Zuoli Xiao

List of Publications by Year
in descending order

57 papers	1,774 citations	304368 22 h-index	264894 42 g-index
58 all docs	58 docs citations	58 times ranked	969 citing authors

#	ARTICLE	IF	CITATIONS
1	Physical Mechanism of the Two-Dimensional Inverse Energy Cascade. Physical Review Letters, 2006, 96, 084502.	2.9	134
2	Effective eddy viscosities in implicit large eddy simulations of turbulent flows. Physics of Fluids, 2003, 15, 3890-3893.	1.6	133
3	A hybrid numerical simulation of isotropic compressible turbulence. Journal of Computational Physics, 2010, 229, 5257-5279.	1.9	116
4	Reynolds-stress-constrained large-eddy simulation of wall-bounded turbulent flows. Journal of Fluid Mechanics, 2012, 703, 1-28.	1.4	112
5	Effect of compressibility on the small-scale structures in isotropic turbulence. Journal of Fluid Mechanics, 2012, 713, 588-631.	1.4	105
6	Constrained large-eddy simulation of separated flow in a channel with streamwise-periodic constrictions. Journal of Turbulence, 2013, 14, 1-21.	0.5	103
7	Physical Mechanism of the Two-Dimensional Enstrophy Cascade. Physical Review Letters, 2003, 91, 214501.	2.9	100
8	Physical mechanism of the inverse energy cascade of two-dimensional turbulence: a numerical investigation. Journal of Fluid Mechanics, 2009, 619, 1-44.	1.4	88
9	Cascade of Kinetic Energy in Three-Dimensional Compressible Turbulence. Physical Review Letters, 2013, 110, 214505.	2.9	78
10	Effect of shocklets on the velocity gradients in highly compressible isotropic turbulence. Physics of Fluids, 2011, 23, .	1.6	70
11	Constrained subgrid-scale stress model for large eddy simulation. Physics of Fluids, 2008, 20, .	1.6	63
12	Scaling and Statistics in Three-Dimensional Compressible Turbulence. Physical Review Letters, 2012, 108, 214505.	2.9	48
13	Constrained large-eddy simulation of wall-bounded compressible turbulent flows. Physics of Fluids, 2013, 25, .	1.6	39
14	Scale-to-scale energy transfer in mixing flow induced by the Richtmyer-Meshkov instability. Physical Review E, 2016, 93, 053112.	0.8	32
15	Transition effects on flow characteristics around a static two-dimensional airfoil. Physics of Fluids, 2020, 32, .	1.6	32
16	New insight on large-eddy simulation of flow past a circular cylinder at subcritical Reynolds number 3900. AIP Advances, 2020, 10, .	0.6	30
17	Subgrid-scale eddy viscosity model for helical turbulence. Physics of Fluids, 2013, 25, .	1.6	29
18	Preferential concentration of heavy particles in compressible isotropic turbulence. Physics of Fluids, 2016, 28, .	1.6	29

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19	Constrained large-eddy simulation and detached eddy simulation of flow past a commercial aircraft at 14 degrees angle of attack. Science China: Physics, Mechanics and Astronomy, 2013, 56, 270-276.	2.0	26
20	Numerical investigation of transonic axial compressor rotor flows using an improved transition-sensitized turbulence model. Physics of Fluids, 2021, 33, .	1.6	26
21	Scale-adaptive subgrid-scale modelling for large-eddy simulation of turbulent flows. Physics of Fluids, 2017, 29, .	1.6	25
22	Dissipation-energy flux correlations as evidence for the Lagrangian energy cascade in turbulence. Physics of Fluids, 2010, 22, .	1.6	24
23	Constrained Large-Eddy Simulation of Compressible Flow Past a Circular Cylinder. Communications in Computational Physics, 2014, 15, 388-421.	0.7	23
24	Mach Number Effect of Compressible Flow Around a Circular Cylinder. AIAA Journal, 2016, 54, 2004-2009.	1.5	23
25	Interactions between inertial particles and shocklets in compressible turbulent flow. Physics of Fluids, 2014, 26, .	1.6	21
26	Constrained large-eddy simulation of laminar-turbulent transition in channel flow. Physics of Fluids, 2014, 26, .	1.6	21
27	Is the Kelvin Theorem Valid for High Reynolds Number Turbulence?. Physical Review Letters, 2006, 97, 144505.	2.9	20
28	Mechanism and modelling of the secondary baroclinic vorticity in the Richtmyer–Meshkov instability. Journal of Fluid Mechanics, 2021, 911, .	1.4	20
29	Acceleration of Passive Tracers in Compressible Turbulent Flow. Physical Review Letters, 2013, 110, 064503.	2.9	18
30	Single-particle dispersion in compressible turbulence. Physics of Fluids, 2018, 30, .	1.6	17
31	Statistics and structures of pressure and density in compressible isotropic turbulence. Journal of Turbulence, 2013, 14, 21-37.	0.5	16
32	Turbulent kinetic energy production and flow structures in compressible homogeneous shear flow. Physics of Fluids, 2016, 28, 096102.	1.6	16
33	Refined modelling of the single-mode cylindrical Richtmyer–Meshkov instability. Journal of Fluid Mechanics, 2021, 908, .	1.4	15
34	Dynamic optimization methodology based on subgrid-scale dissipation for large eddy simulation. Physics of Fluids, 2016, 28, .	1.6	13
35	Constrained large-eddy simulation of turbulent flow and heat transfer in a stationary ribbed duct. International Journal of Numerical Methods for Heat and Fluid Flow, 2016, 26, 1069-1091.	1.6	12
36	Simulation of flow induced by single-dielectric-barrier-discharge plasma actuator using a high-order flux-reconstruction scheme. Physics of Fluids, 2021, 33, 047108.	1.6	12

