

Wei Shyy

List of Publications by Year in descending order

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77
papers

4,775
citations

147566

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118652

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87
all docs

87
docs citations

87
times ranked

3293
citing authors

#	ARTICLE	IF	CITATIONS
1	Comparison of the performance of high-order schemes based on the gas-kinetic and HLLC fluxes. Journal of Computational Physics, 2022, 448, 110706.	1.9	8
2	A compact high-order gas-kinetic scheme on unstructured mesh for acoustic and shock wave computations. Journal of Computational Physics, 2022, 449, 110812.	1.9	13
3	Unified gas-kinetic wave-particle method for gas-particle two-phase flow from dilute to dense solid particle limit. Physics of Fluids, 2022, 34, .	1.6	8
4	A p-multigrid compact gas-kinetic scheme for steady-state acceleration. Computers and Fluids, 2022, , 105489.	1.3	1
5	Implications of dragonfly's muscle control on flapping kinematics and aerodynamics. Physics of Fluids, 2022, 34, .	1.6	3
6	Implications of wing pitching and wing shape on the aerodynamics of a dragonfly. Journal of Fluids and Structures, 2021, 101, 103208.	1.5	10
7	The Importance of Flapping Kinematic Parameters in the Facilitation of the Different Flight Modes of Dragonflies. Journal of Bionic Engineering, 2021, 18, 419-427.	2.7	11
8	Effects of gradual flexibility and trailing edge shape on propulsive performance of pitching fins. Physics of Fluids, 2021, 33, .	1.6	5
9	A Gradient Compression-Based Compact High-Order Gas-Kinetic Scheme on 3D Hybrid Unstructured Meshes. International Journal of Computational Fluid Dynamics, 2021, 35, 485-509.	0.5	4
10	An Acoustic and Shock Wave Capturing Compact High-Order Gas-Kinetic Scheme with Spectral-Like Resolution. International Journal of Computational Fluid Dynamics, 2020, 34, 731-756.	0.5	11
11	Aerodynamic performance of a free-flying dragonfly-A span-resolved investigation. Physics of Fluids, 2020, 32, 041903.	1.6	22
12	A HWENO reconstruction based high-order compact gas-kinetic scheme on unstructured mesh. Journal of Computational Physics, 2020, 410, 109367.	1.9	24
13	10.1063/1.5145199.1. , 2020, , .		0
14	Compact higher-order gas-kinetic schemes with spectral-like resolution for compressible flow simulations. Advances in Aerodynamics, 2019, 1, .	1.3	29
15	Limitation principle for computational fluid dynamics. Shock Waves, 2019, 29, 1083-1102.	1.0	7
16	Flow Over the Tip Region of a Flexible Cantilever Wing With the Effect of Angle of Attack. Journal of Fluids Engineering, Transactions of the ASME, 2019, 141, .	0.8	1
17	Effects of flexibility and aspect ratio on the aerodynamic performance of flapping wings. Bioinspiration and Biomimetics, 2018, 13, 036001.	1.5	34
18	Borophene and defective borophene as potential anchoring materials for lithium-sulfur batteries: a first-principles study. Journal of Materials Chemistry A, 2018, 6, 2107-2114.	5.2	127

