

David Halpern

List of Publications by Year in descending order

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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	Surfactant Effects on Fluid-Elastic Instabilities of Liquid-Lined Flexible Tubes: A Model of Airway Closure. <i>Journal of Biomechanical Engineering</i> , 1993, 115, 271-277.	0.6	138
2	Fluid-elastic instabilities of liquid-lined flexible tubes. <i>Journal of Fluid Mechanics</i> , 1992, 244, 615.	1.4	137
3	The steady motion of a semi-infinite bubble through a flexible-walled channel. <i>Journal of Fluid Mechanics</i> , 1996, 319, 25.	1.4	120
4	Boundary Element Analysis of the Time-Dependent Motion of a Semi-infinite Bubble in a Channel. <i>Journal of Computational Physics</i> , 1994, 115, 366-375.	1.9	88
5	Destabilization of a creeping flow by interfacial surfactant: linear theory extended to all wavenumbers. <i>Journal of Fluid Mechanics</i> , 2003, 485, 191-220.	1.4	86
6	Stokes-flow instability due to interfacial surfactant. <i>Physics of Fluids</i> , 2002, 14, L45.	1.6	82
7	Dynamics and transport of a localized soluble surfactant on a thin film. <i>Journal of Fluid Mechanics</i> , 1992, 237, 1-11.	1.4	74
8	The steady propagation of a bubble in a flexible-walled channel: Asymptotic and computational models. <i>Physics of Fluids</i> , 2002, 14, 443-457.	1.6	55
9	Liquid and surfactant delivery into pulmonary airways. <i>Respiratory Physiology and Neurobiology</i> , 2008, 163, 222-231.	0.7	48
10	Nonlinear saturation of the Rayleigh instability due to oscillatory flow in a liquid-lined tube. <i>Journal of Fluid Mechanics</i> , 2003, 492, 251-270.	1.4	44
11	The squeezing of red blood cells through capillaries with near-minimal diameters. <i>Journal of Fluid Mechanics</i> , 1989, 203, 381-400.	1.4	39
12	Transport of a passive solute by surfactant-driven flows. <i>Chemical Engineering Science</i> , 1994, 49, 1107-1117.	1.9	38
13	The effect of viscoelasticity on the stability of a pulmonary airway liquid layer. <i>Physics of Fluids</i> , 2010, 22, 11901.	1.6	33
14	Unsteady bubble propagation in a flexible channel: predictions of a viscous stick-slip instability. <i>Journal of Fluid Mechanics</i> , 2005, 528, 53-86.	1.4	28
15	The stress singularity in surfactant-driven thin-film flows. Part 1. Viscous effects. <i>Journal of Fluid Mechanics</i> , 1998, 372, 273-300.	1.4	27
16	Experimental study of flow fields in an airway closure model. <i>Journal of Fluid Mechanics</i> , 2010, 647, 391-402.	1.4	24
17	A Dual-Reciprocity Boundary Element Method for Evaluating Bulk Convective Transport of Surfactant in Free-Surface Flows. <i>Journal of Computational Physics</i> , 2001, 171, 534-559.	1.9	23
18	A model of surfactant-induced surface tension effects on the parenchymal tethering of pulmonary airways. <i>Journal of Biomechanics</i> , 2013, 46, 319-328.	0.9	21

#	ARTICLE	IF	CITATIONS
19	Slip-enhanced drop formation in a liquid falling down a vertical fibre. <i>Journal of Fluid Mechanics</i> , 2017, 820, 42-60.	1.4	19
20	Numerical study of flow fields in an airway closure model. <i>Journal of Fluid Mechanics</i> , 2011, 677, 483-502.	1.4	18
21	The squeezing of red blood cells through parallel-sided channels with near-minimal widths. <i>Journal of Fluid Mechanics</i> , 1992, 244, 307.	1.4	16
22	Viscous motion of disk-shaped particles through parallel-sided channels with near-minimal widths. <i>Journal of Fluid Mechanics</i> , 1991, 231, 545-560.	1.4	15
23	A semi-infinite bubble advancing into a planar tapered channel. <i>Physics of Fluids</i> , 2002, 14, 431-442.	1.6	14
24	Surfactant and gravity dependent instability of two-layer Couette flows and its nonlinear saturation. <i>Journal of Fluid Mechanics</i> , 2017, 826, 158-204.	1.4	14
25	Effect of inertia on the insoluble-surfactant instability of a shear flow. <i>Physical Review E</i> , 2005, 71, 016302.	0.8	12
26	The Effect of Airway Wall Motion on Surfactant Delivery. <i>Journal of Biomechanical Engineering</i> , 2004, 126, 410-419.	0.6	11
27	Linear stability of a surfactant-laden annular film in a time-periodic pressure-driven flow through a capillary. <i>Journal of Colloid and Interface Science</i> , 2005, 285, 769-780.	5.0	11
28	Surfactant and Airway Liquid Flows. <i>Lung Biology in Health and Disease</i> , 2005, , 191-227.	0.1	11
29	The influence of surfactant on the propagation of a semi-infinite bubble through a liquid-filled compliant channel. <i>Journal of Fluid Mechanics</i> , 2012, 698, 125-159.	1.4	10
30	Nonlinear evolution, travelling waves, and secondary instability of sheared-film flows with insoluble surfactants. <i>Journal of Fluid Mechanics</i> , 2008, 594, 125-156.	1.4	9
31	Reduced-dimension model of liquid plug propagation in tubes. <i>Physical Review Fluids</i> , 2016, 1, .	1.0	9
32	Cycle-induced flow and transport in a model of alveolar liquid lining. <i>Journal of Fluid Mechanics</i> , 2003, 483, 1-36.	1.4	8
33	Electroosmotic Flow in a Microcavity with Nonuniform Surface Charges. <i>Langmuir</i> , 2007, 23, 9505-9512.	1.6	8
34	Reduced-Dimension Modeling Approach for Simulating Recruitment/De-recruitment Dynamics in the Lung. <i>Annals of Biomedical Engineering</i> , 2016, 44, 3619-3631.	1.3	8
35	Surfactant- and gravity-dependent instability of two-layer channel flows: linear theory covering all wavelengths. Part 1. "Long-wave" regimes. <i>Journal of Fluid Mechanics</i> , 2019, 863, 150-184.	1.4	7
36	Surfactant- and gravity-dependent instability of two-layer channel flows: linear theory covering all wavelengths. Part 2. Mid-wave regimes. <i>Journal of Fluid Mechanics</i> , 2019, 863, 185-214.	1.4	6

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37	Mathematical Model of Gas Bubble Evolution in a Straight Tube. Journal of Biomechanical Engineering, 1999, 121, 505-513.	0.6	5
38	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
39	Slip-induced suppression of Marangoni film thickening in surfactant-retarded Landau-Levich-Bretherton flows. Journal of Fluid Mechanics, 2015, 781, 578-594.	1.4	5
40	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