Dirk Lucas

List of Publications by Year
in descending order

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200 papers	6,405 citations	71061 41 h-index	82499 72 g-index
206 all docs	206 docs citations	206 times ranked	2345 citing authors

#	Article	IF	Citations
1	A literature review of theoretical models for drop and bubble breakup in turbulent dispersions. Chemical Engineering Science, 2009, 64, 3389-3406.	1.9	523
2	A literature review on mechanisms and models for the coalescence process of fluid particles. Chemical Engineering Science, 2010, 65, 2851-2864.	1.9	494
3	The inhomogeneous MUSIG model for the simulation of polydispersed flows. Nuclear Engineering and Design, 2008, 238, 1690-1702.	0.8	227
4	Validation of CFD models for mono- and polydisperse airâ€“water two-phase flows in pipes. Nuclear Engineering and Design, 2008, 238, 647-659.	0.8	189
5	On the modelling of bubbly flow in vertical pipes. Nuclear Engineering and Design, 2005, 235, 597-611.	0.8	165
6	Development of co-current airâ€“water flow in a vertical pipe. International Journal of Multiphase Flow, 2005, 31, 1304-1328.	1.6	164
7	Use of models for lift, wall and turbulent dispersion forces acting on bubbles for poly-disperse flows. Chemical Engineering Science, 2007, 62, 4146-4157.	1.9	148
8	Baseline closure model for dispersed bubbly flow: Bubble coalescence and breakup. Chemical Engineering Science, 2015, 122, 336-349.	1.9	147
9	Evolution of the two-phase flow in a vertical tubeâ€”decomposition of gas fraction profiles according to bubble size classes using wire-mesh sensors. International Journal of Thermal Sciences, 2002, 41, 17-28.	2.6	120
10	On the role of the lateral lift force in poly-dispersed bubbly flows. International Journal of Multiphase Flow, 2011, 37, 1178-1190.	1.6	114
11	Computational modelling of flash boiling flows: A literature survey. International Journal of Heat and Mass Transfer, 2017, 111, 246-265.	2.5	109
12	A multi-field two-fluid concept for transitions between different scales of interfacial structures. International Journal of Multiphase Flow, 2012, 47, 171-182.	1.6	103
13	Influence of the lift force on the stability of a bubble column. Chemical Engineering Science, 2005, 60, 3609-3619.	1.9	102
14	Evolution of the structure of a gasâ€“liquid two-phase flow in a large vertical pipe. Nuclear Engineering and Design, 2007, 237, 1848-1861.	0.8	97
15	Transient simulation for large scale flow in bubble columns. Chemical Engineering Science, 2015, 122, 1-13.	1.9	91
16	Direct numerical simulationâ€“based Reynolds-averaged closure for bubble-induced turbulence. Physical Review Fluids, 2017, 2, .	1.0	90
17	Comparative study of gasâ€“oil and gasâ€“water two-phase flow in a vertical pipe. Chemical Engineering Science, 2010, 65, 3836-3848.	1.9	87
18	Prediction of radial gas profiles in vertical pipe flow on the basis of bubble size distribution. International Journal of Thermal Sciences, 2001, 40, 217-225.	2.6	78

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19	Unified modeling of bubbly flows in pipes, bubble columns, and airlift columns. Chemical Engineering Science, 2017, 157, 147-158.	1.9	69
20	Observations on bubble shapes in bubble columns under different flow conditions. Experimental Thermal and Fluid Science, 2017, 85, 248-256.	1.5	67
21	Bubble size and radial gas holdâ€up distributions in a slurry bubble column using ultrafast electron beam Xâ€ray tomography. AICHE Journal, 2013, 59, 1709-1722.	1.8	66
22	Influence of the Pipe Diameter on the Structure of the Gas-Liquid Interface in a Vertical Two-Phase Pipe Flow. Nuclear Technology, 2005, 152, 3-22.	0.7	63
