Scott W Mccue

List of Publications by Year
in descending order

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112 papers	2,247 citations	218677 26 h-index	330143 37 g-index
114 all docs	114 docs citations	114 times ranked	1469 citing authors

#	Article	IF	Citations
1	Traveling waves, blowâ€up, and extinction in the Fisherâ€“Stefan model. Studies in Applied Mathematics, 2022, 148, 964-986.	2.4	1
2	A Continuum Mathematical Model of Substrate-Mediated Tissue Growth. Bulletin of Mathematical Biology, 2022, 84, 49.	1.9	2
3	Exact time-dependent solutions of a Fisherâ€“KPP-like equation obtained with nonclassical symmetry analysis. Applied Mathematics Letters, 2022, 132, 108151.	2.7	2
4	Exact sharp-fronted travelling wave solutions of the Fisherâ€“KPP equation. Applied Mathematics Letters, 2021, 114, 106918.	2.7	23
5	Invading and Receding Sharp-Fronted Travelling Waves. Bulletin of Mathematical Biology, 2021, 83, 35.	1.9	13
6	A novel mathematical model of heterogeneous cell proliferation. Journal of Mathematical Biology, 2021, 82, 34.	1.9	7
7	Kelvin wake pattern at small Froude numbers. Journal of Fluid Mechanics, 2021, 915, .	3.4	11
8	Mean exit time for diffusion on irregular domains. New Journal of Physics, 2021, 23, 043030.	2.9	9
9	Evaporating droplets on inclined plant leaves and synthetic surfaces: Experiments and mathematical models. Journal of Colloid and Interface Science, 2021, 592, 329-341.	9.4	26
10	Persistency of debris accumulation in tidal estuaries using Lagrangian coherent structures. Science of the Total Environment, 2021, 781, 146808.	8.0	8
11	A REVIEW OF ONE-PHASE HELE-SHAW FLOWS AND A LEVEL-SET METHOD FOR NONSTANDARD CONFIGURATIONS. ANZIAM Journal, 2021, 63, 269-307.	0.2	7
12	Implicit reconstructions of thin leaf surfaces from large, noisy point clouds. Applied Mathematical Modelling, 2021, 98, 416-434.	4.2	4
13	Assimilation of GPS-tracked drifter data to improve the Eulerian velocity fields in an estuary. Estuarine, Coastal and Shelf Science, 2021, 262, 107575.	2.1	0
14	Travelling wave analysis of cellular invasion into surrounding tissues. Physica D: Nonlinear Phenomena, 2021, 428, 133026.	2.8	10
15	Spectrogram analysis of surface elevation signals due to accelerating ships. Physical Review Fluids, 2021, 6, .	2.5	2
16	A sharp-front moving boundary model for malignant invasion. Physica D: Nonlinear Phenomena, 2020, 412, 132639.	2.8	18
17	Selection of a Hele-Shaw Bubble via Exponential Asymptotics. SIAM Journal on Applied Mathematics, 2020, 80, 289-311.	1.8	4
18	Examining Go-or-Grow Using Fluorescent Cell-Cycle Indicators and Cell-Cycle-Inhibiting Drugs. Biophysical Journal, 2020, 118, 1243-1247.	0.5	22

