Xiangyu Y Hu

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/7627847/publications.pdf

Version: 2024-02-01

		87843	74108
117	6,070	38	75
papers	citations	h-index	g-index

118	118	118	2604
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A multi-phase SPH method for macroscopic and mesoscopic flows. Journal of Computational Physics, 2006, 213, 844-861.	1.9	537
2	A generalized wall boundary condition for smoothed particle hydrodynamics. Journal of Computational Physics, 2012, 231, 7057-7075.	1.9	532
3	An incompressible multi-phase SPH method. Journal of Computational Physics, 2007, 227, 264-278.	1.9	388
4	An adaptive central-upwind weighted essentially non-oscillatory scheme. Journal of Computational Physics, 2010, 229, 8952-8965.	1.9	249
5	A new surface-tension formulation for multi-phase SPH using a reproducing divergence approximation. Journal of Computational Physics, 2010, 229, 5011-5021.	1.9	218
6	A family of high-order targeted ENO schemes for compressible-fluid simulations. Journal of Computational Physics, 2016, 305, 333-359.	1.9	218
7	Deep Learning Methods for Reynolds-Averaged Navierâ€“Stokes Simulations of Airfoil Flows. AIAA Journal, 2020, 58, 25-36.	1.5	216
8	A conservative interface method for compressible flows. Journal of Computational Physics, 2006, 219, 553-578.	1.9	198
9	Positivity-preserving method for high-order conservative schemes solving compressible Euler equations. Journal of Computational Physics, 2013, 242, 169-180.	1.9	163
10	A transport-velocity formulation for smoothed particle hydrodynamics. Journal of Computational Physics, 2013, 241, 292-307.	1.9	156
11	Numerical modelling and investigation of symmetric and asymmetric cavitation bubble dynamics. Computers and Fluids, 2012, 69, 1-19.	1.3	140
12	A weakly compressible SPH method based on a low-dissipation Riemann solver. Journal of Computational Physics, 2017, 335, 605-620.	1.9	119
13	Grand challenges for Smoothed Particle Hydrodynamics numerical schemes. Computational Particle Mechanics, 2021, 8, 575-588.	1.5	114
14	An interface interaction method for compressible multifluids. Journal of Computational Physics, 2004, 198, 35-64.	1.9	111
15	A constant-density approach for incompressible multi-phase SPH. Journal of Computational Physics, 2009, 228, 2082-2091.	1.9	106
16	Anti-diffusion interface sharpening technique for two-phase compressible flow simulations. Journal of Computational Physics, 2012, 231, 4304-4323.	1.9	102
17	A conservative immersed interface method for Large-Eddy Simulation of incompressible flows. Journal of Computational Physics, 2010, 229, 6300-6317.	1.9	97
18	On the Richtmyerâ€“Meshkov instability evolving from a deterministic multimode planar interface. Journal of Fluid Mechanics, 2014, 755, 429-462.	1.4	91

#	Article	IF	Citations
19	On the HLLC Riemann solver for interface interaction in compressible multi-fluid flow. Journal of Computational Physics, 2009, 228, 6572-6589.	1.9	86
20	Targeted ENO schemes with tailored resolution property for hyperbolic conservation laws. Journal of Computational Physics, 2017, 349, 97-121.	1.9	85
21	A multi-resolution SPH method for fluid-structure interactions. Journal of Computational Physics, 2021, 429, 110028.	1.9	81
22	Scale separation for implicit large eddy simulation. Journal of Computational Physics, 2011, 230, 7240-7249.	1.9	72
23	A generalized transport-velocity formulation for smoothed particle hydrodynamics. Journal of Computational Physics, 2017, 337, 216-232.	1.9	68
24	Angular-momentum conservative smoothed particle dynamics for incompressible viscous flows. Physics of Fluids, 2006, 18, 101702.	1.6	65
25	A weakly compressible SPH method for violent multi-phase flows with high density ratio. Journal of Computational Physics, 2020, 402, 109092.	1.9	65
26	A conservative SPH method for surfactant dynamics. Journal of Computational Physics, 2010, 229, 1909-1926.	1.9	64
27	A new class of adaptive high-order targeted ENO schemes for hyperbolic conservation laws. Journal of Computational Physics, 2018, 374, 724-751.	1.9	62
28	The cellular structure of a two-dimensional H2/O2/Ar detonation wave. Combustion Theory and Modelling, 2004, 8, 339-359.	1.0	61
29	Numerical investigation of collapsing cavity arrays. Physics of Fluids, 2012, 24, .	1.6	61
30	SPHinXsys: An open-source multi-physics and multi-resolution library based on smoothed particle hydrodynamics. Computer Physics Communications, 2021, 267, 108066.	3.0	61
31	Anti-diffusion method for interface steepening in two-phase incompressible flow. Journal of Computational Physics, 2011, 230, 5155-5177.	1.9	56
32	Smoothed dissipative particle dynamics model for polymer molecules in suspension. Physical Review E, 2008, 77, 066703.	0.8	55
33	SPH modeling of fluid-structure interaction. Journal of Hydrodynamics, 2018, 30, 62-69.	1.3	55
34	Adaptive multi-resolution method for compressible multi-phase flows with sharp interface model and pyramid data structure. Journal of Computational Physics, 2014, 262, 131-152.	1.9	49
35	Qualitative and quantitative characterisation for explosion severity and gaseousâ€“solid residues during methaneâ€“coal particle hybrid explosions: An approach to estimating the safety degree for underground coal mines. Chemical Engineering Research and Design, 2020, 141, 150-166.	2.7	46
36	Liquid Splash Modeling with Neural Networks. Computer Graphics Forum, 2018, 37, 171-182.	1.8	44