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19	A family of high-order gas-kinetic schemes and its comparison with Riemann solver based high-order methods. <i>Journal of Computational Physics</i> , 2018, 356, 150-173.	1.9	39
20	Analysis of passive flexion in propelling a plunging plate using a torsion spring model. <i>Journal of Fluid Mechanics</i> , 2018, 857, 562-604.	1.4	17
21	Aerodynamic characteristics along the wing span of a dragonfly <i>Pantala Flavescens</i> . <i>Journal of Experimental Biology</i> , 2018, 221, .	0.8	17
22	Highly efficient and ultra-stable boron-doped graphite felt electrodes for vanadium redox flow batteries. <i>Journal of Materials Chemistry A</i> , 2018, 6, 13244-13253.	5.2	97
23	A compact fourth-order gas-kinetic scheme for the Euler and Navier–Stokes equations. <i>Journal of Computational Physics</i> , 2018, 372, 446-472.	1.9	41
24	Unsteady Vortex Interactions for Performance Enhancement of a Free Flying Dragonfly. , 2017, , .		1
25	A gas-kinetic theory based multidimensional high-order method for the compressible Navier–Stokes solutions. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2017, 33, 733-741.	1.5	1
26	Effects of Aspect Ratio on Vortex Dynamics of a Rotating Wing. <i>AIAA Journal</i> , 2017, 55, 4074-4082.	1.5	12
27	Boron phosphide monolayer as a potential anode material for alkali metal-based batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 672-679.	5.2	217
28	Lattice Boltzmann modeling of transport phenomena in fuel cells and flow batteries. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2017, 33, 555-574.	1.5	146
29	Morphology of the Discharge Product in Non-aqueous Lithium–Oxygen Batteries: Furrowed Toroid Particles Correspond to a Lower Charge Voltage. <i>Energy Technology</i> , 2016, 4, 393-400.	1.8	18
30	A multi-dimensional high-order DG-ALE method based on gas-kinetic theory with application to oscillating bodies. <i>Journal of Computational Physics</i> , 2016, 316, 700-720.	1.9	23
31	Aerodynamics, sensing and control of insect-scale flapping-wing flight. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2016, 472, 20150712.	1.0	104
32	A nano-structured RuO ₂ /NiO cathode enables the operation of non-aqueous lithium–air batteries in ambient air. <i>Energy and Environmental Science</i> , 2016, 9, 1783-1793.	15.6	142
33	A multi-dimensional high-order discontinuous Galerkin method based on gas kinetic theory for viscous flow computations. <i>Journal of Computational Physics</i> , 2015, 292, 176-193.	1.9	45
34	Fixed-Wing Unmanned Aircraft In-Flight Pitch and Yaw Control Moment Sensing. <i>Journal of Aircraft</i> , 2015, 52, 403-420.	1.7	10
35	A RuO ₂ nanoparticle-decorated buckypaper cathode for non-aqueous lithium–oxygen batteries. <i>Journal of Materials Chemistry A</i> , 2015, 3, 19042-19049.	5.2	40
36	Effects of aspect ratio on flapping wing aerodynamics in animal flight. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2014, 30, 776-786.	1.5	27

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37	Lift-drag and flow structures associated with the "œclap and fling" motion. <i>Physics of Fluids</i> , 2014, 26, .	1.6	34
38	Study on high-Weber-number droplet collision by a parallel, adaptive interface-tracking method. <i>Journal of Fluid Mechanics</i> , 2014, 759, 104-133.	1.4	37
39	Analytical model for instantaneous lift and shape deformation of an insect-scale flapping wing in hover. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140933.	1.5	39
40	Optimization of LiMn2O4 electrode properties in a gradient- and surrogate-based framework. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2013, 29, 335-347.	1.5	17
41	Combined Experimental and Computational Investigation of Unsteady Structure of Sheet/Cloud Cavitation. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2013, 135, .	0.8	193
42	Supersonic jet and crossflow interaction: Computational modeling. <i>Progress in Aerospace Sciences</i> , 2013, 57, 1-24.	6.3	69
43	Fluid Dynamics of Pitching and Plunging Flat Plate at Intermediate Reynolds Numbers. <i>AIAA Journal</i> , 2013, 51, 315-329.	1.5	32
44	Approximate Aeroelastic Modeling of Flapping Wings in Hover. <i>AIAA Journal</i> , 2013, 51, 567-583.	1.5	35
45	Adaptive control of low-Reynolds number aerodynamics in uncertain environments: Part 1. Disturbance regimes and flow characteristics. <i>Computers and Fluids</i> , 2013, 86, 582-596.	1.3	7
46	Adaptive thermo-fluid moving boundary computations for interfacial dynamics. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2012, 28, 999-1021.	1.5	4
47	Interfacial flow computations using adaptive Eulerian" Lagrangian method for spacecraft applications. <i>International Journal for Numerical Methods in Fluids</i> , 2012, 68, 1438-1456.	0.9	12
48	Flow-Induced Acoustics in Corrugated Pipes. <i>Communications in Computational Physics</i> , 2011, 10, 120-139.	0.7	9
49	Effects of flexibility on the aerodynamic performance of flapping wings. <i>Journal of Fluid Mechanics</i> , 2011, 689, 32-74.	1.4	240
50	Flow structures of gaseous jets injected into water for underwater propulsion. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2011, 27, 461-472.	1.5	37
51	Surrogate-based modeling and dimension reduction techniques for multi-scale mechanics problems. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2011, 27, 845-865.	1.5	27
52	A filter-based, mass-conserving lattice Boltzmann method for immiscible multiphase flows. <i>International Journal for Numerical Methods in Fluids</i> , 2011, 66, 622-647.	0.9	36
53	Adaptive Lagrangian" Eulerian computation of propagation and rupture of a liquid plug in a tube. <i>International Journal for Numerical Methods in Fluids</i> , 2011, 67, 1373-1392.	0.9	22
54	Modeling of turbulent, isothermal and cryogenic cavitation under attached conditions. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2010, 26, 325-353.	1.5	17