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19	Image analysis of shatter and pinning events on hardâ€toâ€wet leaf surfaces by drops containing surfactant. Pest Management Science, 2020, 76, 3477-3486.	3.4	11
20	Simulating spray droplet impaction outcomes: comparison with experimental data. Pest Management Science, 2020, 76, 3469-3476.	3.4	13
21	Hole-closing model reveals exponents for nonlinear degenerate diffusivity functions in cell biology. Physica D: Nonlinear Phenomena, 2019, 398, 130-140.	2.8	39
22	Moving Boundary Problems for Quasi-Steady Conduction Limited Melting. SIAM Journal on Applied Mathematics, 2019, 79, 2107-2131.	1.8	8
23	Numerical investigation of controlling interfacial instabilities in non-standard Hele-Shaw configurations. Journal of Fluid Mechanics, 2019, 877, 1063-1097.	3.4	44
24	Mathematical models incorporating a multi-stage cell cycle replicate normally-hidden inherent synchronization in cell proliferation. Journal of the Royal Society Interface, 2019, 16, 20190382.	3.4	24
25	Revisiting the Fisherâ€“Kolmogorovâ€“Petrovskyâ€“Piskunov equation to interpret the spreadingâ€“extinction dichotomy. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20190378.	2.1	43
26	Interfacial dynamics and pinch-off singularities for axially symmetric Darcy flow. Physical Review E, 2019, 100, 053109.	2.1	2
27	Extended logistic growth model for heterogeneous populations. Journal of Theoretical Biology, 2018, 445, 51-61.	1.7	40
28	The role of initial geometry in experimental models of wound closing. Chemical Engineering Science, 2018, 179, 221-226.	3.8	29
29	Three-dimensional free-surface flow over arbitrary bottom topography. Journal of Fluid Mechanics, 2018, 846, 166-189.	3.4	11
30	Mathematical Models for Cell Migration with Real-Time Cell Cycle Dynamics. Biophysical Journal, 2018, 114, 1241-1253.	0.5	53
31	Efficient computation of twoâ€dimensional steady freeâ€surface flows. International Journal for Numerical Methods in Fluids, 2018, 86, 607-624.	1.6	9
32	Inferring parameters for a lattice-free model of cell migration and proliferation using experimental data. Journal of Theoretical Biology, 2018, 437, 251-260.	1.7	37
33	Short, flat-tipped, viscous fingers: novel interfacial patterns in a Hele-Shaw channel with an elastic boundary. Journal of Fluid Mechanics, 2018, 834, 1-4.	3.4	10
34	Time-frequency analysis of ship wave patterns in shallow water: modelling and experiments. Ocean Engineering, 2018, 158, 123-131.	4.3	24
35	Stochastic models of cell invasion with fluorescent cell cycle indicators. Physica A: Statistical Mechanics and Its Applications, 2018, 510, 375-386.	2.6	17
36	Spectrograms of ship wakes: identifying linear and nonlinear wave signals. Journal of Fluid Mechanics, 2017, 811, 189-209.	3.4	25

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37	Spray droplet impaction outcomes for different plant species and spray formulations. Crop Protection, 2017, 99, 65-75.	2.1	93
38	Extending fields in a level set method by solving a biharmonic equation. Journal of Computational Physics, 2017, 343, 170-185.	3.8	11
39	Logistic Proliferation of Cells in Scratch Assays is Delayed. Bulletin of Mathematical Biology, 2017, 79, 1028-1050.	1.9	41
40	A model for one-dimensional morphoelasticity and its application to fibroblast-populated collagen lattices. Biomechanics and Modeling in Mechanobiology, 2017, 16, 1743-1763.	2.8	5
41	A Bayesian Computational Approach to Explore the Optimal Duration of a Cell Proliferation Assay. Bulletin of Mathematical Biology, 2017, 79, 1888-1906.	1.9	26
42	The effect of surface tension on steadily translating bubbles in an unbounded Hele-Shaw cell. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20170050.	2.1	9
43	A computational modelling framework to quantify the effects of passaging cell lines. PLoS ONE, 2017, 12, e0181941.	2.5	14
44	Stochastic simulation tools and continuum models for describing two-dimensional collective cell spreading with universal growth functions. Physical Biology, 2016, 13, 056003.	1.8	28
45	Spray retention on whole plants: modelling, simulations and experiments. Crop Protection, 2016, 88, 118-130.	2.1	45
46	A curve shortening flow rule for closed embedded plane curves with a prescribed rate of change in enclosed area. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20150629.	2.1	13
47	Modeling transport through an environment crowded by a mixture of obstacles of different shapes and sizes. Physica A: Statistical Mechanics and Its Applications, 2016, 449, 74-84.	2.6	14
48	Reproducibility of scratch assays is affected by the initial degree of confluence: Experiments, modelling and model selection. Journal of Theoretical Biology, 2016, 390, 136-145.	1.7	95
49	Simulating droplet motion on virtual leaf surfaces. Royal Society Open Science, 2015, 2, 140528.	2.4	14
50	Surface reconstruction of wheat leaf morphology from three-dimensional scanned data. Functional Plant Biology, 2015, 42, 444.	2.1	35
51	Wake angle for surface gravity waves on a finite depth fluid. Physics of Fluids, 2015, 27, .	4.0	13
52	Saffman-Taylor fingers with kinetic undercooling. Physical Review E, 2015, 91, 023016.	2.1	10
53	Discrete families of Saffmanâ€“Taylor fingers with exotic shapes. Results in Physics, 2015, 5, 103-104.	4.1	6
54	Impaction of spray droplets on leaves: influence of formulation and leaf character on shatter, bounce and adhesion. Experiments in Fluids, 2015, 56, 1.	2.4	73