#	Article	IF	Citations
37	A weakly compressible SPH method with WENO reconstruction. Journal of Computational Physics, 2019, 392, 1-18.	1.9	43
38	A conservative sharp interface method for incompressible multiphase flows. Journal of Computational Physics, 2015, 284, 547-565.	1.9	41
39	Self-diffusion coefficient in smoothed dissipative particle dynamics. Journal of Chemical Physics, 2009, 130, 021101.	1.2	38
40	An efficient low-dissipation hybrid weighted essentially non-oscillatory scheme. Journal of Computational Physics, 2015, 301, 415-424.	1.9	36
41	A new multi-resolution parallel framework for SPH. Computer Methods in Applied Mechanics and Engineering, 2019, 346, 1156-1178.	3.4	36
42	The structure and evolution of a two-dimensional H2/O2/Ar cellular detonation. Shock Waves, 2005, 14, 37-44.	1.0	35
43	A splitting scheme for highly dissipative smoothed particle dynamics. Journal of Computational Physics, 2010, 229, 5457-5464.	1.9	35
44	Towards consistence and convergence of conservative SPH approximations. Journal of Computational Physics, 2015, 301, 394-401.	1.9	32
45	An incremental-stencil WENO reconstruction for simulation of compressible two-phase flows. International Journal of Multiphase Flow, 2018, 104, 20-31.	1.6	32
46	Improved Five- and Six-Point Targeted Essentially Nonoscillatory Schemes with Adaptive Dissipation. AIAA Journal, 2019, 57, 1143-1158.	1.5	32
47	A low dissipation method to cure the grid-aligned shock instability. Journal of Computational Physics, 2020, 401, 109004.	1.9	31
48	Dual-criteria time stepping for weakly compressible smoothed particle hydrodynamics. Journal of Computational Physics, 2020, 404, 109135.	1.9	30
49	SPHinXsys: An open-source meshless, multi-resolution and multi-physics library. Software Impacts, 2020, 6, 100033.	0.8	29
50	CFD analysis and experimental study on the effect of oxygen level, particle size, and dust concentration on the flame evolution characteristics and explosion severity of cornstarch dust cloud deflagration in a spherical chamber. Powder Technology, 2020, 372, 585-599.	2.1	29
51	Influence of ignition delay on explosion severities of the methaneâ€“coal particle hybrid mixture at elevated injection pressures. Powder Technology, 2020, 367, 860-876.	2.1	27
52	A CAD-compatible body-fitted particle generator for arbitrarily complex geometry and its application to wave-structure interaction. Journal of Hydrodynamics, 2021, 33, 195-206.	1.3	27
53	An integrative smoothed particle hydrodynamics method for modeling cardiac function. Computer Methods in Applied Mechanics and Engineering, 2021, 381, 113847.	3.4	27
54	On the Kolmogorov inertial subrange developing from Richtmyer-Meshkov instability. Physics of Fluids, 2013, 25, .	1.6	26

