

# Dirk Lucas

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7402357/publications.pdf>

Version: 2024-02-01

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	CFD-modelling of boiling in a heated pipe including flow pattern transition. Applied Thermal Engineering, 2022, 204, 117962.	3.0	9
2	An experimental study on the multiscale properties of turbulence in bubble-laden flows. Journal of Fluid Mechanics, 2022, 936, .	1.4	10
3	Investigation on pool-scrubbing hydrodynamics with VOF interface-capturing method. Nuclear Engineering and Design, 2022, 390, 111713.	0.8	5
4	An open-source population balance modeling framework for the simulation of polydisperse multiphase flows. AIChE Journal, 2022, 68, .	1.8	19
5	Bubble identification from images with machine learning methods. International Journal of Multiphase Flow, 2022, 155, 104169.	1.6	15
6	Message from the Guest Editor of the 17th Multiphase Flow Conference Special Issue. Experimental and Computational Multiphase Flow, 2021, 3, 137-138.	1.9	0
7	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
8	A review on numerical modelling of flashing flow with application to nuclear safety analysis. Applied Thermal Engineering, 2021, 182, 116002.	3.0	28
9	Basic verification of a numerical framework applied to a morphology adaptive multifield two-fluid model considering bubble motions. International Journal for Numerical Methods in Fluids, 2021, 93, 748-773.	0.9	19
10	Benchmarking of computational fluid dynamic models for bubbly flows. Nuclear Engineering and Design, 2021, 375, 111075.	0.8	13
11	Radial pressure forces in Euler-Euler simulations of turbulent bubbly pipe flows. Nuclear Engineering and Design, 2021, 374, 111079.	0.8	3
12	Lift force coefficient of ellipsoidal single bubbles in water. International Journal of Multiphase Flow, 2021, 138, 103587.	1.6	26
13	Experimental studies on bubble aspect ratio and corresponding correlations under bubble swarm condition. Chemical Engineering Science, 2021, 236, 116551.	1.9	14
14	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
15	Scaling of Lift Reversal of Deformed Bubbles in Air-Water Systems. International Journal of Multiphase Flow, 2021, 142, 103653.	1.6	12
16	Numerical simulation of micro-crack leakage on steam generator heat transfer tube. Nuclear Engineering and Design, 2021, 382, 111385.	0.8	7
17	A workflow for the sustainable development of closure models for bubbly flows. Chemical Engineering Science, 2021, 244, 116807.	1.9	8
18	Influence of surfactant contaminations on the lift force of ellipsoidal bubbles in water. International Journal of Multiphase Flow, 2021, 145, 103833.	1.6	8