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55	Micro air vehicle-motivated computational biomechanics in bio-flights: aerodynamics, flight dynamics and maneuvering stability. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2010, 26, 863-879.	1.5	41
56	Recent progress in flapping wing aerodynamics and aeroelasticity. <i>Progress in Aerospace Sciences</i> , 2010, 46, 284-327.	6.3	802
57	Surrogate modelling for characterising the performance of a dielectric barrier discharge plasma actuator. <i>International Journal of Computational Fluid Dynamics</i> , 2010, 24, 281-301.	0.5	5
58	Simulations of dynamics of plunge and pitch of a three-dimensional flexible wing in a low Reynolds number flow. <i>Physics of Fluids</i> , 2010, 22, .	1.6	29
59	Open loop pitch control of a flapping wing micro-air vehicle using a tail and control mass. , 2010, , .		21
60	K0202 Aerodynamics and Aeroelasticity of Bio-inspired Micro Air Vehicles. The Reference Collection of Annual Meeting, 2010, 2010.9, 55-56.	0.0	0
61	Multiphase fluid dynamics and transport processes of low capillary number cavitating flows. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2009, 25, 161-172.	1.5	16
62	Near wake vortex dynamics of a hovering hawkmoth. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2009, 25, 23-36.	1.5	32
63	Shallow and deep dynamic stall for flapping low Reynolds number airfoils. <i>Experiments in Fluids</i> , 2009, 46, 883-901.	1.1	175
64	Cryogenic Boiling and Two-Phase Flow during Pipe Chilldown in Earth and Reduced Gravity. <i>Journal of Low Temperature Physics</i> , 2008, 150, 101-122.	0.6	35
65	Computational aerodynamics of low Reynolds number plunging, pitching and flexible wings for MAV applications. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2008, 24, 351-373.	1.5	122
66	Pitfalls of using a single criterion for selecting experimental designs. <i>International Journal for Numerical Methods in Engineering</i> , 2008, 75, 127-155.	1.5	43
67	A finite volume-based high-order, Cartesian cut-cell method for wave propagation. <i>International Journal for Numerical Methods in Fluids</i> , 2008, 56, 1787-1818.	0.9	10
68	Surrogate model-based strategy for cryogenic cavitation model validation and sensitivity evaluation. <i>International Journal for Numerical Methods in Fluids</i> , 2008, 58, 969-1007.	0.9	46
69	Modeling of dielectric barrier discharge plasma actuator. <i>Journal of Applied Physics</i> , 2008, 103, .	1.1	37
70	Computational Aerodynamics of Low Reynolds Number Plunging, Pitching and Flexible Wings for MAV Applications. , 2008, , .		32
71	Modeling of Fluid Dynamics and Heat Transfer Induced by Dielectric Barrier Plasma Actuator. <i>Journal of Heat Transfer</i> , 2007, 129, 517-525.	1.2	46
72	On Optimized Extrapolation Method for Elliptic Problems with Large Coefficient Variation. <i>Journal of Algorithms and Computational Technology</i> , 2007, 1, 495-524.	0.4	2

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73	Flapping Wings and Aerodynamic Lift: The Role of Leading-Edge Vortices. AIAA Journal, 2007, 45, 2817-2819.	1.5	200
74	Error assessment of lattice Boltzmann equation method for variable viscosity flows. International Journal for Numerical Methods in Fluids, 2007, 53, 1457-1471.	0.9	1
75	Flexible-wing-based micro air vehicles. WIT Transactions on State-of-the-art in Science and Engineering, 2006, , 377-392.	0.0	11
76	Time-dependent turbulent cavitating flow computations with interfacial transport and filter-based models. International Journal for Numerical Methods in Fluids, 2005, 49, 739-761.	0.9	112
77	Multigrid Computations and Conservation Law Treatment of a Sharp Interface Method. Numerical Heat Transfer, Part B: Fundamentals, 2005, 48, 405-424.	0.6	11