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55	Characterizing transport through a crowded environment with different obstacle sizes. Journal of Chemical Physics, 2014, 140, 054108.	3.0	24
56	What is the apparent angle of a Kelvin ship wave pattern?. Journal of Fluid Mechanics, 2014, 758, 468-485.	3.4	46
57	Corner and finger formation in Hele-Shaw flow with kinetic undercooling regularisation. European Journal of Applied Mathematics, 2014, 25, 707-727.	2.9	10
58	Towards a model of sprayâ€“canopy interactions: Interception, shatter, bounce and retention of droplets on horizontal leaves. Ecological Modelling, 2014, 290, 94-101.	2.5	71
59	Jacobian-free Newtonâ€“Krylov methods with GPU acceleration for computing nonlinear ship wave patterns. Journal of Computational Physics, 2014, 269, 297-313.	3.8	21
60	The effect of surface tension and kinetic undercooling on a radially-symmetric melting problem. Applied Mathematics and Computation, 2014, 229, 41-52.	2.2	29
61	Including nonequilibrium interface kinetics in a continuum model for melting nanoscaled particles. Scientific Reports, 2014, 4, 7066.	3.3	24
62	A Cellular Automata Model to Investigate Immune Cellâ€“Tumor Cell Interactions in Growing Tumors in Two Spatial Dimensions. Springer Proceedings in Mathematics and Statistics, 2014, , 223-251.	0.2	2
63	Travelling waves for a velocity-jump model of cell migration and proliferation. Mathematical Biosciences, 2013, 244, 98-106.	1.9	3
64	Simplified approach for calculating moments of action for linear reaction-diffusion equations. Physical Review E, 2013, 88, 054102.	2.1	11
65	Gravity-driven fingering simulations for a thin liquid film flowing down the outside of a vertical cylinder. Physical Review E, 2013, 87, 053018.	2.1	36
66	Bubble extinction in Hele-Shaw flow with surface tension and kinetic undercooling regularization. Nonlinearity, 2013, 26, 1639-1665.	1.4	28
67	Comment on â€œLocal accumulation times for source, diffusion, and degradation models in two and three dimensionsâ€•[J. Chem. Phys. 138, 104121 (2013)]. Journal of Chemical Physics, 2013, 139, 017101.	3.0	5
68	Velocity-jump processes with proliferation. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 015003.	2.1	3
69	CRITICAL TIMESCALES AND TIME INTERVALS FOR COUPLED LINEAR PROCESSES. ANZIAM Journal, 2013, 54, 127-142.	0.2	4
70	Free-surface flow past arbitrary topography and an inverse approach for wave-free solutions. IMA Journal of Applied Mathematics, 2013, 78, 685-696.	1.6	21
71	Exponential asymptotics of free surface flow due to a line source. IMA Journal of Applied Mathematics, 2013, 78, 697-713.	1.6	15
72	Critical time scales for advection-diffusion-reaction processes. Physical Review E, 2012, 85, 041135.	2.1	30

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73	Moments of action provide insight into critical times for advection-diffusion-reaction processes. Physical Review E, 2012, 86, 031136.	2.1	24
74	New exact solutions for Hele-Shaw flow in doubly connected regions. Physics of Fluids, 2012, 24, 052101.	4.0	13
75	Modelling the interaction of keratinocytes and fibroblasts during normal and abnormal wound healing processes. Proceedings of the Royal Society B: Biological Sciences, 2012, 279, 3329-3338.	2.6	45
76	Free surface flow past topography: A beyond-all-orders approach. European Journal of Applied Mathematics, 2012, 23, 441-467.	2.9	26
77	A Fibrocontractive Mechanochemical Model of Dermal Wound Closure Incorporating Realistic Growth Factor Kinetics. Bulletin of Mathematical Biology, 2012, 74, 1143-1170.	1.9	41
78	Clinical strategies for the alleviation of contractures from a predictive mathematical model of dermal repair. Wound Repair and Regeneration, 2012, 20, 194-202.	3.0	16
79	Models of collective cell spreading with variable cell aspect ratio: A motivation for degenerate diffusion models. Physical Review E, 2011, 83, 021901.	2.1	48
80	Minimising wave drag for free surface flow past a two-dimensional stern. Physics of Fluids, 2011, 23, 072101.	4.0	11
81	Asymptotic and Numerical Results for a Model of Solvent-Dependent Drug Diffusion through Polymeric Spheres. SIAM Journal on Applied Mathematics, 2011, 71, 2287-2311.	1.8	33
82	A two-compartment mechanochemical model of the roles of transforming growth factor <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0127.gif" overflow="scroll"><mml:mi>Î²</mml:mi></mml:math> and tissue tension in dermal wound healing. Journal of Theoretical Biology, 2011, 272, 145-159.	1.7	25
83	Modelling water droplet movement on a leaf surface. Mathematics and Computers in Simulation, 2011, 81, 1553-1571.	4.4	28
84	Velocity-jump models with crowding effects. Physical Review E, 2011, 84, 061920.	2.1	13
85	Contracting bubbles in Hele-Shaw cells with a power-law fluid. Nonlinearity, 2011, 24, 613-641.	1.4	16
86	Accurate series solutions for gravity-driven Stokes waves. Physics of Fluids, 2010, 22, .	4.0	12
87	Micro/nanoparticle melting with spherical symmetry and surface tension. IMA Journal of Applied Mathematics, 2009, 74, 439-457.	1.6	29
88	Preface to fourth Special Issue on Practical Asymptotics. Journal of Engineering Mathematics, 2009, 63, 153-154.	1.2	3
89	Quadrature Domains and p-Laplacian Growth. Complex Analysis and Operator Theory, 2009, 3, 453-469.	0.6	10
90	Application of a continuum theory to vertical vibrations of a layer of granular material. International Journal of Engineering Science, 2009, 47, 1216-1231.	5.0	2

