent structures and wavepackets in subsonic transitional turbulent jets. Acta Mechanica Sinica/Lixue Xuebao, 2017, 33, 10-19.	3.4	5
41	Bifurcations in penetrative Rayleigh-Bénard convection in a cylindrical container. Applied Mathematics and Mechanics (English Edition), 2019, 40, 695-704.	3.6	5
42	The influence of aspect ratio on flow states in the buoyancy-driven turbulence with free slip boundaries. International Journal of Heat and Mass Transfer, 2021, 178, 121639.	4.8	5
43	Transient growth in Taylor-Couette flow of a Bingham fluid. Physical Review E, 2015, 91, 043202.	2.1	4
44	Stability analysis of Rayleigh-Bénard convection in a cylinder with internal heat generation. Physical Review E, 2016, 94, 013108.	2.1	4
45	The piecewise parabolic method for Riemann problems in nonlinear elasticity. Scientific Reports, 2017, 7, 13497.	3.3	4
46	The influence of nonlinearities on jet noise modeling based on parabolized stability equation. Physics of Fluids, 2021, 33, 086107.	4.0	4
47	Noise reduction in cavity flow by addition of porous media. Acta Mechanica Sinica/Lixue Xuebao, 2022, 38, .	3.4	4
48	High-fidelity robust and efficient finite difference algorithm for simulation of polymer-induced turbulence in cylindrical coordinates. Journal of Non-Newtonian Fluid Mechanics, 2022, 307, 104875.	2.4	4
49	Mode decomposition of a noise suppressed mixing layer. Theoretical and Applied Mechanics Letters, 2013, 3, 042007.	2.8	3
50	A study on large coherent structures and noise emission in a turbulent round jet. Science China: Physics, Mechanics and Astronomy, 2014, 57, 1552-1562.	5.1	3
51	A Study on Slip Characteristics Using Hybrid Particle-Continuum Method. Journal of Fluids Engineering, Transactions of the ASME, 2018, 140, .	1.5	3
52	Optimal 'quiet' inlet perturbation using adjoint-based PSE in supersonic jets. Fluid Dynamics Research, 2018, 50, 045504.	1.3	2
53	Heat transfer and plume statistics in turbulent thermal convection with sparse fractal roughness. Journal of Hydrodynamics, 2021, 33, 1065-1077.	3.2	2
54	Statistical properties of pressure-Hessian tensor in a turbulent channel flow. Journal of Fluid Mechanics, 2022, 934, .	3.4	2

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55	Linear stability analysis of supersonic axisymmetric jets. Theoretical and Applied Mechanics Letters, 2014, 4, 062005.	2.8	1
56	The Effects of Heating on Noise Generation in Subsonic Transitional Jets. Procedia Engineering, 2015, 126, 29-33.	1.2	1
57	The Effects of Temperature on Vortex-pairing Noise in Axisymmetric Subsonic Jets. Procedia Engineering, 2015, 126, 63-67.	1.2	1
58	Nonlinear interaction of instability waves and vortex-pairing noise in axisymmetric subsonic jets. Fluid Dynamics Research, 2016, 48, 055502.	1.3	1
59	The piecewise parabolic method for elastic-plastic flow in solids. Scientific Reports, 2018, 8, 9989.	3.3	1
60	Radius ratio dependency of the instability of fully compressible convection in rapidly rotating spherical shells. Journal of Fluid Mechanics, 2021, 925, .	3.4	1
61	Thermal convection in a tilted rectangular box. AIP Advances, 2021, 11, .	1.3	1
62	The effects of initial perturbation to mixing-layer noise. Theoretical and Applied Mechanics Letters, 2012, 2, 032003.	2.8	0