

Stephen K Wilson

List of Publications by Year in descending order

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docs citations

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times ranked

1599
citing authors

#	ARTICLE	IF	CITATIONS
1	Young and Youngâ€“Laplace equations for a static ridge of nematic liquid crystal, and transitions between equilibrium states. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, 20210849.	1.0	3
2	Unsteady coating flow on a rotating cylinder in the presence of an irrotational airflow with circulation. Physics of Fluids, 2022, 34, 043105.	1.6	3
3	Coating flow on a rotating cylinder in the presence of an irrotational airflow with circulation. Journal of Fluid Mechanics, 2022, 932, .	1.4	1
4	The ventilation of buildings and other mitigating measures for COVID-19: a focus on wintertime. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2021, 477, 20200855.	1.0	47
5	The Lifetimes of Evaporating Sessile Droplets of Water Can Be Strongly Influenced by Thermal Effects. Fluids, 2021, 6, 141.	0.8	7
6	Contact-line deposits from multiple evaporating droplets. Physical Review Fluids, 2021, 6, .	1.0	17
7	Evaporation of a thin droplet in a shallow well: theory and experiment. Journal of Fluid Mechanics, 2021, 927, .	1.4	7
8	The Strong Influence of Thermal Effects on the Lifetime of an Evaporating Droplet. , 2021, , 105-109.		0
9	Rivulet flow over and through a permeable membrane. Physical Review Fluids, 2021, 6, .	1.0	3
10	Competitive evaporation of multiple sessileÂdroplets. Journal of Fluid Mechanics, 2020, 884, .	1.4	47
11	On the Effect of Substrate Viscoelasticity on the Evaporation Kinetics and Deposition Patterns of Nanosuspension Drops. Langmuir, 2020, 36, 204-213.	1.6	21
12	Rivulet flow down a slippery substrate. Physics of Fluids, 2020, 32, 072011.	1.6	4
13	Transient flow-driven distortion of a nematic liquid crystal in channel flow with dissipative weak planar anchoring. Physical Review E, 2020, 102, 062703.	0.8	5
14	The shielding effect extends the lifetimes of two-dimensional sessile droplets. Journal of Engineering Mathematics, 2020, 120, 89-110.	0.6	16
15	Thixotropic pumping in a cylindrical pipe. Physical Review Fluids, 2020, 5, .	1.0	6
16	Squeezing a drop of nematic liquid crystal with strong elasticity effects. Physics of Fluids, 2019, 31, 083107.	1.6	5
17	The lifetimes of evaporating sessile droplets are significantly extended by strong thermal effects. Journal of Fluid Mechanics, 2018, 851, 231-244.	1.4	24
18	Rivulet flow of generalized Newtonian fluids. Physical Review Fluids, 2018, 3, .	1.0	6