#	ARTICLE	IF	CITATIONS
19	Horizontal annular flow through orifice studied by X-ray microtomography. <i>Experiments in Fluids</i> , 2021, 62, 1.	1.1	10
20	Drag and lift forces on a rigid sphere immersed in a wall-bounded linear shear flow. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	7
21	Contamination effects on the lift force of ellipsoidal air bubbles rising in saline water solutions. <i>Chemical Engineering Journal</i> , 2020, 386, 121589.	6.6	19
22	Experimental study of the liquid velocity and turbulence in a large-scale air-water counter-current bubble column. <i>Experimental Thermal and Fluid Science</i> , 2020, 111, 109955.	1.5	5
23	twoWayGPBEFoam: An open-source Eulerian QBMM solver for monokinetic bubbly flows. <i>Computer Physics Communications</i> , 2020, 250, 107036.	3.0	9
24	General guideline for closure model development for gas-liquid flows in the multi-fluid framework. <i>Nuclear Engineering and Design</i> , 2020, 357, 110396.	0.8	5
25	Progress in the second-moment closure for bubbly flow based on direct numerical simulation data. <i>Journal of Fluid Mechanics</i> , 2020, 883, .	1.4	23
26	Modelling of Passive Heat Removal Systems: A Review with Reference to the Framatome BWR Reactor KERENA: Part II. <i>Energies</i> , 2020, 13, 109.	1.6	2
27	Multiphase numerical modeling of a pilot-scale bubble column with a fixed poly-dispersity approach. <i>International Journal of Multiphase Flow</i> , 2020, 128, 103287.	1.6	4
28	A Multiscale Approach Simulating Generic Pool Boiling. <i>Nuclear Science and Engineering</i> , 2020, 194, 859-872.	0.5	2
29	Modeling of the Free-Surface Vortex-Driven Bubble Entrainment into Water. <i>Water (Switzerland)</i> , 2020, 12, 709.	1.2	4
30	Flow morphology and heat transfer analysis for high-pressure steam condensation in an inclined tube part II: Numerical investigations. <i>Nuclear Engineering and Design</i> , 2020, 362, 110580.	0.8	3
31	Modelling of Passive Heat Removal Systems: A Review with Reference to the Framatome KERENA BWR Reactor: Part I. <i>Energies</i> , 2020, 13, 35.	1.6	10
32	Hydrodynamic forces on a clean spherical bubble translating in a wall-bounded linear shear flow. <i>Physical Review Fluids</i> , 2020, 5, .	1.0	16
33	Explicit algebraic relation for calculating Reynolds normal stresses in flows dominated by bubble-induced turbulence. <i>Physical Review Fluids</i> , 2020, 5, .	1.0	12
34	A Multiscale Approach Simulating Boiling in a Heated Pipe Including Flow Pattern Transition. <i>Nuclear Technology</i> , 2019, 205, 48-56.	0.7	5
35	Message from the Guest Editor of the 16th Multiphase Flow Conference Special Issue. <i>Experimental and Computational Multiphase Flow</i> , 2019, 1, 231-232.	1.9	0
36	Comparison of Eulerian QBMM and classical Eulerian-Eulerian method for the simulation of polydisperse bubbly flows. <i>AIChE Journal</i> , 2019, 65, e16732.	1.8	12

#	ARTICLE	IF	CITATIONS
37	Influence of the bubble size distribution on the bubble column flow regime. <i>International Journal of Multiphase Flow</i> , 2019, 120, 103092.	1.6	23
38	Experimental study of liquid velocity profiles in large-scale bubble columns with particle tracking velocimetry. <i>Journal of Physics: Conference Series</i> , 2019, 1224, 012036.	0.3	4
39	Prediction of Bubble Departure in Forced Convection Boiling with a Mechanistic Model That Considers Dynamic Contact Angle and Base Expansion. <i>Energies</i> , 2019, 12, 1950.	1.6	13
40	Numerical analysis of flashing pipe flow using a population balance approach. <i>International Journal of Heat and Fluid Flow</i> , 2019, 77, 299-313.	1.1	9
41	Evaluation of Hydrodynamic Closures for Bubbly Regime CFD Simulations in Developing Pipe Flow. <i>Chemical Engineering and Technology</i> , 2019, 42, 1618-1626.	0.9	5
42	A systematic experimental study and dimensionless analysis of bubble plume oscillations in rectangular bubble columns. <i>Chemical Engineering Journal</i> , 2019, 372, 352-362.	6.6	22
43	Application of a novel model for bubble-induced turbulence to bubbly flows in containers and vertical pipes. <i>Chemical Engineering Science</i> , 2019, 202, 55-69.	1.9	45
44	A baseline closure concept for simulating bubbly flow with phase change: A mechanistic model for interphase heat transfer coefficient. <i>Nuclear Engineering and Design</i> , 2019, 348, 1-13.	0.8	17
45	The critical bubble diameter of the lift force in technical and environmental, buoyancy-driven bubbly flows. <i>International Journal of Multiphase Flow</i> , 2019, 116, 26-38.	1.6	21
46	Comparison of Gas-Liquid Flow Characteristics in Geometrically Different Swirl Generating Devices. <i>Energies</i> , 2019, 12, 4653.	1.6	8
47	Two-scale CFD analysis of a spent fuel pool involving partially uncovered fuel storage racks. <i>Nuclear Engineering and Design</i> , 2019, 341, 432-450.	0.8	11
48	Euler-Euler modeling and X-ray measurement of oscillating bubble chain in liquid metals. <i>International Journal of Multiphase Flow</i> , 2019, 110, 218-237.	1.6	21
49	The pseudo-homogeneous flow regime in large-scale bubble columns: experimental benchmark and computational fluid dynamics modeling. <i>Petroleum</i> , 2019, 5, 141-160.	1.3	6
50	A discrete population balance equation for binary breakage. <i>International Journal for Numerical Methods in Fluids</i> , 2018, 87, 202-215.	0.9	26
51	CFD studies on the gas-liquid flow in the swirl generating device. <i>Nuclear Engineering and Design</i> , 2018, 332, 213-225.	0.8	21
52	Experimental studies on high-pressure high-temperature contact-condensation at falling jets in the TOPFLOW pressure-tank. <i>Nuclear Engineering and Design</i> , 2018, 336, 54-63.	0.8	3
53	Experimental investigation of two-phase pipe flow with ultrafast X-ray tomography and comparison with state-of-the-art CFD simulations. <i>Nuclear Engineering and Design</i> , 2018, 336, 90-104.	0.8	22
54	Validation of a closure model framework for turbulent bubbly two-phase flow in different flow situations. <i>Nuclear Engineering and Design</i> , 2018, 340, 388-404.	0.8	11

