

Dominique Legendre

List of Publications by Year in descending order

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Version: 2024-02-01

62
papers

2,735
citations

218677

26
h-index

175258

52
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62
docs citations

62
times ranked

1828
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of spheroid bubble interface contamination on gas-liquid mass transfer at intermediate Reynolds numbers: From DNS to Sherwood numbers. <i>Chemical Engineering Science</i> , 2022, 248, 116979.	3.8	8
2	Stochastic wall model for turbulent pipe flow using Immersed Boundary Method and Large Eddy Simulation. <i>Computers and Fluids</i> , 2022, 239, 105419.	2.5	4
3	Towards Tomography-Based Real-Time Control of Multiphase Flows: A Proof of Concept in Inline Fluid Separation. <i>Sensors</i> , 2022, 22, 4443.	3.8	2
4	How molecular effects affect solutal Marangoni flows. <i>Physical Review Fluids</i> , 2022, 7, .	2.5	1
5	A hybrid VOF-IBM method for the simulation of freezing liquid films and freezing drops. <i>Journal of Computational Physics</i> , 2021, 432, 110160.	3.8	15
6	Comparison of Different Numerical Interface Capturing Methods for the Simulation of Faraday Waves. <i>Processes</i> , 2021, 9, 948.	2.8	1
7	On the spreading of high-pressure spray-generated liquid wall films. <i>International Journal of Multiphase Flow</i> , 2021, 139, 103619.	3.4	3
8	Fluid inertia effects on the motion of small spherical bubbles or solid spheres in turbulent flows. <i>Journal of Fluid Mechanics</i> , 2021, 921, .	3.4	3
9	Bubbles determine the amount of alcohol in Mezcal. <i>Scientific Reports</i> , 2020, 10, 11014.	3.3	11
10	Numerical study of conjugate mass transfer from a spherical droplet at moderate Reynolds number. <i>International Journal of Heat and Mass Transfer</i> , 2020, 157, 119958.	4.8	11
11	Lifetime of Surface Bubbles in Surfactant Solutions. <i>Langmuir</i> , 2020, 36, 7749-7764.	3.5	17
12	Rivulet cascade from falling liquid films with side contact lines. <i>Physical Review Fluids</i> , 2020, 5, .	2.5	5
13	Control of a Gas-Liquid Inline Swirl Separator Based on Tomographic Measurements. <i>IFAC-PapersOnLine</i> , 2020, 53, 11483-11490.	0.9	6
14	Model for the dynamics of micro-bubbles in high-Reynolds-number flows. <i>Journal of Fluid Mechanics</i> , 2019, 879, 554-578.	3.4	13
15	On the use of a friction model in a Volume of Fluid solver for the simulation of dynamic contact lines. <i>Journal of Computational Physics</i> , 2019, 393, 29-45.	3.8	10
16	Image processing for the experimental investigation of dense dispersed flows: Application to bubbly flows. <i>International Journal of Multiphase Flow</i> , 2019, 111, 16-30.	3.4	19
17	Drag modulation in turbulent boundary layers subject to different bubble injection strategies. <i>Computers and Fluids</i> , 2019, 178, 73-87.	2.5	9
18	Basset-Boussinesq history force of a fluid sphere. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	13

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19	Sliding motion of a bubble against an inclined wall from moderate to high bubble Reynolds number. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	5
20	Enhancement of a 2D front-tracking algorithm with a non-uniform distribution of Lagrangian markers. <i>Journal of Computational Physics</i> , 2018, 358, 173-200.	3.8	4
21	On single bubble mass transfer in a volatile liquid. <i>International Journal of Heat and Mass Transfer</i> , 2018, 125, 1144-1155.	4.8	12
22	Influence of Soluble Surfactants and Deformation on the Dynamics of Centered Bubbles in Cylindrical Microchannels. <i>Langmuir</i> , 2018, 34, 10048-10062.	3.5	24
23	A penalization method for the simulation of bubbly flows. <i>Journal of Computational Physics</i> , 2018, 374, 563-590.	3.8	3
24	van der Waals interaction between a moving nano-cylinder and a liquid thin film. <i>Soft Matter</i> , 2017, 13, 3822-3830.	2.7	4
25	Existence of Moffatt vortices at a moving contact line between two fluids. <i>Physical Review Fluids</i> , 2017, 2, .	2.5	0
26	Conditions for the sliding-bouncing transition for the interaction of a bubble with an inclined wall. <i>Physical Review Fluids</i> , 2016, 1, .	2.5	10
27	On the combined effects of surface tension force calculation and interface advection on spurious currents within Volume of Fluid and Level Set frameworks. <i>Journal of Computational Physics</i> , 2015, 297, 611-636.	3.8	87
28	A note on the onset of recirculation in a 2D Couette flow over a wavy bottom. <i>Physics of Fluids</i> , 2015, 27, 014108.	4.0	5
29	Comparison between numerical models for the simulation of moving contact lines. <i>Computers and Fluids</i> , 2015, 113, 2-13.	2.5	42
30	Dynamics and mass transfer of rising bubbles in a homogenous swarm at large gas volume fraction. <i>Journal of Fluid Mechanics</i> , 2015, 763, 254-285.	3.4	72
31	Numerical simulation of bubble dispersion in turbulent Taylor-Couette flow. <i>Physics of Fluids</i> , 2014, 26, .	4.0	48
32	Numerical Simulation of Sliding Drops on an Inclined Solid Surface. <i>Environmental Science and Engineering</i> , 2014, , 47-69.	0.2	5
33	Mixing and recirculation characteristics of gas-liquid Taylor flow in microreactors. <i>Chemical Engineering Research and Design</i> , 2013, 91, 2225-2234.	5.6	25
34	Experiments and modelling of a draft tube airlift reactor operated at high gas throughputs. <i>Chemical Engineering Science</i> , 2013, 104, 32-43.	3.8	4
35	Mass or heat transfer inside a spherical gas bubble at low to moderate Reynolds number. <i>International Journal of Heat and Mass Transfer</i> , 2013, 67, 1096-1105.	4.8	43
36	A model of bubble-induced turbulence based on large-scale wake interactions. <i>Journal of Fluid Mechanics</i> , 2013, 719, 362-387.	3.4	56