23	Development of a generalized coalescence and breakup closure for the inhomogeneous MUSIG model. Nuclear Engineering and Design, 2011, 241, 1024-1033.	0.8	60
24	Gasâ€“liquid countercurrent two-phase flow in a PWR hot leg: A comprehensive research review. Nuclear Engineering and Design, 2012, 243, 214-233.	0.8	59
25	Comparative study of ultrafast X-ray tomography and wire-mesh sensors for vertical gasâ€“liquid pipe flows. Flow Measurement and Instrumentation, 2017, 53, 95-106.	1.0	59
26	A new database on the evolution of airâ€“water flows along a large vertical pipe. International Journal of Thermal Sciences, 2010, 49, 664-674.	2.6	56
27	3D CFD simulation of flashing flows in a converging-diverging nozzle. Nuclear Engineering and Design, 2015, 292, 149-163.	0.8	55
28	Computational Fluid-Dynamic modeling of the pseudo-homogeneous flow regime in large-scale bubble columns. Chemical Engineering Science, 2017, 160, 144-160.	1.9	55
29	Correlation for countercurrent flow limitation in a PWR hot leg. Journal of Nuclear Science and Technology, 2012, 49, 398-407.	0.7	54
30	A strategy for the qualification of multi-fluid approaches for nuclear reactor safety. Nuclear Engineering and Design, 2016, 299, 2-11.	0.8	54
31	Effect of an Electromagnetic Brake on the Turbulent Melt Flow in a Continuous-Casting Mold. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2012, 43, 954-972.	1.0	53
32	Numerical simulations of counter-current two-phase flow experiments in a PWR hot leg model using an interfacial area density model. International Journal of Heat and Fluid Flow, 2011, 32, 1047-1056.	1.1	50
33	Heterogeneous nucleation in CFD simulation of flashing flows in convergingâ€“diverging nozzles. International Journal of Multiphase Flow, 2015, 74, 106-117.	1.6	50
34	The characteristics of gas/liquid flow in large risers at high pressures. International Journal of Multiphase Flow, 2008, 34, 461-476.	1.6	49
35	Baseline Model for the Simulation of Bubbly Flows. Chemical Engineering and Technology, 2015, 38, 1972-1978.	0.9	49
36	A review on mechanisms and models for the churn-turbulent flow regime. Chemical Engineering Science, 2016, 141, 86-103.	1.9	48

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37	Lift force acting on single bubbles in linear shear flows. International Journal of Multiphase Flow, 2017, 96, 113-122.	1.6	47
38	Three-dimensional flow pattern visualization and bubble size distributions in stationary and transient upward flashing flow. International Journal of Multiphase Flow, 2006, 32, 996-1016.	1.6	46
39	Investigation of flow development of co-current gasâ€“liquid vertical slug flow. International Journal of Multiphase Flow, 2009, 35, 335-348.	1.6	45
40	Application of a novel model for bubble-induced turbulence to bubbly flows in containers and vertical pipes. Chemical Engineering Science, 2019, 202, 55-69.	1.9	45
41	Bubble-wall interactions in a vertical gasâ€“liquid flow: Bouncing, sliding and bubble deformations. Chemical Engineering Science, 2007, 62, 1591-1605.	1.9	42
42	Gasâ€“liquid flows in medium and large vertical pipes. Chemical Engineering Science, 2011, 66, 872-883.	1.9	42
43	Towards a unified approach for modelling uniform and nonâ€uniform bubbly flows. Canadian Journal of Chemical Engineering, 2017, 95, 170-179.	0.9	42
44	Steam bubble condensation in sub-cooled water in case of co-current vertical pipe flow. Nuclear Engineering and Design, 2007, 237, 497-508.	0.8	40
45	Scale-Adaptive Simulation of a square cross-sectional bubble column. Chemical Engineering Science, 2015, 131, 101-108.	1.9	40
