Fabian Denner

List of Publications by Year
in descending order

46	904	430874	477307
papers	citations	18 h-index	29 g-index

48	48	48	635
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Fully-Coupled Balanced-Force VOF Framework for Arbitrary Meshes with Least-Squares Curvature Evaluation from Volume Fractions. Numerical Heat Transfer, Part B: Fundamentals, 2014, 65, 218-255.	0.9	84
2	Numerical time-step restrictions as a result of capillary waves. Journal of Computational Physics, 2015, 285, 24-40.	3.8	77
3	The acoustic pressure generated by the cavitation bubble expansion and collapse near a rigid wall. Physics of Fluids, 2021, 33, .	4.0	71
4	Compressive VOF method with skewness correction to capture sharp interfaces on arbitrary meshes. Journal of Computational Physics, 2014, 279, 127-144.	3.8	55
5	Fully-coupled pressure-based finite-volume framework for the simulation of fluid flows at all speeds in complex geometries. Journal of Computational Physics, 2017, 346, 91-130.	3.8	42
6	Solitary waves on falling liquid films in the inertia-dominated regime. Journal of Fluid Mechanics, 2018, 837, 491-519.	3.4	41
7	Conservative finite-volume framework and pressure-based algorithm for flows of incompressible, ideal-gas and real-gas fluids at all speeds. Journal of Computational Physics, 2020, 409, 109348.	3.8	39
8	Pressure-based algorithm for compressible interfacial flows with acoustically-conservative interface discretisation. Journal of Computational Physics, 2018, 367, 192-234.	3.8	38
9	Unified formulation of the momentum-weighted interpolation for collocated variable arrangements. Journal of Computational Physics, 2018, 375, 177-208.	3.8	35
10	Comparative study of mass-conserving interface capturing frameworks for two-phase flows with surface tension. International Journal of Multiphase Flow, 2014, 61, 37-47.	3.4	29
11	TVD differencing on three-dimensional unstructured meshes with monotonicity-preserving correction of mesh skewness. Journal of Computational Physics, 2015, 298, 466-479.	3.8	29
12	Detailed hydrodynamic characterization of harmonically excited falling-film flows: A combined experimental and computational study. Physical Review Fluids, 2017, 2, .	2.5	27
13	Artificial viscosity model to mitigate numerical artefacts at fluid interfaces with surface tension. Computers and Fluids, 2017, 143, 59-72.	2.5	26
14	Experimental investigations of liquid falling films flowing under an inclined planar substrate. Physical Review Fluids, 2018, 3, .	2.5	24
15	Frequency dispersion of small-amplitude capillary waves in viscous fluids. Physical Review E, 2016, 94, 023110.	2.1	23
16	Estimation of curvature from volume fractions using parabolic reconstruction on two-dimensional unstructured meshes. Journal of Computational Physics, 2017, 351, 271-294.	3.8	23
17	Fully-coupled pressure-based algorithm for compressible flows: Linearisation and iterative solution strategies. Computers and Fluids, 2018, 175, 53-65.	2.5	21
18	A multi-scale approach to simulate atomisation processes. International Journal of Multiphase Flow, 2019, 119, 194-216.	3.4	19

#	Article	IF	Citations
19	Multiscale modeling and validation of the flow around Taylor bubbles surrounded with small dispersed bubbles using a coupled VOF-DBM approach. International Journal of Multiphase Flow, 2021, 141, 103673.	3.4	17
20	The Gilmore-NASG model to predict single-bubble cavitation in compressible liquids. Ultrasonics Sonochemistry, 2021, 70, 105307.	8.2	16
21	On the convolution of fluid properties and surface force for interface capturing methods. International Journal of Multiphase Flow, 2013, 54, 61-64.	3.4	15
22	Self-similarity of solitary waves on inertia-dominated falling liquid films. Physical Review E, 2016, 93, 033121.	2.1	14
23	Dispersion and viscous attenuation of capillary waves with finite amplitude. European Physical Journal: Special Topics, 2017, 226, 1229-1238.	2.6	14
24	Modeling Acoustic Cavitation Using a Pressure-Based Algorithm for Polytropic Fluids. Fluids, 2020, 5, 69.	1.7	14
25	Capillary waves with surface viscosity. Journal of Fluid Mechanics, 2018, 847, 644-663.	3.4	12
26	Modelling Lipid-Coated Microbubbles in Focused Ultrasound Applications at Subresonance Frequencies. Ultrasound in Medicine and Biology, 2021, 47, 2958-2979.	1.5	11
27	Modeling of interfacial mass transfer based on a single-field formulation and an algebraic VOF method considering non-isothermal systems and large volume changes. Chemical Engineering Science, 2022, 247, 116855.	3.8	9
28	Numerical modelling of shock-bubble interactions using a pressure-based algorithm without Riemann solvers. Experimental and Computational Multiphase Flow, 2019, 1, 271-285.	3.9	8
29	Robust low-dimensional modelling of falling liquid films subject to variable wall heating. Journal of Fluid Mechanics, 2019, 877, 844-881.	3.4	8
30	Statistical characteristics of falling-film flows: A synergistic approach at the crossroads of direct numerical simulations and experiments. Physical Review Fluids, 2017, 2, .	2.5	8
31	Euler-Lagrange modelling of dilute particle-laden flows with arbitrary particle-size to mesh-spacing ratio. Journal of Computational Physics: X, 2020, 8, 100078.	0.7	7
32	Transient structures in rupturing thin films: Marangoni-induced symmetry-breaking pattern formation in viscous fluids. Science Advances, 2020, 6, eabb0597.	10.3	7
33	Quantifying the errors of the particle-source-in-cell Euler-Lagrange method. International Journal of Multiphase Flow, 2021, 135, 103535.	3.4	7
34	Wall collision of deformable bubbles in the creeping flow regime. European Journal of Mechanics, B/Fluids, 2018, 70, 36-45.	2.5	6
35	On the numerical modelling of Corium spreading using Volume-of-Fluid methods. Nuclear Engineering and Design, 2019, 345, 216-232.	1.7	5
36	Breaching the capillary time-step constraint using a coupled VOF method with implicit surface tension. Journal of Computational Physics, 2022, 459, 111128.	3.8	5

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37	Predicting laserâ€induced cavitation near a solid substrate. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000007.	0.2	4
38	Marangoni effect on small-amplitude capillary waves in viscous fluids. Physical Review E, 2017, 96, 053110.	2.1	3
39	Modeling interfacial mass transfer of highly non-ideal mixtures using an algebraic VOF method. Chemical Engineering Science, 2022, 251, 117458.	3.8	3
40	Strong shear flows release gaseous nuclei from surface micro- and nanobubbles. Physical Review Fluids, 2021, 6, .	2.5	2
41	Height-function curvature estimation with arbitrary order on non-uniform Cartesian grids. Journal of Computational Physics: X, 2020, 7, 100060.	0.7	1
42	Before the bubble ruptures. Physical Review Fluids, 2017, 2, .	2.5	1
43	Performance evaluation of standard second-order finite volume method for DNS solution of turbulent channel flow. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2021, 43, 1.	1.6	1
44	Reducing volume and shape errors in front tracking by divergence-preserving velocity interpolation and parabolic fit vertex positioning. Journal of Computational Physics, 2022, 457, 111072.	3.8	1
45	A Unified Algorithm for Interfacial Flows with Incompressible and Compressible Fluids. Forum for Interdisciplinary Mathematics, 2022, , 179-208.	1.6	1
46	Reversal and Inversion of Capillary Jet Breakup at Large Excitation Amplitudes. Flow, Turbulence and Combustion, 0, , 1.	2.6	0