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37	AFM Tip Effect on a Thin Liquid Film. Langmuir, 2013, 29, 7749-7757.	3.5	9
38	Numerical simulation of spreading drops. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2013, 432, 29-37.	4.7	51
39	Inertial coalescence of droplets on a partially wetting substrate. Physics of Fluids, 2013, 25, .	4.0	23
40	Nanoscale Deformation of a Liquid Surface. Physical Review Letters, 2012, 108, 106104.	7.8	21
41	Unsteady rising of clean bubble in low viscosity liquid. Bubble Science, Engineering & Technology, 2012, 4, 4-11.	0.2	8
42	On the deformation of gas bubbles in liquids. Physics of Fluids, 2012, 24, .	4.0	130
43	Numerical simulation of bubble generation in a T-junction. Computers and Fluids, 2012, 56, 49-60.	2.5	31
44	Hydrodynamics of gas-liquid Taylor flow in rectangular microchannels. Microfluidics and Nanofluidics, 2012, 12, 355-369.	2.2	86
45	Interaction between two spherical bubbles rising in a viscous liquid. Journal of Fluid Mechanics, 2011, 673, 406-431.	3.4	82
46	Experimental study of mass transfer in a dense bubble swarm. Chemical Engineering Science, 2011, 66, 3432-3440.	3.8	52
47	Experimental characterization of the agitation generated by bubbles rising at high Reynolds number. Journal of Fluid Mechanics, 2010, 643, 509-539.	3.4	155
48	Numerical simulation of static and sliding drop with contact angle hysteresis. Journal of Computational Physics, 2010, 229, 2453-2478.	3.8	156
49	Mass or heat transfer from spheroidal gas bubbles rising through a stationary liquid. Chemical Engineering Science, 2010, 65, 6296-6309.	3.8	59
50	The coefficient of restitution for air bubbles colliding against solid walls in viscous liquids. Physics of Fluids, 2009, 21, .	4.0	57
51	Reversal of the lift force on an oblate bubble in a weakly viscous linear shear flow. Journal of Fluid Mechanics, 2009, 628, 23-41.	3.4	78
52	Influence of slip on the dynamics of two-dimensional wakes. Journal of Fluid Mechanics, 2009, 633, 437-447.	3.4	73
53	Enhancement of wall friction by fixed cap bubbles. Physics of Fluids, 2008, 20, 051704.	4.0	10
54	The effect of confinement on the motion of a single clean bubble. Journal of Fluid Mechanics, 2008, 616, 419-443.	3.4	40

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55	On the relation between the drag and the vorticity produced on a clean bubble. <i>Physics of Fluids</i> , 2007, 19, 018102.	4.0	28
56	Forces on a high-Reynolds-number spherical bubble in a turbulent flow. <i>Journal of Fluid Mechanics</i> , 2005, 532, 53-62.	3.4	56
57	Hydrodynamic interactions between two spherical bubbles rising side by side in a viscous liquid. <i>Journal of Fluid Mechanics</i> , 2003, 497, 133-166.	3.4	162
58	Influence of gravity upon the bubble distribution in a turbulent pipe flow: Comparison between numerical simulations and experimental data. <i>Journal De Chimie Physique Et De Physico-Chimie Biologique</i> , 1999, 96, 951-957.	0.2	17
59	The viscous drag force on a spherical bubble with a time-dependent radius. <i>Physics of Fluids</i> , 1998, 10, 550-554.	4.0	144
60	Thermal and dynamic evolution of a spherical bubble moving steadily in a superheated or subcooled liquid. <i>Physics of Fluids</i> , 1998, 10, 1256-1272.	4.0	77
61	The lift force on a spherical bubble in a viscous linear shear flow. <i>Journal of Fluid Mechanics</i> , 1998, 368, 81-126.	3.4	417
62	A note on the lift force on a spherical bubble or drop in a low-Reynolds-number shear flow. <i>Physics of Fluids</i> , 1997, 9, 3572-3574.	4.0	113