46	A new measuring concept to determine the lift force for distorted bubbles in low Morton number system: Results for air/water. International Journal of Multiphase Flow, 2018, 108, 11-24.	1.6	40
47	Eulerian modelling of turbulent bubbly flow based on a baseline closure concept. Nuclear Engineering and Design, 2018, 337, 450-459.	0.8	37
48	On the hydrodynamics of airlift reactors, Part I: Experiments. Chemical Engineering Science, 2016, 150, 54-65.	1.9	36
49	Extension of the inhomogeneous MUSIG model for bubble condensation. Nuclear Engineering and Design, 2011, 241, 4359-4367.	0.8	35
50	Flashing evaporation under different pressure levels. Nuclear Engineering and Design, 2013, 265, 801-813.	0.8	34
51	Possibilities and Limitations of CFD Simulation for Flashing Flow Scenarios in Nuclear Applications. Energies, 2017, 10, 139.	1.6	34
52	The effects of surface tension on flooding in counter-current two-phase flow in an inclined tube. Experimental Thermal and Fluid Science, 2010, 34, 813-826.	1.5	33
53	Numerical modeling of bubble-driven liquid metal flows with external static magnetic field. International Journal of Multiphase Flow, 2013, 48, 32-45.	1.6	33
54	On sampling bias in multiphase flows: Particle image velocimetry in bubbly flows. Flow Measurement and Instrumentation, 2016, 48, 36-41.	1.0	32

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55	CFD modelling of polydispersed bubbly two-phase flow around an obstacle. Nuclear Engineering and Design, 2009, 239, 2372-2381.	0.8	31
56	Application of a new concept for multi-scale interfacial structures to the dam-break case with an obstacle. Nuclear Engineering and Design, 2014, 279, 171-181.	0.8	30
57	Eulerâ€“Euler large eddy simulations for dispersed turbulent bubbly flows. International Journal of Heat and Fluid Flow, 2015, 56, 51-59.	1.1	30
58	Particle tracking using micro bubbles in bubbly flows. Chemical Engineering Science, 2016, 153, 155-164.	1.9	30
59	Investigations on the Stability of the Flow Characteristics in a Bubble Column. Chemical Engineering and Technology, 2006, 29, 1066-1072.	0.9	29
60	Experimental study on the air/water counter-current flow limitation in a model of the hot leg of a pressurized water reactor. Nuclear Engineering and Design, 2008, 238, 3389-3402.	0.8	29
61	Numerical Simulation of Polydispersed Flow in Bubble Columns with the Inhomogeneous Multiâ€Sizeâ€Group Model. Chemie-Ingenieur-Technik, 2013, 85, 1080-1091.	0.4	29
62	Benchmark database on the evolution of two-phase flows in a vertical pipe. Nuclear Engineering and Design, 2010, 240, 2338-2346.	0.8	28
63	A review on numerical modelling of flashing flow with application to nuclear safety analysis. Applied Thermal Engineering, 2021, 182, 116002.	3.0	28
64	Quality check of wire-mesh sensor measurements in a vertical air/water flow. Flow Measurement and Instrumentation, 2010, 21, 511-520.	1.0	27
65	Comparison of CFD simulations on two-phase Pressurized Thermal Shock scenarios. Nuclear Engineering and Design, 2014, 266, 112-128.	0.8	27
66	Planar Array Sensor for High-speed Component Distribution Imaging in Fluid Flow Applications. Sensors, 2007, 7, 2430-2445.	2.1	26
67	CFD based approach for modeling direct contact condensation heat transfer in two-phase turbulent stratified flows. International Journal of Thermal Sciences, 2015, 95, 123-135.	2.6	26
68	A discrete population balance equation for binary breakage. International Journal for Numerical Methods in Fluids, 2018, 87, 202-215.	0.9	26
69	Lift force coefficient of ellipsoidal single bubbles in water. International Journal of Multiphase Flow, 2021, 138, 103587.	1.6	26
