Philip K Maini

List of Publications by Year
in descending order

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276 papers	14,092 citations	20797 60 h-index	31818 101 g-index
358 all docs	358 docs citations	358 times ranked	11832 citing authors

#	Article	IF	Citations
1	Cyclic dermal BMP signalling regulates stem cell activation during hair regeneration. Nature, 2008, 451, 340-344.	13.7	643
2	Mathematical Models of Avascular Tumor Growth. SIAM Review, 2007, 49, 179-208.	4.2	469
3	Pattern Formation by Lateral Inhibition with Feedback: a Mathematical Model of Delta-Notch Intercellular Signalling. Journal of Theoretical Biology, 1996, 183, 429-446.	0.8	468
4	Reaction and Diffusion on Growing Domains: Scenarios for Robust Pattern Formation. Bulletin of Mathematical Biology, 1999, 61, 1093-1120.	0.9	286
5	Spatial pattern formation in chemical and biological systems. Journal of the Chemical Society, Faraday Transactions, 1997, 93, 3601-3610.	1.7	261
6	Mathematical modeling of cell population dynamics in the colonic crypt and in colorectal cancer. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 4008-4013.	3.3	253
7	Inherent noise can facilitate coherence in collective swarm motion. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 5464-5469.	3.3	240
8	Traveling Wave Model to Interpret a Wound-Healing Cell Migration Assay for Human Peritoneal Mesothelial Cells. Tissue Engineering, 2004, 10, 475-482.	4.9	221
9	Non-linear incidence and stability of infectious disease models. Mathematical Medicine and Biology, 2005, 22, 113-128.	0.8	217
10	A Lyapunov function and global properties for SIR and SEIR epidemiological models with nonlinear incidence. Mathematical Biosciences and Engineering, 2004, 1, 57-60.	1.0	211
11	Chaste: A test-driven approach to software development for biological modelling. Computer Physics Communications, 2009, 180, 2452-2471.	3.0	207
12	Mathematical oncology: Cancer summed up. Nature, 2003, 421, 321-321.	13.7	201
13	Turing's model for biological pattern formation and the robustness problem. Interface Focus, 2012, 2, 487-496.	1.5	192
14	Self-Organizing and Stochastic Behaviors During the Regeneration of Hair Stem Cells. Science, 2011, 332, 586-589.	6.0	186
15	Comparing individual-based approaches to modelling the self-organization of multicellular tissues. PLoS Computational Biology, 2017, 13, e1005387.	1.5	185
16	Angiogenesis and vascular remodelling in normal and cancerous tissues. Journal of Mathematical Biology, 2009, 58, 689-721.	0.8	178
17	Conformational Spread as a Mechanism for Cooperativity in the Bacterial Flagellar Switch. Science, 2010, 327, 685-689.	6.0	176
18	DEVELOPMENTAL BIOLOGY: The Turing Model Comes of Molecular Age. Science, 2006, 314, 1397-1398.	6.0	175

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19	Metabolic changes during carcinogenesis: Potential impact on invasiveness. Journal of Theoretical Biology, 2007, 244, 703-713.	0.8	164
20	A Mechanochemical Model for Adult Dermal Wound Contraction and the Permanence of the Contracted Tissue Displacement Profile. Journal of Theoretical Biology, 1995, 177, 113-128.	0.8	161
21	Generation time of the alpha and delta SARS-CoV-2 variants: an epidemiological analysis. Lancet Infectious Diseases, The, 2022, 22, 603-610.	4.6	154
22	Steering Evolution with Sequential Therapy to Prevent the Emergence of Bacterial Antibiotic Resistance. PLoS Computational Biology, 2015, 11, e1004493.	1.5	151
23	Multiscale Modelling of Vascular Tumour Growth in 3D: The Roles of Domain Size and Boundary Conditions. PLoS ONE, 2011, 6, e14790.	1.1	150
24	Enzyme Kinetics at High Enzyme Concentration. Bulletin of Mathematical Biology, 2000, 62, 483-499.	0.9	149
25	The role of acidity in solid tumour growth and invasion. Journal of Theoretical Biology, 2005, 235, 476-484.	0.8	140
26	Implementing vertex dynamics models of cell populations in biology within a consistent computational framework. Progress in Biophysics and Molecular Biology, 2013, 113, 299-326.	1.4	135
27	Phenotypic models of T cell activation. Nature Reviews Immunology, 2014, 14, 619-629.	10.6	135
28	Reptile scale paradigm: Evo-Devo, pattern formation and regeneration. International Journal of Developmental Biology, 2009, 53, 813-826.	0.3	133
29	Multiscale mechanisms of cell migration during development: theory and experiment. Development (Cambridge), 2012, 139, 2935-2944.	1.2	133
30	Turing instabilities in general systems. Journal of Mathematical Biology, 2000, 41, 493-512.	0.8	122
31	Neural crest migration is driven by a few trailblazer cells with a unique molecular signature narrowly confined to the invasive front. Development (Cambridge), 2015, 142, 2014-2025.	1.2	119
32	An analysis of B cell selection mechanisms in germinal centers. Mathematical Medicine and Biology, 2006, 23, 255-277.	0.8	117
33	A clock and wavefront mechanism for somite formation. Developmental Biology, 2006, 293, 116-126.	0.9	114
34	Mathematical Modelling of Extracellular Matrix Dynamics using Discrete Cells: Fiber Orientation and Tissue Regeneration. Journal of Theoretical Biology, 1999, 199, 449-471.	0.8	113
35	Cellular pattern formation during Dictyostelium aggregation. Physica D: Nonlinear Phenomena, 1995, 85, 425-444.	1.3	112
36	A PHABULOSA/Cytokinin Feedback Loop Controls Root Growth in Arabidopsis. Current Biology, 2012, 22, 1699-1704.	1.8	112