#	Article	IF	Citations
55	A Targeted ENO Scheme as Implicit Model for Turbulent and Genuine Subgrid Scales. Communications in Computational Physics, 2019, 26, 311-345.	0.7	26
56	Supervised learning mixing characteristics of film cooling in a rocket combustor using convolutional neural networks. Acta Astronautica, 2020, 175, 11-18.	1.7	24
57	A conservative interface-interaction method for compressible multi-material flows. Journal of Computational Physics, 2018, 371, 870-895.	1.9	23
58	Flame behaviours and deflagration severities of aluminium powderâ€“air mixture in a 20-L sphere: Computational fluid dynamics modelling and experimental validation. Fuel, 2020, 276, 118028.	3.4	21
59	Simulation of Individual Polymer Chains and Polymer Solutions with Smoothed Dissipative Particle Dynamics. Fluids, 2016, 1, 7.	0.8	20
60	Curvature boundary condition for a moving contact line. Journal of Computational Physics, 2016, 310, 329-341.	1.9	19
61	An isotropic unstructured mesh generation method based on a fluid relaxation analogy. Computer Methods in Applied Mechanics and Engineering, 2019, 350, 396-431.	3.4	18
62	Transient temperature evolution of pulverized coal cloud deflagration in a methaneâ€“oxygen atmosphere. Powder Technology, 2020, 366, 294-304.	2.1	18
63	Numerical investigation of minimum drag profiles in laminar flow using deep learning surrogates. Journal of Fluid Mechanics, 2021, 919, .	1.4	18
64	An efficient fully Lagrangian solver for modeling wave interaction with oscillating wave surge converter. Ocean Engineering, 2021, 236, 109540.	1.9	18
65	A physically consistent weakly compressible high-resolution approach to underresolved simulations of incompressible flows. Computers and Fluids, 2013, 86, 109-124.	1.3	17
66	Scale separation for multi-scale modeling of free-surface and two-phase flows with the conservative sharp interface method. Journal of Computational Physics, 2015, 280, 387-403.	1.9	17
67	Experimental study on a three-dimensional pulsating heat pipe with tandem tapered nozzles. Experimental Thermal and Fluid Science, 2020, 119, 110201.	1.5	17
68	An efficient and generalized solid boundary condition for SPH: Applications to multi-phase flow and fluidâ€“structure interaction. European Journal of Mechanics, B/Fluids, 2022, 94, 276-292.	1.2	16
69	An artificial damping method for total Lagrangian SPH method with application in biomechanics. Engineering Analysis With Boundary Elements, 2022, 143, 1-13.	2.0	16
70	Numerical simulation of a Richtmyerâ€“Meshkov instability with an adaptive central-upwind sixth-order WENO scheme. Physica Scripta, 2013, T155, 014016.	1.2	15
71	A physics-motivated Centroidal Voronoi Particle domain decomposition method. Journal of Computational Physics, 2017, 335, 718-735.	1.9	15
72	Numerical simulation of tethered DNA in shear flow. Journal of Physics Condensed Matter, 2011, 23, 184118.	0.7	14

#	Article	IF	Citations
73	A novel partitioning method for block-structured adaptive meshes. Journal of Computational Physics, 2017, 341, 447-473.	1.9	13
74	A consistent parallel isotropic unstructured mesh generation method based on multi-phase SPH. Computer Methods in Applied Mechanics and Engineering, 2020, 363, 112881.	3.4	13
75	Particle-based simulation of cold spray: Influence of oxide layer on impact process. Additive Manufacturing, 2021, 37, 101517.	1.7	13
76	Quantification of initial-data uncertainty on a shock-accelerated gas cylinder. Physics of Fluids, 2014, 26, 026101.	1.6	12
77	A SPH Model for Incompressible Turbulence. Procedia IUTAM, 2015, 18, 66-75.	1.2	12
78	Single-step reinitialization and extending algorithms for level-set based multi-phase flow simulations. Computer Physics Communications, 2017, 221, 63-80.	3.0	12
79	Free-stream preserving linear-upwind and WENO schemes on curvilinear grids. Journal of Computational Physics, 2019, 399, 108907.	1.9	12
80	Kinetic energy fix for low internal energy flows. Journal of Computational Physics, 2004, 193, 243-259.	1.9	11
81	Particle-layering effect in wall-bounded dissipative particle dynamics. Physical Review E, 2010, 82, 066704.	0.8	11
82	Efficient formulation of scale separation for multi-scale modeling of interfacial flows. Journal of Computational Physics, 2016, 308, 411-420.	1.9	11
83	Perceptual evaluation of liquid simulation methods. ACM Transactions on Graphics, 2017, 36, 1-12.	4.9	11
84	Phenomenology of bubble-collapse-driven penetration of biomaterial-surrogate liquid-liquid interfaces. Physical Review Fluids, 2018, 3, .	1.0	10
85	Mesoscopic simulation of the transient behavior of semi-diluted polymer solution in a microchannel following extensional flow. Microfluidics and Nanofluidics, 2014, 16, 257-264.	1.0	9
86	Parallel fast-neighbor-searching and communication strategy for particle-based methods. Engineering Computations, 2019, 36, 899-929.	0.7	9
87	Wavelet-based adaptive multi-resolution solver on heterogeneous parallel architecture for computational fluid dynamics. Computer Science - Research and Development, 2011, 26, 197-203.	2.7	8
88	Simple gradient-based error-diffusion method. Journal of Electronic Imaging, 2016, 25, 043029.	0.5	8
89	High-order time-marching reinitialization for regional level-set functions. Journal of Computational Physics, 2018, 354, 311-319.	1.9	7
90	A consistency-driven particle-advection formulation for weakly-compressible smoothed particle hydrodynamics. Computers and Fluids, 2021, 230, 105140.	1.3	7