70	On the accuracy of wire-mesh sensors in dependence of bubble sizes and liquid flow rates. Experimental Thermal and Fluid Science, 2015, 65, 73-81.	1.5	25
71	CFD-simulation of boiling in a heated pipe including flow pattern transitions using the GENTOP concept. Nuclear Engineering and Design, 2017, 322, 165-176.	0.8	25
72	Influence of the bubble size distribution on the bubble column flow regime. International Journal of Multiphase Flow, 2019, 120, 103092.	1.6	23

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73	Progress in the second-moment closure for bubbly flow based on direct numerical simulation data. Journal of Fluid Mechanics, 2020, 883, .	1.4	23
74	Poly-disperse simulation of condensing steam-water flow inside a large vertical pipe. International Journal of Thermal Sciences, 2016, 104, 194-207.	2.6	22
75	Experimental investigation of two-phase pipe flow with ultrafast X-ray tomography and comparison with state-of-the-art CFD simulations. Nuclear Engineering and Design, 2018, 336, 90-104.	0.8	22
76	A systematic experimental study and dimensionless analysis of bubble plume oscillations in rectangular bubble columns. Chemical Engineering Journal, 2019, 372, 352-362.	6.6	22
77	Prediction of the evolution of the dispersed phase in bubbly flow problems. Applied Mathematical Modelling, 2008, 32, 1813-1833.	2.2	21
78	On the Coupled Solution of a Combined Population Balance Model Using the Least-Squares Spectral Element Method. Industrial & Engineering Chemistry Research, 2009, 48, 7994-8006.	1.8	21
79	A population balance approach considering heat and mass transferâ€"Experiments and CFD simulations. Nuclear Engineering and Design, 2011, 241, 2889-2897.	0.8	21
80	CFD studies on the gas-liquid flow in the swirl generating device. Nuclear Engineering and Design, 2018, 332, 213-225.	0.8	21
81	Evaluation of Interfacial Heat Transfer Models for Flashing Flow with Two-Fluid CFD. Fluids, 2018, 3, 38.	0.8	21
82	The critical bubble diameter of the lift force in technical and environmental, buoyancy-driven bubbly flows. International Journal of Multiphase Flow, 2019, 116, 26-38.	1.6	21
83	Eulerâ€"Euler modeling and X-ray measurement of oscillating bubble chain in liquid metals. International Journal of Multiphase Flow, 2019, 110, 218-237.	1.6	21
84	Image-Processing-Based Study of the Interfacial Behavior of the Countercurrent Gas-Liquid Two-Phase Flow in a Hot Leg of a PWR. Science and Technology of Nuclear Installations, 2012, 2012, 1-10.	0.3	20
85	A new algorithm for segmentation of ultrafast X-ray tomographed gasâ€"liquid flows. International Journal of Thermal Sciences, 2015, 90, 311-322.	2.6	20
86	An Overview of the Pressurized Thermal Shock Issue in the Context of the NURESIM Project. Science and Technology of Nuclear Installations, 2009, 2009, 1-13.	0.3	19
87	Classification of bubbles in vertical gasâ€"liquid flow: Part 1 â€" An analysis of experimental data. International Journal of Multiphase Flow, 2012, 39, 121-134.	1.6	19
88	Application of new closure models for bubble coalescence and breakup to steamâ€"water vertical pipe flow. Nuclear Engineering and Design, 2014, 279, 126-136.	0.8	19
89	Large eddy simulations of the gasâ€"liquid flow in a rectangular bubble column. Nuclear Engineering and Design, 2016, 299, 146-153.	0.8	19
90	Contamination effects on the lift force of ellipsoidal air bubbles rising in saline water solutions. Chemical Engineering Journal, 2020, 386, 121589.	6.6	19