#	ARTICLE	IF	CITATIONS
55	CFD Modelling of Flashing Instability in Natural Circulation Cooling Systems. , 2018, , .		5
56	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
57	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
58	Eulerian modelling of turbulent bubbly flow based on a baseline closure concept. Nuclear Engineering and Design, 2018, 337, 450-459.	0.8	37
59	The Bubble Shape in Contaminated Bubbly Flows: Results for Different NaCl Concentrations in Purified Water. ChemEngineering, 2018, 2, 18.	1.0	6
60	Evaluation of Interfacial Heat Transfer Models for Flashing Flow with Two-Fluid CFD. Fluids, 2018, 3, 38.	0.8	21
61	Comparative study of ultrafast X-ray tomography and wire-mesh sensors for vertical gas-liquid pipe flows. Flow Measurement and Instrumentation, 2017, 53, 95-106.	1.0	59
62	Unified modeling of bubbly flows in pipes, bubble columns, and airlift columns. Chemical Engineering Science, 2017, 157, 147-158.	1.9	69
63	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
64	Observations on bubble shapes in bubble columns under different flow conditions. Experimental Thermal and Fluid Science, 2017, 85, 248-256.	1.5	67
65	Computational modelling of flash boiling flows: A literature survey. International Journal of Heat and Mass Transfer, 2017, 111, 246-265.	2.5	109
66	Prediction of Countercurrent Flow Limitation and Its Uncertainty in Horizontal and Slightly Inclined Pipes. Nuclear Technology, 2017, 197, 140-157.	0.7	7
67	Three Dimensional CFD Simulation of Condensation Inside Inclined Tubes. , 2017, , .		0
68	An Eulerian-Eulerian Computational Approach for Simulating Descending Gas-Liquid Flows in Reactors with Solid Foam Internals. Chemical Engineering and Technology, 2017, 40, 2044-2057.	0.9	3
69	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
70	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
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	Lift force acting on single bubbles in linear shear flows. International Journal of Multiphase Flow, 2017, 96, 113-122.	1.6	47