#	Article	IF	Citations
91	Analytical study of idealized two-dimensional cellular detonations. Shock Waves, 2002, 11, 475-480.	1.0	6
92	On the convergence of the weakly compressible sharp-interface method for two-phase flows. Journal of Computational Physics, 2016, 324, 94-114.	1.9	6
93	A Lagrangian Inertial Centroidal Voronoi Particle method for dynamic load balancing in particle-based simulations. Computer Physics Communications, 2019, 239, 53-63.	3.0	6
94	Partial characteristic decomposition for multi-species Euler equations. Computers and Fluids, 2019, 181, 364-382.	1.3	6
95	A species-clustered splitting scheme for the integration of large-scale chemical kinetics using detailed mechanisms. Combustion and Flame, 2019, 205, 41-54.	2.8	6
96	A split random time-stepping method for stiff and nonstiff detonation capturing. Combustion and Flame, 2019, 204, 397-413.	2.8	6
97	Numerical investigation of homogeneous cavitation nucleation in a microchannel. Physical Review Fluids, 2018, 3, .	1.0	6
98	Reinstating the Authority of the Five Punishments: A New Perspective on Legal Privilege for Bannermen. Late Imperial China, 2013, 34, 28-51.	0.2	5
99	An L2-norm regularized incremental-stencil WENO scheme for compressible flows. Computers and Fluids, 2020, 213, 104721.	1.3	5
100	A dynamic relaxation method with operator splitting and random-choice strategy for SPH. Journal of Computational Physics, 2022, 458, 111105.	1.9	5
101	High-resolution method for evolving complex interface networks. Computer Physics Communications, 2018, 225, 10-27.	3.0	4
102	A feature-aware SPH for isotropic unstructured mesh generation. Computer Methods in Applied Mechanics and Engineering, 2021, 375, 113634.	3.4	4
103	A Consistent Analytical Formulation for Volume Estimation of Geometries Enclosed by Implicitly Defined Surfaces. SIAM Journal of Scientific Computing, 2018, 40, A1523-A1543.	1.3	3
104	Modeling of Cavitation Bubble Cloud with Discrete Lagrangian Tracking. Water (Switzerland), 2021, 13, 2684.	1.2	2
105	Shock-induced collapse of bubbles in liquid. , 2009, , 931-936.		1
106	Adaptive Anisotropic Unstructured Mesh Generation Method Based on Fluid Relaxation Analogy. Communications in Computational Physics, 2020, 27, 1275-1308.	0.7	1
107	Considerations for Hydrodynamic Slug Analysis in Pipelines. , 2014, , .		0
108	Numerical Study on Super/Hypersonic Flow, Mixing, and Combustion Phenomena. Advances in Mechanical Engineering, 2014, 6, 765315.	0.8	0

#	Article	IF	Citations
109	Numerical study on super/hypersonic flow, mixing, and combustion phenomena, 2015. Advances in Mechanical Engineering, 2016, 8, 168781401663293.	0.8	0
110	The Evolution of Early Qing Regulations on Fugitive Slaves. Modern China, 2020, 46, 642-675.	0.3	0
111	Spot the Difference. ACM Transactions on Applied Perception, 2021, 18, 1-15.	1.2	0
112	Numerical Studies on the Reaction Zones in a Detonation Wave with a Detailed Chemical Reaction Model. , 2003, , 502-507.		0
113	Numerical studies on shock cell interaction. , 2005, , 1205-1210.		0
114	Moving Contact Line with Balanced Stress Singularities. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2009, , 87-94.	0.1	0
115	Splitting for Highly Dissipative Smoothed Particle Dynamics. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2009, , 207-218.	0.1	0
116	Numerical Investigation of the Micromechanical Behavior of DNA Immersed in a Hydrodynamic Flow. , 2010, , 147-160.		0
117	An Immersed Interface Method in the Framework of Implicit Large-Eddy Simulation. ERCOFTAC Series, 2010, , 109-115.	0.1	0