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91	Basic verification of a numerical framework applied to a morphology adaptive multifield twoâ€fluid model considering bubble motions. International Journal for Numerical Methods in Fluids, 2021, 93, 748-773.	0.9	19
92	An openâ€source population balance modeling framework for the simulation of polydisperse multiphase flows. AICHE Journal, 2022, 68, .	1.8	19
93	CFD studies on the phenomena around counter-current flow limitations of gas/liquid two-phase flow in a model of a PWR hot leg. Nuclear Engineering and Design, 2011, 241, 5138-5148.	0.8	18
94	Application of a new drag coefficient model at CFD-simulations on free surface flows relevant for the nuclear reactor safety analysis. Annals of Nuclear Energy, 2012, 39, 70-82.	0.9	18
95	Modelling and simulation of flow boiling with an Eulerian-Eulerian approach and integrated models for bubble dynamics and temperature-dependent heat partitioning. International Journal of Thermal Sciences, 2021, 161, 106709.	2.6	18
96	A baseline closure concept for simulating bubbly flow with phase change: A mechanistic model for interphase heat transfer coefficient. Nuclear Engineering and Design, 2019, 348, 1-13.	0.8	17
97	Euler-Euler simulation and X-ray measurement of bubble chain in a shallow container filled with liquid metals. Chemical Engineering Science, 2018, 192, 288-305.	1.9	16
98	Hydrodynamic forces on a clean spherical bubble translating in a wall-bounded linear shear flow. Physical Review Fluids, 2020, 5, .	1.0	16
99	Bubble identification from images with machine learning methods. International Journal of Multiphase Flow, 2022, 155, 104169.	1.6	15
100	Flow field assessment under a plunging liquid jet. Progress in Nuclear Energy, 2012, 56, 100-110.	1.3	14
101	Effects of inlet condition on flow structure of bubbly flow in a rectangular column. Chemical Engineering Science, 2013, 104, 166-176.	1.9	14
102	Experimental database on steamâ€“water flow with phase transfer in a vertical pipe. Nuclear Engineering and Design, 2013, 265, 1113-1123.	0.8	14
103	Experimental studies on bubble aspect ratio and corresponding correlations under bubble swarm condition. Chemical Engineering Science, 2021, 236, 116551.	1.9	14
104	Prediction of Bubble Departure in Forced Convection Boiling with a Mechanistic Model That Considers Dynamic Contact Angle and Base Expansion. Energies, 2019, 12, 1950.	1.6	13
105	Benchmarking of computational fluid dynamic models for bubbly flows. Nuclear Engineering and Design, 2021, 375, 111075.	0.8	13
106	Review of Available Data for Validation of Nuresim Two-Phase CFD Software Applied to CHF Investigations. Science and Technology of Nuclear Installations, 2009, 2009, 1-14.	0.3	12
107	Counter-current flow limitation in a model of the hot leg of a PWRâ€”Comparison between air/water and steam/water experiments. Nuclear Engineering and Design, 2012, 245, 113-124.	0.8	12
108	Comparison of Eulerian QBMM and classical Eulerianâ€“Eulerian method for the simulation of polydisperse bubbly flows. AICHE Journal, 2019, 65, e16732.	1.8	12

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109	Scaling of Lift Reversal of Deformed Bubbles in Air-Water Systems. International Journal of Multiphase Flow, 2021, 142, 103653.	1.6	12
110	Explicit algebraic relation for calculating Reynolds normal stresses in flows dominated by bubble-induced turbulence. Physical Review Fluids, 2020, 5, .	1.0	12
111	Grid studies for the simulation of resolved structures in an Eulerian two-fluid framework. Nuclear Engineering and Design, 2016, 305, 371-377.	0.8	11
112	Validation of a closure model framework for turbulent bubbly two-phase flow in different flow situations. Nuclear Engineering and Design, 2018, 340, 388-404.	0.8	11