#	ARTICLE	IF	CITATIONS
73	Computational Fluid-Dynamic modeling of the pseudo-homogeneous flow regime in large-scale bubble columns. <i>Chemical Engineering Science</i> , 2017, 160, 144-160.	1.9	55
74	CFD codes benchmark on TOPFLOW-PTS experiment. <i>Nuclear Engineering and Design</i> , 2017, 321, 288-300.	0.8	7
75	Towards a unified approach for modelling uniform and non-uniform bubbly flows. <i>Canadian Journal of Chemical Engineering</i> , 2017, 95, 170-179.	0.9	42
76	Bubble aspect ratio in dense bubbly flows: experimental studies in low Morton-number systems. <i>Journal of Physics: Conference Series</i> , 2017, 923, 012014.	0.3	6
77	Possibilities and Limitations of CFD Simulation for Flashing Flow Scenarios in Nuclear Applications. <i>Energies</i> , 2017, 10, 139.	1.6	34
78	Direct numerical simulation-based Reynolds-averaged closure for bubble-induced turbulence. <i>Physical Review Fluids</i> , 2017, 2, .	1.0	90
79	Prediction Method of Countercurrent Flow Limitation in a Pressurizer Surge Line and Its Evaluation for a 1/10-Scale Model. <i>Journal of Nuclear Engineering and Radiation Science</i> , 2016, 2, .	0.2	1
80	On the hydrodynamics of airlift reactors, Part I: Experiments. <i>Chemical Engineering Science</i> , 2016, 150, 54-65.	1.9	36
81	Particle tracking using micro bubbles in bubbly flows. <i>Chemical Engineering Science</i> , 2016, 153, 155-164.	1.9	30
82	Uncertainty analysis of an interfacial area reconstruction algorithm and its application to two group interfacial area transport equation validation. <i>Nuclear Engineering and Design</i> , 2016, 310, 620-637.	0.8	10
83	Grid studies for the simulation of resolved structures in an Eulerian two-fluid framework. <i>Nuclear Engineering and Design</i> , 2016, 305, 371-377.	0.8	11
84	A strategy for the qualification of multi-fluid approaches for nuclear reactor safety. <i>Nuclear Engineering and Design</i> , 2016, 299, 2-11.	0.8	54
85	Poly-disperse simulation of condensing steam-water flow inside a large vertical pipe. <i>International Journal of Thermal Sciences</i> , 2016, 104, 194-207.	2.6	22
86	On sampling bias in multiphase flows: Particle image velocimetry in bubbly flows. <i>Flow Measurement and Instrumentation</i> , 2016, 48, 36-41.	1.0	32
87	A review on mechanisms and models for the churn-turbulent flow regime. <i>Chemical Engineering Science</i> , 2016, 141, 86-103.	1.9	48
88	Large eddy simulations of the gas-liquid flow in a rectangular bubble column. <i>Nuclear Engineering and Design</i> , 2016, 299, 146-153.	0.8	19
89	Qualification of CFD-models for multiphase flows. <i>Kerntechnik</i> , 2016, 81, 167-169.	0.2	1
90	Experiments on Gas-Liquid Flow in Vertical Pipes. , 2016, , 1-45.		0

#	ARTICLE	IF	CITATIONS
91	Countercurrent Flow Limitation in Slightly Inclined Pipes With Elbows. Journal of Nuclear Engineering and Radiation Science, 2015, 1, .	0.2	5
92	Baseline Model for the Simulation of Bubbly Flows. Chemical Engineering and Technology, 2015, 38, 1972-1978.	0.9	49
93	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
94	Simulations of flashing experiments in TOPFLOW facility with TRACE code. Nuclear Engineering and Design, 2015, 283, 60-70.	0.8	6
95	A new algorithm for segmentation of ultrafast X-ray tomographed gas-liquid flows. International Journal of Thermal Sciences, 2015, 90, 311-322.	2.6	20
96	Heterogeneous nucleation in CFD simulation of flashing flows in converging-diverging nozzles. International Journal of Multiphase Flow, 2015, 74, 106-117.	1.6	50
97	Euler-Euler large eddy simulations for dispersed turbulent bubbly flows. International Journal of Heat and Fluid Flow, 2015, 56, 51-59.	1.1	30
98	3D CFD simulation of flashing flows in a converging-diverging nozzle. Nuclear Engineering and Design, 2015, 292, 149-163.	0.8	55
99	Scale-Adaptive Simulation of a square cross-sectional bubble column. Chemical Engineering Science, 2015, 131, 101-108.	1.9	40
100	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
101	Baseline closure model for dispersed bubbly flow: Bubble coalescence and breakup. Chemical Engineering Science, 2015, 122, 336-349.	1.9	147
102	Transient simulation for large scale flow in bubble columns. Chemical Engineering Science, 2015, 122, 1-13.	1.9	91
103	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
104	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
105	Comparison of CFD simulations on two-phase Pressurized Thermal Shock scenarios. Nuclear Engineering and Design, 2014, 266, 112-128.	0.8	27
106	Application of new closure models for bubble coalescence and breakup to steam-water vertical pipe flow. Nuclear Engineering and Design, 2014, 279, 126-136.	0.8	19
107	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
108	Multiphase Flow System with Suspended Particles. Advances in Mechanical Engineering, 2014, 6, 792050.	0.8	0