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19	Unsteady motion of a long bubble or droplet in a self-wetting system. <i>Physical Review Fluids</i> , 2018, 3, .	1.0	8
20	Squeeze-film flow between a curved impermeable bearing and a flat porous bed. <i>Physics of Fluids</i> , 2017, 29, 023101.	1.6	10
21	Unsteady flow of a thixotropic fluid in a slowly varying pipe. <i>Physics of Fluids</i> , 2017, 29, .	1.6	12
22	Preface to the inaugural "Perspectives" article entitled "The importance of being thin" by Stephen H. Davis. <i>Journal of Engineering Mathematics</i> , 2017, 105, 1-2.	0.6	0
23	Advection and Taylor-Aris dispersion in rivulet flow. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017, 473, 20170524.	1.0	11
24	Preface to the special issue celebrating 50 years of the <i>Journal of Engineering Mathematics</i> . <i>Journal of Engineering Mathematics</i> , 2017, 107, 1-4.	0.6	0
25	Simple waves and shocks in a thin film of a perfectly soluble anti-surfactant solution. <i>Journal of Engineering Mathematics</i> , 2017, 107, 167-178.	0.6	5
26	Flow of a thixotropic or antithixotropic fluid in a slowly varying channel: The weakly advective regime. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 238, 140-157.	1.0	17
27	Fluid-dynamical model for antisurfactants. <i>Physical Review E</i> , 2016, 93, 043121.	0.8	11
28	Dynamic response of a thin sessile drop of conductive liquid to an abruptly applied or removed electric field. <i>Physical Review E</i> , 2016, 94, 043112.	0.8	6
29	Porous squeeze-film flow. <i>IMA Journal of Applied Mathematics</i> , 2015, 80, 376-409.	0.8	12
30	Evaporation of Droplets on Strongly Hydrophobic Substrates. <i>Langmuir</i> , 2015, 31, 3653-3660.	1.6	83
31	Closed-form solution of a thermocapillary free-film problem due to Pukhnachev. <i>European Journal of Applied Mathematics</i> , 2015, 26, 721-741.	1.4	2
32	Shallow flows of generalised Newtonian fluids on an inclined plane. <i>Journal of Engineering Mathematics</i> , 2015, 94, 115-133.	0.6	12
33	On the lifetimes of evaporating droplets with related initial and receding contact angles. <i>Physics of Fluids</i> , 2015, 27, .	1.6	89
34	Deformation of a nearly hemispherical conducting drop due to an electric field: Theory and experiment. <i>Physics of Fluids</i> , 2014, 26, 122106.	1.6	29
35	A pinned or free-floating rigid plate on a thin viscous film. <i>Journal of Fluid Mechanics</i> , 2014, 760, 407-430.	1.4	4
36	On the lifetimes of evaporating droplets. <i>Journal of Fluid Mechanics</i> , 2014, 744, .	1.4	160

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37	Rivulet flow round a horizontal cylinder subject to a uniform surface shear stress. Quarterly Journal of Mechanics and Applied Mathematics, 2014, 67, 567-597.	0.5	9
38	Thin-film flow in helically wound rectangular channels with small torsion. Physics of Fluids, 2013, 25, 083103.	1.6	6
39	Comment on "Increased Evaporation Kinetics of Sessile Droplets by Using Nanoparticles". Langmuir, 2013, 29, 12328-12329.	1.6	3
40	Three-dimensional coating and rimming flow: a ring of fluid on a rotating horizontal cylinder. Journal of Fluid Mechanics, 2013, 716, 51-82.	1.4	14
41	Travelling-wave similarity solutions for a steadily translating slender dry patch in a thin fluid film. Physics of Fluids, 2013, 25, 052103.	1.6	11
42	Thermoviscous Coating and Rimming Flow. Quarterly Journal of Mechanics and Applied Mathematics, 2012, 65, 483-511.	0.5	17
43	The Stokes boundary layer for a thixotropic or antithixotropic fluid. Journal of Non-Newtonian Fluid Mechanics, 2012, 185-186, 18-38.	1.0	17
44	Similarity solutions for unsteady shear-stress-driven flow of Newtonian and power-law fluids: slender rivulets and dry patches. Journal of Engineering Mathematics, 2012, 73, 53-69.	0.6	9
45	Preface to the special issue on "Recent Developments and New Directions in Thin-Film Flow". Journal of Engineering Mathematics, 2012, 73, 1-2.	0.6	1
46	The energetics of the breakup of a sheet and of a rivulet on a vertical substrate in the presence of a uniform surface shear stress. Journal of Fluid Mechanics, 2011, 674, 281-306.	1.4	19
47	Heat and fluid flow in a scraped-surface heat exchanger containing a fluid with temperature-dependent viscosity. Journal of Engineering Mathematics, 2010, 68, 301-325.	0.6	12
48	Quasi-Steady Spreading of A Thin Ridge of Fluid With Temperature-Dependent Surface Tension on A Heated or Cooled Substrate. Quarterly Journal of Mechanics and Applied Mathematics, 2009, 62, 365-402.	0.5	12
49	Evaporation of a thin droplet on a thin substrate with a high thermal resistance. Physics of Fluids, 2009, 21, .	1.6	35
50	The strong influence of substrate conductivity on droplet evaporation. Journal of Fluid Mechanics, 2009, 623, 329-351.	1.4	272
51	Asymptotic and numerical analysis of a simple model for blade coating. Journal of Engineering Mathematics, 2009, 63, 155-176.	0.6	11
52	Large-Biot-number non-isothermal flow of a thin film on a stationary or rotating cylinder. European Physical Journal: Special Topics, 2009, 166, 147-150.	1.2	8
53	On the effect of the atmosphere on the evaporation of sessile droplets of water. Physics of Fluids, 2009, 21, .	1.6	135
54	A mathematical model for the evaporation of a thin sessile liquid droplet: Comparison between experiment and theory. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2008, 323, 50-55.	2.3	119