113	Two-scale CFD analysis of a spent fuel pool involving partially uncovered fuel storage racks. Nuclear Engineering and Design, 2019, 341, 432-450.	0.8	11
114	Experimental CFD grade data for stratified two-phase flows. Nuclear Engineering and Design, 2010, 240, 2347-2356.	0.8	10
115	Numerical study of a bubble plume generated by bubble entrainment from an impinging jet. Nuclear Engineering and Design, 2011, 241, 4111-4121.	0.8	10
116	Uncertainty analysis of an interfacial area reconstruction algorithm and its application to two group interfacial area transport equation validation. Nuclear Engineering and Design, 2016, 310, 620-637.	0.8	10
117	Modelling of Passive Heat Removal Systems: A Review with Reference to the Framatome KERENA BWR Reactor: Part I. Energies, 2020, 13, 35.	1.6	10
118	Horizontal annular flow through orifice studied by X-ray microtomography. Experiments in Fluids, 2021, 62, 1.	1.1	10
119	An experimental study on the multiscale properties of turbulence in bubble-laden flows. Journal of Fluid Mechanics, 2022, 936, .	1.4	10
120	CFD Approaches for Modelling Bubble Entrainment by an Impinging Jet. Science and Technology of Nuclear Installations, 2009, 2009, 1-12.	0.3	9
121	Experimental and numerical modelling of the fluid flow in the continuous casting of steel. European Physical Journal: Special Topics, 2013, 220, 151-166.	1.2	9
122	Numerical analysis of flashing pipe flow using a population balance approach. International Journal of Heat and Fluid Flow, 2019, 77, 299-313.	1.1	9
123	twoWayGPBEFoam: An open-source Eulerian QBMM solver for monokinetic bubbly flows. Computer Physics Communications, 2020, 250, 107036.	3.0	9
124	EXPERIMENTAL INVESTIGATIONS ON THE CONDENSATION OF STEAM BUBBLES INJECTED INTO SUBCOOLED WATER AT 1 MPA. Multiphase Science and Technology, 2010, 22, 33-55.	0.2	9
125	Main results of the European project NURESIM on the CFD-modelling of two-phase Pressurized Thermal Shock (PTS). Kerntechnik, 2009, 74, 238-242.	0.2	9
126	CFD-modelling of boiling in a heated pipe including flow pattern transition. Applied Thermal Engineering, 2022, 204, 117962.	3.0	9

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127	Modeling the Evolution of Bubbly Flow along a Large Vertical Pipe. Nuclear Technology, 2007, 158, 291-303.	0.7	8
128	Air/Water Counter-Current Flow Experiments in a Model of the Hot Leg of a Pressurized Water Reactor. Journal of Engineering for Gas Turbines and Power, 2009, 131, .	0.5	8
129	Comparison of Countercurrent Flow Limitation Experiments Performed in Two Different Models of the Hot Leg of a Pressurized Water Reactor With Rectangular Cross Section. Journal of Engineering for Gas Turbines and Power, 2011, 133, .	0.5	8
130	Numerical simulations for steamâ€“water CCFL tests using the 1/3 scale rectangular channel simulating a PWR hot leg. Nuclear Engineering and Design, 2012, 249, 14-23.	0.8	8
131	Evaluation of two-group interfacial area transport equation model for vertical small diameter pipes against high-resolution experimental data. Chemical Engineering Science, 2017, 162, 175-191.	1.9	8
132	A novel fuzzy-logic based method for determination of individual bubble velocity and size from dual-plane ultrafast X-ray tomography data of two-phase flow. International Journal of Multiphase Flow, 2017, 96, 144-160.	1.6	8
133	Counter-current flow limitation for air-water and steam-water flows in a PWR hot leg geometry. Nuclear Engineering and Design, 2017, 323, 56-67.	0.8	8
134	Comparison of Gasâ€“Liquid Flow Characteristics in Geometrically Different Swirl Generating Devices. Energies, 2019, 12, 4653.	1.6	8