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37	Intermittency caused by compressibility: aÂLagrangian study. Journal of Fluid Mechanics, 2016, 786, .	1.4	10
38	Constrained large-eddy simulation of supersonic turbulent boundary layer over a compression ramp. Journal of Turbulence, 2017, 18, 781-808.	0.5	8
39	Transition-based constrained large-eddy simulation method with application to an ultrahigh-lift low-pressure turbine cascade flow. Journal of Fluid Mechanics, 2022, 941, .	1.4	8
40	Numerical investigation on ultra-high-lift low-pressure turbine cascade aerodynamics at low Reynolds numbers using transition-based turbulence models. Journal of Turbulence, 2021, 22, 114-139.	0.5	7
41	Refined subgrid-scale model for large-eddy simulation of helical turbulence. Physical Review E, 2013, 87, 013006.	0.8	6
42	Effects of the secondary baroclinic vorticity on the energy cascade in the Richtmyerâ€"Meshkov instability. Journal of Fluid Mechanics, 2021, 925, .	1.4	6
43	Joint-constraint model for large-eddy simulation of helical turbulence. Physical Review E, 2014, 89, 043021.	0.8	5
44	Fully Implicit Chebyshev Time-Spectral Method for General Unsteady Flows. AIAA Journal, 2018, 56, 4474-4486.	1.5	5
45	On the time irreversibility of compressible turbulence reflected by particles of various inertias. Physics of Fluids, 2021, 33, 036113.	1.6	4
46	Influence of free-stream turbulence on the aerodynamic performance of a three-dimensional airfoil. AIP Advances, 2021, 11, .	0.6	4
47	Comment on â€œA hybrid subgrid-scale model constrained by Reynolds stressâ€•[Phys. Fluids 25, 110805 (2013)]. Physics of Fluids, 2014, 26, .	1.6	3
48	Constrained Large-Eddy Simulation for Aerodynamics. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2015, , 105-115.	0.2	3
49	Coupling effects and thin-shell corrections for surface instabilities of cylindrical fluid shells. Physical Review E, 2020, 101, 023108.	0.8	3
50	Non-isothermal flow past a heated circular cylinder in subcritical regime: a numerical investigation based on large-eddy simulation. Journal of Turbulence, 2022, 23, 352-381.	0.5	3
51	Preface: symposium on turbulence structures and aerodynamic heat/force (STSAHF2018). Applied Mathematics and Mechanics (English Edition), 2019, 40, 181-184.	1.9	2
52	Numerical investigation on motion of an ellipsoidal particle inside confined microcavity flow. Theoretical and Applied Mechanics Letters, 2021, 11, 100234.	1.3	2
53	Implicit Time-Spectral Method for Unsteady Reynolds-Averaged Navierâ€"Stokes Computations of Turbulent Flows. AIAA Journal, 2021, 59, 1718-1734.	1.5	2
54	A throughflow-based optimization method for multi-stage axial compressor. AIP Advances, 2021, 11, 115207.	0.6	2

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55	Constrained Large Eddy Simulation of Wall-Bounded Turbulent Flows. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2012, , 121-130.	0.2	1
56	SCALING LAWS, TURBULENCE STRUCTURE AND SUBGRID-SCALE MODELS FOR LARGE EDDY SIMULATION. Modern Physics Letters B, 2010, 24, 1445-1448.	1.0	0
57	An implicit time spectral method using adaptive stablization. Computers and Fluids, 2021, 227, 105030.	1.3	0