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55	Modeling the Kinetics of Enzymic Reactions in Mainly Solid Reaction Mixtures. <i>Biotechnology Progress</i> , 2008, 19, 1228-1237.	1.3	1
56	A mathematical model for blade coating of a nematic liquid crystal. <i>Liquid Crystals</i> , 2007, 34, 621-631.	0.9	15
57	A thin rivulet of perfectly wetting fluid subject to a longitudinal surface shear stress. <i>Quarterly Journal of Mechanics and Applied Mathematics</i> , 2007, 61, 25-61.	0.5	23
58	A mathematical model of fluid flow in a scraped-surface heat exchanger. <i>Journal of Engineering Mathematics</i> , 2007, 57, 381-405.	0.6	14
59	Shear-driven and pressure-driven flow of a nematic liquid crystal in a slowly varying channel. <i>Physics of Fluids</i> , 2006, 18, 027105.	1.6	20
60	Unidirectional flow of a thin rivulet on a vertical substrate subject to a prescribed uniform shear stress at its free surface. <i>Physics of Fluids</i> , 2005, 17, 108105.	1.6	22
61	Steady Flow of a Nematic Liquid Crystal in a Slowly Varying Channel. <i>Molecular Crystals and Liquid Crystals</i> , 2005, 438, 237/[1801]-249/[1813].	0.4	6
62	A rivulet of perfectly wetting fluid draining steadily down a slowly varying substrate. <i>IMA Journal of Applied Mathematics</i> , 2004, 70, 293-322.	0.8	17
63	Strong temperature-dependent-viscosity effects on a rivulet draining down a uniformly heated or cooled slowly varying substrate. <i>Physics of Fluids</i> , 2003, 15, 827-840.	1.6	25
64	A rivulet of perfectly wetting fluid with temperature-dependent viscosity draining down a uniformly heated or cooled slowly varying substrate. <i>Physics of Fluids</i> , 2003, 15, 3236.	1.6	9
65	A Slender Rivulet of a Power-Law Fluid Driven by Either Gravity or a Constant Shear Stress at the Free Surface. <i>Quarterly Journal of Mechanics and Applied Mathematics</i> , 2002, 55, 385-408.	0.5	22
66	On the Critical Solutions in Coating and Rimming Flow on a Uniformly Rotating Horizontal Cylinder. <i>Quarterly Journal of Mechanics and Applied Mathematics</i> , 2002, 55, 357-383.	0.5	38
67	On the gravity-driven draining of a rivulet of a viscoplastic material down a slowly varying substrate. <i>Physics of Fluids</i> , 2002, 14, 555-571.	1.6	23
68	The linear stability of a drop of fluid during spin coating or subject to a jet of air. <i>Physics of Fluids</i> , 2002, 14, 133-142.	1.6	17
69	Thermocapillary effects on a thin viscous rivulet draining steadily down a uniformly heated or cooled slowly varying substrate. <i>Journal of Fluid Mechanics</i> , 2001, 441, 195-221.	1.4	26
70	Thin-film flow of a viscoplastic material round a large horizontal stationary or rotating cylinder. <i>Journal of Fluid Mechanics</i> , 2001, 430, 309-333.	1.4	25
71	The linear stability of a ridge of fluid subject to a jet of air. <i>Physics of Fluids</i> , 2001, 13, 872-883.	1.6	12
72	On a slender dry patch in a liquid film draining under gravity down an inclined plane. <i>European Journal of Applied Mathematics</i> , 2001, 12, 233-252.	1.4	34