135	A workflow for the sustainable development of closure models for bubbly flows. Chemical Engineering Science, 2021, 244, 116807.	1.9	8
136	Influence of surfactant contaminations on the lift force of ellipsoidal bubbles in water. International Journal of Multiphase Flow, 2021, 145, 103833.	1.6	8
137	Two phase flow 1D turbulence model for poly-disperse upward flow in a vertical pipe. Nuclear Engineering and Design, 2009, 239, 1933-1943.	0.8	7
138	Experimental Characterisation of the Interfacial Structure during Counter-Current Flow Limitation in a Model of the Hot Leg of a PWR. Science and Technology of Nuclear Installations, 2012, 2012, 1-8.	0.3	7
139	Counter Current Flow Limitation of Gas-Liquid Two-Phase Flow in Nearly Horizontal Pipe. Science and Technology of Nuclear Installations, 2012, 2012, 1-9.	0.3	7
140	Effects of Shape and Size on Countercurrent Flow Limitation in Flow Channels Simulating a PWR Hot Leg. Nuclear Technology, 2014, 187, 44-56.	0.7	7
141	Prediction of Countercurrent Flow Limitation and Its Uncertainty in Horizontal and Slightly Inclined Pipes. Nuclear Technology, 2017, 197, 140-157.	0.7	7
142	CFD codes benchmark on TOPFLOW-PTS experiment. Nuclear Engineering and Design, 2017, 321, 288-300.	0.8	7
143	Numerical simulation of micro-crack leakage on steam generator heat transfer tube. Nuclear Engineering and Design, 2021, 382, 111385.	0.8	7
144	Drag and lift forces on a rigid sphere immersed in a wall-bounded linear shear flow. Physical Review Fluids, 2021, 6, .	1.0	7

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145	Experimental Investigation on Bubble Turbulent Diffusion in a Vertical Large-Diameter Pipe by Wire-Mesh Sensors and Correlation Techniques. Nuclear Technology, 2007, 158, 275-290.	0.7	6
146	Effects of Liquid Properties on CCFL in a Scaled-Down Model of a PWR Hot Leg. Journal of Power and Energy Systems, 2011, 5, 316-329.	0.5	6
147	Comparative Simulations of Free Surface Flows Using VOF-Methods and a New Approach for Multi-Scale Interfacial Structures. , 2013, , .		6
148	Simulations of flashing experiments in TOPFLOW facility with TRACE code. Nuclear Engineering and Design, 2015, 283, 60-70.	0.8	6
149	Bubble aspect ratio in dense bubbly flows: experimental studies in low Morton-number systems. Journal of Physics: Conference Series, 2017, 923, 012014.	0.3	6
150	The Bubble Shape in Contaminated Bubbly Flows: Results for Different NaCl Concentrations in Purified Water. ChemEngineering, 2018, 2, 18.	1.0	6
151	The pseudo-homogeneous flow regime in large-scale bubble columns: experimental benchmark and computational fluid dynamics modeling. Petroleum, 2019, 5, 141-160.	1.3	6
152	CFD Simulation of Polydispersed Bubbly Two-Phase Flow around an Obstacle. Science and Technology of Nuclear Installations, 2009, 2009, 1-12.	0.3	5
153	CFD MODELING OF FREE SURFACE FLOW WITH AND WITHOUT CONDENSATION. Multiphase Science and Technology, 2011, 23, 253-342.	0.2	5
154	High-resolution two-phase flow measurement techniques for the generation of experimental data for CFD code qualification. Kerntechnik, 2013, 78, 9-15.	0.2	5
155	Countercurrent Flow Limitation in Slightly Inclined Pipes With Elbows. Journal of Nuclear Engineering and Radiation Science, 2015, 1, .	0.2	5
156	CFD Modelling of Flashing Instability in Natural Circulation Cooling Systems. , 2018, , .		5
157	A Multiscale Approach Simulating Boiling in a Heated Pipe Including Flow Pattern Transition. Nuclear Technology, 2019, 205, 48-56.	0.7	5