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37	Multi-Cellular Rosettes in the Mouse Visceral Endoderm Facilitate the Ordered Migration of Anterior Visceral Endoderm Cells. PLoS Biology, 2012, 10, e1001256.	2.6	105
38	Complex pattern formation in reactionâ€“diffusion systems with spatially varying parameters. Physica D: Nonlinear Phenomena, 2005, 202, 95-115.	1.3	104
39	The Effect of Growth and Curvature on Pattern Formation. Journal of Dynamics and Differential Equations, 2004, 16, 1093-1121.	1.0	100
40	A moving grid finite element method applied to a model biological pattern generator. Journal of Computational Physics, 2003, 190, 478-500.	1.9	96
41	Stability analysis of non-autonomous reaction-diffusion systems: the effects of growing domains. Journal of Mathematical Biology, 2010, 61, 133-164.	0.8	89
42	Mixed-mode pattern in Doublefoot mutant mouse limbâ€”Turing reactionâ€“diffusion model on a growing domain during limb development. Journal of Theoretical Biology, 2006, 240, 562-573.	0.8	88
43	Cell proliferation within small intestinal crypts is the principal driving force for cell migration on villi. FASEB Journal, 2017, 31, 636-649.	0.2	88
44	Pattern formation in reaction-diffusion models with spatially inhomogeneous diffusion coefficients. Mathematical Medicine and Biology, 1992, 9, 197-213.	0.8	82
45	Mathematical modeling of corneal epithelial wound healing. Mathematical Biosciences, 1994, 124, 127-147.	0.9	78
46	From a discrete to a continuum model of cell dynamics in one dimension. Physical Review E, 2009, 80, 031912.	0.8	78
47	Enabling multiscale modeling in systems medicine. Genome Medicine, 2014, 6, 21.	3.6	76
48	In vitro cell migration quantification method for scratch assays. Journal of the Royal Society Interface, 2019, 16, 20180709.	1.5	76
49	VEGF signals induce trailblazer cell identity that drives neural crest migration. Developmental Biology, 2015, 407, 12-25.	0.9	75
50	Diffusion driven instability in an inhomogeneous domain. Bulletin of Mathematical Biology, 1993, 55, 365-384.	0.9	72
51	Velocity-induced numerical solutions of reaction-diffusion systems on continuously growing domains. Journal of Computational Physics, 2007, 225, 100-119.	1.9	72
52	On the mathematical modeling of wound healing angiogenesis in skin as a reaction-transport process. Frontiers in Physiology, 2015, 6, 262.	1.3	72
53	Multiscale Modelling of Tumour Growth and Therapy: The Influence of Vessel Normalisation on Chemotherapy. Computational and Mathematical Methods in Medicine, 2006, 7, 85-119.	0.7	71
54	Turnover Modulates the Need for a Cost of Resistance in Adaptive Therapy. Cancer Research, 2021, 81, 1135-1147.	0.4	71