#	ARTICLE	IF	CITATIONS
109	Experimental and numerical modelling of the fluid flow in the continuous casting of steel. <i>European Physical Journal: Special Topics</i> , 2013, 220, 151-166.	1.2	9
110	Numerical Simulation of Polydispersed Flow in Bubble Columns with the Inhomogeneous Multi-Size-Group Model. <i>Chemie-Ingenieur-Technik</i> , 2013, 85, 1080-1091.	0.4	29
111	Effects of inlet condition on flow structure of bubbly flow in a rectangular column. <i>Chemical Engineering Science</i> , 2013, 104, 166-176.	1.9	14
112	Numerical modeling of bubble-driven liquid metal flows with external static magnetic field. <i>International Journal of Multiphase Flow</i> , 2013, 48, 32-45.	1.6	33
113	Flashing evaporation under different pressure levels. <i>Nuclear Engineering and Design</i> , 2013, 265, 801-813.	0.8	34
114	Experimental database on steam-water flow with phase transfer in a vertical pipe. <i>Nuclear Engineering and Design</i> , 2013, 265, 1113-1123.	0.8	14
115	Bubble size and radial gas hold-up distributions in a slurry bubble column using ultrafast electron beam X-ray tomography. <i>AIChE Journal</i> , 2013, 59, 1709-1722.	1.8	66
116	CFD Simulation of Flashing Boiling Flow in the Containment Cooling Condensers (CCC) System of KERENA <sub>2</sub> Reactor. , 2013, , .		2
117	Analysis and Applications of a Two-Fluid Multi-Field Hydrodynamic Model for Churn-Turbulent Flows. , 2013, , .		4
118	High-resolution two-phase flow measurement techniques for the generation of experimental data for CFD code qualification. <i>Kerntechnik</i> , 2013, 78, 9-15.	0.2	5
119	Röntgentomographische Untersuchung von Blasengeschwindigkeiten in vertikalen Gas/flüssig-Strömungen. <i>Chemie-Ingenieur-Technik</i> , 2013, 85, 1423-1423.	0.4	1
120	Comparative Simulations of Free Surface Flows Using VOF-Methods and a New Approach for Multi-Scale Interfacial Structures. , 2013, , .		6
121	Image-Processing-Based Study of the Interfacial Behavior of the Countercurrent Gas-Liquid Two-Phase Flow in a Hot Leg of a PWR. <i>Science and Technology of Nuclear Installations</i> , 2012, 2012, 1-10.	0.3	20
122	Experimental Characterisation of the Interfacial Structure during Counter-Current Flow Limitation in a Model of the Hot Leg of a PWR. <i>Science and Technology of Nuclear Installations</i> , 2012, 2012, 1-8.	0.3	7
123	Counter Current Flow Limitation of Gas-Liquid Two-Phase Flow in Nearly Horizontal Pipe. <i>Science and Technology of Nuclear Installations</i> , 2012, 2012, 1-9.	0.3	7
124	Ultrafast electron beam X-ray computed tomography for 2D and 3D two-phase flow imaging. , 2012, , .		4
125	Investigations on Bubble-Induced Turbulence Modeling for Vertical Pipe Bubbly Flows. , 2012, , .		2
126	Multi-Scale Thermalhydraulic Analyses Performed in NURESIM and NURISP Projects. , 2012, , .		4



