David Halpern

List of Publications by Year
in descending order

40 papers	1,336 citations	393982 19 h-index	344852 36 g-index
41 all docs	41 docs citations	41 times ranked	582 citing authors

#	Article	IF	Citations
1	A two-fluid arrangement with bounded van der Waals body forces. Part 1. The Young-Laplace equilibria. Differences from comparable gravity systems. Journal of Engineering Mathematics, 2021, 131, 1.	0.6	0
2	Surfactant- and gravity-dependent instability of two-layer channel flows: linear theory covering all wavelengths. Part 1. â€˜Long-waveâ€™ regimes. Journal of Fluid Mechanics, 2019, 863, 150-184.	1.4	7
3	Surfactant- and gravity-dependent instability of two-layer channel flows: linear theory covering all wavelengths. Part 2. Mid-wave regimes. Journal of Fluid Mechanics, 2019, 863, 185-214.	1.4	6
4	Slip-enhanced drop formation in a liquid falling down a vertical fibre. Journal of Fluid Mechanics, 2017, 820, 42-60.	1.4	19
5	Surfactant and gravity dependent instability of two-layer Couette flows and its nonlinearÂsaturation. Journal of Fluid Mechanics, 2017, 826, 158-204.	1.4	14
6	Reduced-Dimension Modeling Approach for Simulating Recruitment/De-recruitment Dynamics in the Lung. Annals of Biomedical Engineering, 2016, 44, 3619-3631.	1.3	8
7	Reduced-dimension model of liquid plug propagation in tubes. Physical Review Fluids, 2016, 1, .	1.0	9
8	Slip-induced suppression of Marangoni film thickening in surfactant-retarded Landauâ€“Levichâ€“Bretherton flows. Journal of Fluid Mechanics, 2015, 781, 578-594.	1.4	5
9	A model of surfactant-induced surface tension effects on the parenchymal tethering of pulmonary airways. Journal of Biomechanics, 2013, 46, 319-328.	0.9	21
10	The influence of surfactant on the propagation of a semi-infinite bubble through a liquid-filled compliant channel. Journal of Fluid Mechanics, 2012, 698, 125-159.	1.4	10
11	Numerical study of flow fields in an airway closure model. Journal of Fluid Mechanics, 2011, 677, 483-502.	1.4	18
12	Experimental study of flow fields in an airway closure model. Journal of Fluid Mechanics, 2010, 647, 391-402.	1.4	24
13	The effect of viscoelasticity on the stability of a pulmonary airway liquid layer. Physics of Fluids, 2010, 22, 11901.	1.6	33
14	Liquid and surfactant delivery into pulmonary airways. Respiratory Physiology and Neurobiology, 2008, 163, 222-231.	0.7	48
15	Nonlinear evolution, travelling waves, and secondary instability of sheared-film flows with insoluble surfactants. Journal of Fluid Mechanics, 2008, 594, 125-156.	1.4	9
16	Electroosmotic Flow in a Microcavity with Nonuniform Surface Charges. Langmuir, 2007, 23, 9505-9512.	1.6	8
17	Linear stability of a surfactant-laden annular film in a time-periodic pressure-driven flow through a capillary. Journal of Colloid and Interface Science, 2005, 285, 769-780.	5.0	11
18	Effect of inertia on the insoluble-surfactant instability of a shear flow. Physical Review E, 2005, 71, 016302.	0.8	12

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19	Unsteady bubble propagation in a flexible channel: predictions of a viscous stick-slip instability. Journal of Fluid Mechanics, 2005, 528, 53-86.	1.4	28
20	Surfactant and Airway Liquid Flows. Lung Biology in Health and Disease, 2005, , 191-227.	0.1	11
21	The Effect of Airway Wall Motion on Surfactant Delivery. Journal of Biomechanical Engineering, 2004, 126, 410-419.	0.6	11
22	Nonlinear saturation of the Rayleigh instability due to oscillatory flow in a liquid-lined tube. Journal of Fluid Mechanics, 2003, 492, 251-270.	1.4	44
23	Destabilization of a creeping flow by interfacial surfactant: linear theory extended to all wavenumbers. Journal of Fluid Mechanics, 2003, 485, 191-220.	1.4	86
24	Cycle-induced flow and transport in a model of alveolar liquid lining. Journal of Fluid Mechanics, 2003, 483, 1-36.	1.4	8
25	Stokes-flow instability due to interfacial surfactant. Physics of Fluids, 2002, 14, L45.	1.6	82
26	A semi-infinite bubble advancing into a planar tapered channel. Physics of Fluids, 2002, 14, 431-442.	1.6	14
27	The steady propagation of a bubble in a flexible-walled channel: Asymptotic and computational models. Physics of Fluids, 2002, 14, 443-457.	1.6	55
28	A model of chaotic evolution of an ultrathin liquid film flowing down an inclined plane. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2001, 192, 377-385.	2.3	5
29	A Dual-Reciprocity Boundary Element Method for Evaluating Bulk Convective Transport of Surfactant in Free-Surface Flows. Journal of Computational Physics, 2001, 171, 534-559.	1.9	23
30	Mathematical Model of Gas Bubble Evolution in a Straight Tube. Journal of Biomechanical Engineering, 1999, 121, 505-513.	0.6	5
31	The stress singularity in surfactant-driven thin-film flows. Part 1. Viscous effects. Journal of Fluid Mechanics, 1998, 372, 273-300.	1.4	27
32	The steady motion of a semi-infinite bubble through a flexible-walled channel. Journal of Fluid Mechanics, 1996, 319, 25.	1.4	120
33	Boundary Element Analysis of the Time-Dependent Motion of a Semi-infinite Bubble in a Channel. Journal of Computational Physics, 1994, 115, 366-375.	1.9	88
34	Transport of a passive solute by surfactant-driven flows. Chemical Engineering Science, 1994, 49, 1107-1117.	1.9	38
35	Surfactant Effects on Fluid-Elastic Instabilities of Liquid-Lined Flexible Tubes: A Model of Airway Closure. Journal of Biomechanical Engineering, 1993, 115, 271-277.	0.6	138
36	The squeezing of red blood cells through parallel-sided channels with near-minimal widths. Journal of Fluid Mechanics, 1992, 244, 307.	1.4	16

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37	Fluid-elastic instabilities of liquid-lined flexible tubes. Journal of Fluid Mechanics, 1992, 244, 615.	1.4	137
38	Dynamics and transport of a localized soluble surfactant on a thin film. Journal of Fluid Mechanics, 1992, 237, 1-11.	1.4	74
39	Viscous motion of disk-shaped particles through parallel-sided channels with near-minimal widths. Journal of Fluid Mechanics, 1991, 231, 545-560.	1.4	15
40	The squeezing of red blood cells through capillaries with near-minimal diameters. Journal of Fluid Mechanics, 1989, 203, 381-400.	1.4	39