158	Evaluation of Hydrodynamic Closures for Bubbly Regime CFD Simulations in Developing Pipe Flow. Chemical Engineering and Technology, 2019, 42, 1618-1626.	0.9	5
159	Experimental study of the liquid velocity and turbulence in a large-scale air-water counter-current bubble column. Experimental Thermal and Fluid Science, 2020, 111, 109955.	1.5	5
160	General guideline for closure model development for gas-liquid flows in the multi-fluid framework. Nuclear Engineering and Design, 2020, 357, 110396.	0.8	5
161	Investigation on pool-scrubbing hydrodynamics with VOF interface-capturing method. Nuclear Engineering and Design, 2022, 390, 111713.	0.8	5
162	Optimization of a Two-Fluid Hydrodynamic Model of Churn-Turbulent Flows. , 2009, , .		4

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163	Ultrafast electron beam X-ray computed tomography for 2D and 3D two-phase flow imaging. , 2012, , .		4
164	Multi-Scale Thermalhydraulic Analyses Performed in NURESIM and NURISP Projects. , 2012, , .		4
165	Analysis and Applications of a Two-Fluid Multi-Field Hydrodynamic Model for Churn-Turbulent Flows. , 2013, , .		4
166	Experimental study of liquid velocity profiles in large-scale bubble columns with particle tracking velocimetry. Journal of Physics: Conference Series, 2019, 1224, 012036.	0.3	4
167	Multiphase numerical modeling of a pilot-scale bubble column with a fixed poly-dispersity approach. International Journal of Multiphase Flow, 2020, 128, 103287.	1.6	4
168	Modeling of the Free-Surface Vortex-Driven Bubble Entrainment into Water. Water (Switzerland), 2020, 12, 709.	1.2	4
169	Stability analysis of discrete population balance model for bubble growth and shrinkage. International Journal for Numerical Methods in Fluids, 2021, 93, 3338-3363.	0.9	4
170	An Eulerianâ€Eulerian Computational Approach for Simulating Descending Gasâ€Liquid Flows in Reactors with Solid Foam Internals. Chemical Engineering and Technology, 2017, 40, 2044-2057.	0.9	3
171	Experimental studies on high-pressure high-temperature contact-condensation at falling jets in the TOPFLOW pressure-tank. Nuclear Engineering and Design, 2018, 336, 54-63.	0.8	3
172	Flow morphology and heat transfer analysis for high-pressure steam condensation in an inclined tube part II: Numerical investigations. Nuclear Engineering and Design, 2020, 362, 110580.	0.8	3
173	Radial pressure forces in Euler-Euler simulations of turbulent bubbly pipe flows. Nuclear Engineering and Design, 2021, 374, 111079.	0.8	3
174	A new one-dimensional particle-in-cell model for multiphase vessel flow. International Journal of Thermal Sciences, 1999, 38, 758-768.	2.6	2
175	Air Entrainment by Impinging Jets: Experimental Identification of the Key Phenomena and Approaches for Their Simulation in CFD. , 2009, , .		2
176	Investigations on Bubble-Induced Turbulence Modeling for Vertical Pipe Bubbly Flows. , 2012, , .		2
177	CFD Simulation of Flashing Boiling Flow in the Containment Cooling Condensers (CCC) System of KERENAâ„¢ Reactor. , 2013, , .		2
178	Comparative Analysis of High Void Fraction Regimes Using an Averaging Euler-Euler Multi-Fluid Approach and a Generalized Two-Phase Flow (GENTOP) Concept. , 2014, , .		2
179	Modelling of Passive Heat Removal Systems: A Review with Reference to the Framatome BWR Reactor KERENA: Part II. Energies, 2020, 13, 109.	1.6	2
180	A Multiscale Approach Simulating Generic Pool Boiling. Nuclear Science and Engineering, 2020, 194, 859-872.	0.5	2

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181	Modelling of Polydispersed Flows using Two Population Balance Approaches. , 2010, , .		1
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