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73	The dynamics of thin fluid films. <i>European Journal of Applied Mathematics</i> , 2001, 12, 193-194.	1.4	1
74	The rate of spreading in spin coating. <i>Journal of Fluid Mechanics</i> , 2000, 413, 65-88.	1.4	55
75	Thin-film and curtain flows on the outside of a rotating horizontal cylinder. <i>Journal of Fluid Mechanics</i> , 1999, 394, 29-49.	1.4	33
76	Blade coating of a power-law fluid. <i>Physics of Fluids</i> , 1999, 11, 958-970.	1.6	42
77	The effect of a uniform vertical magnetic field on the onset of oscillatory marangoni convection in a horizontal layer of conducting fluid. <i>Acta Mechanica</i> , 1999, 132, 129-146.	1.1	19
78	The onset of oscillatory Marangoni convection in a semi-infinitely deep layer of fluid. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 1999, 50, 546.	0.7	8
79	Spin coating and air-jet blowing of thin viscous drops. <i>Physics of Fluids</i> , 1999, 11, 30-47.	1.6	33
80	The unsteady expansion and contraction of a long two-dimensional vapour bubble between superheated or subcooled parallel plates. <i>Journal of Fluid Mechanics</i> , 1999, 391, 1-27.	1.4	28
81	On the gravity-driven draining of a rivulet of viscous fluid down a slowly varying substrate with variation transverse to the direction of flow. <i>Physics of Fluids</i> , 1998, 10, 13-22.	1.6	35
82	On the linear growth rates of the long-wave modes in Marangoni convection. <i>Physics of Fluids</i> , 1997, 9, 2455-2457.	1.6	16
83	The linear stability of flat-plate boundary-layer flow of fluid with temperature-dependent viscosity. <i>Physics of Fluids</i> , 1997, 9, 2885-2898.	1.6	23
84	A mathematical model for drying paint layers. <i>Journal of Engineering Mathematics</i> , 1997, 32, 377-394.	0.6	61
85	The derivation and analysis of a model of the drying process of a paint film. <i>Journal of Coatings Technology and Research</i> , 1997, 80, 162-167.	0.2	12
86	The effect of uniform internal heat generation on the onset of steady Marangoni convection in a horizontal layer of fluid. <i>Acta Mechanica</i> , 1997, 124, 63-78.	1.1	17
87	The linear stability of channel flow of fluid with temperature-dependent viscosity. <i>Journal of Fluid Mechanics</i> , 1996, 323, 107-132.	1.4	70
88	An asymptotic analysis of small holes in thin fluid layers. <i>Journal of Engineering Mathematics</i> , 1996, 30, 445-457.	0.6	6
89	The effect of an axial temperature gradient on the steady motion of a large droplet in a tube. <i>Journal of Engineering Mathematics</i> , 1995, 29, 205-217.	0.6	13
90	The effect of a uniform magnetic field on the onset of steady Marangoni convection in a layer of conducting fluid with a prescribed heat flux at its lower boundary. <i>Physics of Fluids</i> , 1994, 6, 3591-3600.	1.6	30

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91	The levelling of paint films. IMA Journal of Applied Mathematics, 1993, 50, 149-166.	0.8	35
92	The steady thermocapillary-driven motion of a large droplet in a closed tube. Physics of Fluids A, Fluid Dynamics, 1993, 5, 2064-2066.	1.6	15
93	Incompressible water-entry problems at small deadrise angles. Journal of Fluid Mechanics, 1991, 222, 215.	1.4	265
94	Patterns formed in a thin film with spatially homogeneous and non-homogeneous Derjaguin disjoining pressure. European Journal of Applied Mathematics, 0, , 1-25.	1.4	0