#	ARTICLE	IF	CITATIONS
127	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
128	Correlation for countercurrent flow limitation in a PWR hot leg. Journal of Nuclear Science and Technology, 2012, 49, 398-407.	0.7	54
129	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
130	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
131	Classification of bubbles in vertical gas-liquid flow: Part 1 - An analysis of experimental data. International Journal of Multiphase Flow, 2012, 39, 121-134.	1.6	19
132	Numerical simulations for steam-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
133	Gas-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
134	Counter-current flow limitation in a model of the hot leg of a PWR - Comparison between air/water and steam/water experiments. Nuclear Engineering and Design, 2012, 245, 113-124.	0.8	12
135	Flow field assessment under a plunging liquid jet. Progress in Nuclear Energy, 2012, 56, 100-110.	1.3	14
136	CFD MODELING OF FREE SURFACE FLOW WITH AND WITHOUT CONDENSATION. Multiphase Science and Technology, 2011, 23, 253-342.	0.2	5
137	Comparison of two turbulence models in simulating an axisymmetric jet evolving into a tank. Journal of Physics: Conference Series, 2011, 318, 042035.	0.3	1
138	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
139	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
140	Extension of the inhomogeneous MUSIC model for bubble condensation. Nuclear Engineering and Design, 2011, 241, 4359-4367.	0.8	35
141	A population balance approach considering heat and mass transfer - Experiments and CFD simulations. Nuclear Engineering and Design, 2011, 241, 2889-2897.	0.8	21
142	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
143	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
144	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

#	ARTICLE	IF	CITATIONS
145	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
146	Gas-liquid flows in medium and large vertical pipes. Chemical Engineering Science, 2011, 66, 872-883.	1.9	42
147	Development of a generalized coalescence and breakup closure for the inhomogeneous MUSIG model. Nuclear Engineering and Design, 2011, 241, 1024-1033.	0.8	60
148	Numerical Calculations for Air-Water Tests on CCFL in Different-Scale Models of a PWR Hot Leg. , 2010, , .		0
149	A new database on the evolution of air-water flows along a large vertical pipe. International Journal of Thermal Sciences, 2010, 49, 664-674.	2.6	56
150	Benchmark database on the evolution of two-phase flows in a vertical pipe. Nuclear Engineering and Design, 2010, 240, 2338-2346.	0.8	28
151	Experimental CFD grade data for stratified two-phase flows. Nuclear Engineering and Design, 2010, 240, 2347-2356.	0.8	10
152	Quality check of wire-mesh sensor measurements in a vertical air/water flow. Flow Measurement and Instrumentation, 2010, 21, 511-520.	1.0	27
153	A literature review on mechanisms and models for the coalescence process of fluid particles. Chemical Engineering Science, 2010, 65, 2851-2864.	1.9	494
154	Comparative study of gas-oil and gas-water two-phase flow in a vertical pipe. Chemical Engineering Science, 2010, 65, 3836-3848.	1.9	87
155	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
156	Modelling of Polydispersed Flows using Two Population Balance Approaches. , 2010, , .		1
157	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
158	Comparison of CCFL Experiments Performed in Two Different Models of the Hot Leg of a PWR With Rectangular Cross-Section. , 2010, , .		0
159	Optimization of a Two-Fluid Hydrodynamic Model of Churn-Turbulent Flows. , 2009, , .		4
160	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
161	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
162	CFD Simulation of Polydispersed Bubbly Two-Phase Flow around an Obstacle. Science and Technology of Nuclear Installations, 2009, 2009, 1-12.	0.3	5

