Peter Dm Spelt

List of Publications by Year
in descending order

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48 papers	2,566 citations	279798 23 h-index	206112 48 g-index
49 all docs	49 docs citations	49 times ranked	1938 citing authors

#	Article	IF	Citations
1	Diffuse interface model for incompressible two-phase flows with large density ratios. Journal of Computational Physics, 2007, 226, 2078-2095.	3.8	524
2	Wetting condition in diffuse interface simulations of contact line motion. Physical Review E, 2007, 75, 046708.	2.1	261
3	Numerical Simulations of Flows with Moving Contact Lines. Annual Review of Fluid Mechanics, 2014, 46, 97-119.	25.0	248
4	A level-set approach for simulations of flows with multiple moving contact lines with hysteresis. Journal of Computational Physics, 2005, 207, 389-404.	3.8	170
5	On the motion of gas bubbles in homogeneous isotropic turbulence. Journal of Fluid Mechanics, 1997, 336, 221-244.	3.4	133
6	Inertial effects in droplet spreading: a comparison between diffuse-interface and level-set simulations. Journal of Fluid Mechanics, 2007, 576, 287-296.	3.4	125
7	Linear instability of pressure-driven channel flow of a Newtonian and a Herschel-Bulkley fluid. Physics of Fluids, 2007, 19, .	4.0	90
8	Onset of motion of a three-dimensional droplet on a wall in shear flow at moderate Reynolds numbers. Journal of Fluid Mechanics, 2008, 599, 341-362.	3.4	90
9	Propagation of capillary waves and ejection of small droplets in rapid droplet spreading. Journal of Fluid Mechanics, 2012, 697, 92-114.	3.4	65
10	A model for resin viscosity during cure in the resin transfer moulding process. Composites Part A: Applied Science and Manufacturing, 2002, 33, 1497-1503.	7.6	64
11	Sliding, pinch-off and detachment of a droplet on a wall in shear flow. Journal of Fluid Mechanics, 2010, 644, 217-244.	3.4	56
12	Shear flow past two-dimensional droplets pinned or moving on an adhering channel wall at moderate Reynolds numbers: a numerical study. Journal of Fluid Mechanics, 2006, 561, 439.	3.4	54
13	Linear and nonlinear spatio-temporal instability in laminar two-layer flows. Journal of Fluid Mechanics, 2010, 656, 458-480.	3.4	49
14	Properties and Averaged Equations for Flows of Bubbly Liquids. Flow, Turbulence and Combustion, 1997, 58, 337-386.	0.2	47
15	Finite-Weber-number motion of bubbles through a nearly inviscid liquid. Journal of Fluid Mechanics, 2002, 460, 241-280.	3.4	44
16	An efficient computational model for macroscale simulations of moving contact lines. Journal of Computational Physics, 2013, 242, 37-52.	3.8	44
17	Creeping flows of power-law fluids through periodic arrays of elliptical cylinders. Journal of Non-Newtonian Fluid Mechanics, 2003, 111, 211-228.	2.4	36
18	Validation and modification of asymptotic analysis of slow and rapid droplet spreading by numerical simulation. Journal of Fluid Mechanics, 2013, 715, 283-313.	3.4	32