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91	Single phase limit for melting nanoparticles. Applied Mathematical Modelling, 2009, 33, 2349-2367.	4.2	34
92	Nanoparticle Melting as a Stefan Moving Boundary Problem. Journal of Nanoscience and Nanotechnology, 2009, 9, 885-888.	0.9	17
93	Classical two-phase Stefan problem for spheres. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 2055-2076.	2.1	76
94	Coulombâ€“Mohr Granular Materials: Quasi-static Flows and the Highly Frictional Limit. Applied Mechanics Reviews, 2008, 61, .	10.1	17
95	Lie group symmetry analysis for granular media stress equations. Journal of Mathematical Analysis and Applications, 2005, 301, 135-157.	1.0	2
96	Symmetry analysis for uniaxial compression of a hypoplastic granular material. Zeitschrift Fur Angewandte Mathematik Und Physik, 2005, 56, 1061-1083.	1.4	2
97	Perturbation solutions for flow through symmetrical hoppers with inserts and asymmetrical wedge hoppers. Journal of Engineering Mathematics, 2005, 52, 63-91.	1.2	7
98	The Extinction Problem for Three-dimensional Inward Solidification. Journal of Engineering Mathematics, 2005, 52, 389-409.	1.2	30
99	Free Surface Problems for Static Coulomb-Mohr Granular Solids. Mathematics and Mechanics of Solids, 2005, 10, 651-672.	2.4	14
100	New stress and velocity fields for highly frictional granular materials. IMA Journal of Applied Mathematics, 2004, 70, 92-118.	1.6	7
101	Extinction behaviour for twoâ€“dimensional inward-solidification problems. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2003, 459, 977-999.	2.1	28
102	Extinction Behaviour of Contracting Bubbles in Porous Media. Quarterly Journal of Mechanics and Applied Mathematics, 2003, 56, 455-482.	1.3	13
103	Free-surface flows emerging from beneath a semi-infinite plate with constant vorticity. Journal of Fluid Mechanics, 2002, 461, 387-407.	3.4	18
104	Linear stern waves in finite depth channels. Quarterly Journal of Mechanics and Applied Mathematics, 2000, 53, 629-643.	1.3	9
105	Free surface flow into a horizontal slot with zero gravity. Physics of Fluids, 2000, 12, 2145-2147.	4.0	0
106	Optimal fluid injection strategies for in situ mineral leaching in two-dimensions. , 1999, 36, 185-206.		3
107	Bow and stern flows with constant vorticity. Journal of Fluid Mechanics, 1999, 399, 277-300.	3.4	17
108	Numerical study of two ill-posed one phase Stefan problems. ANZIAM Journal, 0, 52, 430.	0.0	5

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109	Drug diffusion from polymeric delivery devices: a problem with two moving boundaries. ANZIAM Journal, 0, 52, 549.	0.0	4
110	An accurate numerical scheme for the contraction of a bubble in a Hele--Shaw cell. ANZIAM Journal, 0, 54, 309.	0.0	7
111	Numerical solutions for thin film flow down the outside and inside of a vertical cylinder. ANZIAM Journal, 0, 54, 377.	0.0	1
112	A review of one-phase Hele-Shaw flows and a level-set method for nonstandard configurations. ANZIAM Journal, 0, 63, 269-307.	0.0	3