#	ARTICLE	IF	CITATIONS
163	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
164	CFD Approaches for Modelling Bubble Entrainment by an Impinging Jet. Science and Technology of Nuclear Installations, 2009, 2009, 1-12.	0.3	9
165	Computational Fluid Dynamics for Gas-Liquid Flows. Science and Technology of Nuclear Installations, 2009, 2009, 1-1.	0.3	0
166	Investigation of flow development of co-current gas-liquid vertical slug flow. International Journal of Multiphase Flow, 2009, 35, 335-348.	1.6	45
167	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
168	CFD modelling of polydispersed bubbly two-phase flow around an obstacle. Nuclear Engineering and Design, 2009, 239, 2372-2381.	0.8	31
169	A literature review of theoretical models for drop and bubble breakup in turbulent dispersions. Chemical Engineering Science, 2009, 64, 3389-3406.	1.9	523
170	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
171	Air Entrainment by Impinging Jets: Experimental Identification of the Key Phenomena and Approaches for Their Simulation in CFD. , 2009, , .		2
172	Experimental investigation on air entrainment below impinging jets by means of video observations and image processing. , 2009, , .		1
173	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
174	Development and Validation of a Multifield Model of Churn-Turbulent Gas/Liquid Flows. , 2009, , .		1
175	Prediction of the evolution of the dispersed phase in bubbly flow problems. Applied Mathematical Modelling, 2008, 32, 1813-1833.	2.2	21
176	Validation of CFD models for mono- and polydisperse air-water two-phase flows in pipes. Nuclear Engineering and Design, 2008, 238, 647-659.	0.8	189
177	The inhomogeneous MUSIG model for the simulation of polydispersed flows. Nuclear Engineering and Design, 2008, 238, 1690-1702.	0.8	227
178	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
179	The characteristics of gas/liquid flow in large risers at high pressures. International Journal of Multiphase Flow, 2008, 34, 461-476.	1.6	49
180	Air/Water Counter-Current Flow Experiments in a Model of the Hot Leg of a Pressurised Water Reactor. , 2008, , .		0

#	ARTICLE	IF	CITATIONS
181	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
182	Modeling the Evolution of Bubbly Flow along a Large Vertical Pipe. Nuclear Technology, 2007, 158, 291-303.	0.7	8
183	Planar Array Sensor for High-speed Component Distribution Imaging in Fluid Flow Applications. Sensors, 2007, 7, 2430-2445.	2.1	26
184	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
185	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
186	Evolution of the structure of a gas-liquid two-phase flow in a large vertical pipe. Nuclear Engineering and Design, 2007, 237, 1848-1861.	0.8	97
187	Bubble-wall interactions in a vertical gas-liquid flow: Bouncing, sliding and bubble deformations. Chemical Engineering Science, 2007, 62, 1591-1605.	1.9	42
188	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
189	Investigations on the Stability of the Flow Characteristics in a Bubble Column. Chemical Engineering and Technology, 2006, 29, 1066-1072.	0.9	29
190	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
191	On the modelling of bubbly flow in vertical pipes. Nuclear Engineering and Design, 2005, 235, 597-611.	0.8	165
192	Development of co-current air-water flow in a vertical pipe. International Journal of Multiphase Flow, 2005, 31, 1304-1328.	1.6	164
193	Influence of the lift force on the stability of a bubble column. Chemical Engineering Science, 2005, 60, 3609-3619.	1.9	102
194	Experimental investigation and modeling of air/water flows in vertical pipes. Heat and Mass Transfer, 2004, , 101-115.	0.2	0
195	Pulsations of the mass flow rate during pressure relief. International Journal of Thermal Sciences, 2003, 42, 5-14.	2.6	0
196	Evolution of the two-phase flow in a vertical tube-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
197	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
198	BRICK - A One-Dimensional Simulation Tool for Multiphase Flow in Vessels. Chemical Engineering and Technology, 2000, 23, 845-849.	0.9	0

#	ARTICLE	IF	CITATIONS
199	A new one-dimensional particle-in-cell model for multiphase vessel flow. International Journal of Thermal Sciences, 1999, 38, 758-768.	2.6	2
200	BRICK - Ein 1-D-Simulationstool für Mehrphasenströmungen in Behältern. Chemie-Ingenieur-Technik, 1999, 71, 713-717.	0.4	0