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19	Numerical simulation of the onset of slug initiation in laminar horizontal channel flow. International Journal of Multiphase Flow, 2008, 34, 206-225.	3.4	31
20	Linear instability, nonlinear instability and ligament dynamics in three-dimensional laminar two-layer liquidâ€“liquid flows. Journal of Fluid Mechanics, 2014, 750, 464-506.	3.4	31
21	Shock emission from collapsing gas bubbles. Journal of Fluid Mechanics, 2010, 646, 363-373.	3.4	30
22	Mass conservation and reduction of parasitic interfacial waves in level-set methods for the numerical simulation of two-phase flows: A comparative study. International Journal of Multiphase Flow, 2017, 95, 235-256.	3.4	26
23	Buoyancy-driven bubbly flows: ordered and free rise at small and intermediate volume fraction. Journal of Fluid Mechanics, 2017, 816, 94-141.	3.4	25
24	Attenuation of sound in concentrated suspensions: theory and experiments. Journal of Fluid Mechanics, 2001, 430, 51-86.	3.4	23
25	Flows of inelastic non-Newtonian fluids through arrays of aligned cylinders. Part 1. Creeping flows. Journal of Engineering Mathematics, 2005, 51, 57-80.	1.2	23
26	Inertial coalescence of droplets on a partially wetting substrate. Physics of Fluids, 2013, 25, .	4.0	23
27	Interfacial instability in turbulent flow over a liquid film in a channel. International Journal of Multiphase Flow, 2011, 37, 812-830.	3.4	22
28	Creeping flows of Bingham fluids through arrays of aligned cylinders. Journal of Non-Newtonian Fluid Mechanics, 2005, 129, 66-74.	2.4	17
29	Three-dimensional dynamics of oblate and prolate capsules in shear flow. Physical Review E, 2013, 88, 053021.	2.1	17
30	Absolute linear instability in laminar and turbulent gasâ€“liquid two-layer channel flow. Journal of Fluid Mechanics, 2013, 714, 58-94.	3.4	16
31	Interfacial instability of turbulent two-phase stratified flow: Pressure-driven flow and non-Newtonian layers. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 489-508.	2.4	13
32	Flows of inelastic non-Newtonian fluids through arrays of aligned cylinders. Part 2. Inertial effects for square arrays. Journal of Engineering Mathematics, 2005, 51, 81-97.	1.2	12
33	A level-set method for large-scale simulations of three-dimensional flows with moving contact lines. Journal of Computational Physics, 2017, 348, 151-170.	3.8	12
34	Collapse of a bubble in an electric field. Physical Review E, 2006, 74, 046309.	2.1	11
35	Turbulent flow over a liquid layer revisited: multi-equation turbulence modelling. Journal of Fluid Mechanics, 2011, 683, 357-394.	3.4	11
36	Determination of particle size distributions from acoustic wave propagation measurements. Physics of Fluids, 1999, 11, 1065-1080.	4.0	10

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37	Simulations of viscous and compressible gasâ€“gas flows using high-order finite difference schemes. Journal of Computational Physics, 2018, 361, 56-81.	3.8	10
38	Sustained inertial-capillary oscillations and jet formation in displacement flow in a tube. Physics of Fluids, 2011, 23, .	4.0	9
39	Level-set simulations of a 2D topological rearrangement in a bubble assembly: effects of surfactant properties. Journal of Fluid Mechanics, 2018, 838, 222-247.	3.4	9
40	Critical strength of an electric field whereby aÂbubble can adopt a steady shape. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2009, 465, 3127-3143.	2.1	8
41	Non-isothermal droplet spreading/dewetting andÂits reversal. Journal of Fluid Mechanics, 2015, 776, 74-95.	3.4	8
42	Dynamics of thin free films with reaction-driven density and viscosity variations. Physics of Fluids, 2005, 17, 122102.	4.0	7
43	An analytical connection between temporal and spatio-temporal growth rates in linear stability analysis. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20130171.	2.1	7
44	The effective diffusivity of ordered and freely evolving bubbly suspensions. Journal of Fluid Mechanics, 2018, 840, 215-237.	3.4	7
45	Electrically induced bubble deformation, translation and collapse. Journal of Engineering Mathematics, 2009, 65, 291-310.	1.2	5
46	Instability of pressure-driven gasâ€“liquid two-layer channel flows in two and three dimensions. Journal of Fluid Mechanics, 2018, 849, 1-34.	3.4	3
47	Collisions of liquid coated solid spherical particles in a viscous fluid. Journal of Colloid and Interface Science, 2006, 301, 594-606.	9.4	1
48	The response of a 2D droplet on a wall executing small sinusoidal vibrations. International Journal of Multiphase Flow, 2021, 142, 103732.	3.4	1