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55	Existence and uniqueness of a sharp travelling wave in degenerate non-linear diffusion Fisher-KPP equations. Journal of Mathematical Biology, 1994, 33, 163-192.	0.8	70
56	Multiscale Modeling in Biology. American Scientist, 2007, 95, 134.	0.1	70
57	Age-Related Changes in Speed and Mechanism of Adult Skeletal Muscle Stem Cell Migration. Stem Cells, 2012, 30, 1182-1195.	1.4	68
58	Pattern formation in spatially heterogeneous Turing reactionâ€“diffusion models. Physica D: Nonlinear Phenomena, 2003, 181, 80-101.	1.3	67
59	Modelling Spatially Regulated Î²-Catenin Dynamics and Invasion inÂIntestinal Crypts. Biophysical Journal, 2010, 99, 716-725.	0.2	66
60	A Moving Grid Finite Element Method for the Simulation of Pattern Generation by Turing Models on Growing Domains. Journal of Scientific Computing, 2005, 24, 247-262.	1.1	65
61	A Mechanistic Model of the Intravitreal Pharmacokinetics of Large Molecules and the Pharmacodynamic Suppression of Ocular Vascular Endothelial Growth Factor Levels by Ranibizumab in Patients with Neovascular Age-Related Macular Degeneration. Molecular Pharmaceutics, 2016, 13, 2941-2950.	2.3	65
62	Modeling the effects of transforming growth factor-beta on extracellular matrix alignment in dermal wound repair. Wound Repair and Regeneration, 2001, 9, 278-286.	1.5	64
63	Mesoscopic and continuum modelling of angiogenesis. Journal of Mathematical Biology, 2015, 70, 485-532.	0.8	64
64	3D hybrid modelling of vascular network formation. Journal of Theoretical Biology, 2017, 414, 254-268.	0.8	63
65	High infectiousness immediately before COVID-19 symptom onset highlights the importance of continued contact tracing. ELife, 2021, 10, .	2.8	63
66	Speed of pattern appearance in reaction-diffusion models: implications in the pattern formation of limb bud mesenchyme cells. Bulletin of Mathematical Biology, 2004, 66, 627-649.	0.9	62
67	Tumourâ€“stromal interactions in acid-mediated invasion: A mathematical model. Journal of Theoretical Biology, 2010, 267, 461-470.	0.8	62
68	Spots and stripes: Pleomorphic patterning of stem cells via p-ERK-dependent cell chemotaxis shown by feather morphogenesis and mathematical simulation. Developmental Biology, 2009, 334, 369-382.	0.9	61
69	Elevated apoptosis impairs epithelial cell turnover and shortens villi in TNF-driven intestinal inflammation. Cell Death and Disease, 2019, 10, 108.	2.7	61
70	On the proportion of cancer stem cells in a tumour. Journal of Theoretical Biology, 2010, 266, 708-711.	0.8	59
71	Stochastic reaction and diffusion on growing domains: Understanding the breakdown of robust pattern formation. Physical Review E, 2011, 84, 046216.	0.8	59
72	Chaste: Cancer, Heart and Soft Tissue Environment. Journal of Open Source Software, 2020, 5, 1848.	2.0	58

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73	A model for colour pattern formation in the butterfly wing of Papilio dardanus. Proceedings of the Royal Society B: Biological Sciences, 2000, 267, 851-859.	1.2	57
74	A theoretical investigation of the effect of proliferation and adhesion on monoclonal conversion in the colonic crypt. Journal of Theoretical Biology, 2012, 312, 143-156.	0.8	57
75	Pigmentation pattern formation in butterflies: experiments and models. Comptes Rendus - Biologies, 2003, 326, 717-727.	0.1	56
76	Ocular Pharmacokinetics of Therapeutic Antibodies Given by Intravitreal Injection: Estimation of Retinal Permeabilities Using a 3-Compartment Semi-Mechanistic Model. Molecular Pharmaceutics, 2017, 14, 2690-2696.	2.3	55
77	Parameter space analysis, pattern sensitivity and model comparison for Turing and stationary flow-distributed waves (FDS). Physica D: Nonlinear Phenomena, 2001, 160, 79-102.	1.3	54
78	Examples of Mathematical Modeling: Tales from the Crypt. Cell Cycle, 2007, 6, 2106-2112.	1.3	54
79	MODELLING THE RESPONSE OF VASCULAR TUMOURS TO CHEMOTHERAPY: A MULTISCALE APPROACH. Mathematical Models and Methods in Applied Sciences, 2006, 16, 1219-1241.	1.7	52
80	DendroBLAST: Approximate Phylogenetic Trees in the Absence of Multiple Sequence Alignments. PLoS ONE, 2013, 8, e58537.	1.1	52
81	Mathematical modelling of anisotropy in fibrous connective tissue. Mathematical Biosciences, 1999, 158, 145-170.	0.9	50
82	The clock and wavefront model revisited. Journal of Theoretical Biology, 2011, 283, 227-238.	0.8	50
83	A mathematical model for fibro-proliferative wound healing disorders. Bulletin of Mathematical Biology, 1996, 58, 787-808.	0.9	49
84	Unravelling the Turing bifurcation using spatially varying diffusion coefficients. Journal of Mathematical Biology, 1998, 37, 381-417.	0.8	49
85	Growth-induced mass flows in fungal networks. Proceedings of the Royal Society B: Biological Sciences, 2010, 277, 3265-3274.	1.2	49
86	A general reactionâ€“diffusion model of acidity in cancer invasion. Journal of Mathematical Biology, 2014, 68, 1199-1224.	0.8	48
87	The Dynamics and Pinning of a Spike for a Reaction-Diffusion System. SIAM Journal on Applied Mathematics, 2002, 62, 1297-1328.	0.8	47
88	Cutting Edge: Back to â€œOne-Wayâ€•Germinal Centers. Journal of Immunology, 2005, 174, 2489-2493.	0.4	47
89	Spatial Metrics of Tumour Vascular Organisation Predict Radiation Efficacy in a Computational Model. PLoS Computational Biology, 2016, 12, e1004712.	1.5	47
90	Different populations of RNA polymerase II in living mammalian cells. Chromosome Research, 2005, 13, 135-144.	1.0	45

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91	The Evolution of Tumour Composition During Fractionated Radiotherapy: Implications for Outcome. Bulletin of Mathematical Biology, 2018, 80, 1207-1235.	0.9	45
92	Systems Model of T Cell Receptor Proximal Signaling Reveals Emergent Ultrasensitivity. PLoS Computational Biology, 2013, 9, e1003004.	1.5	44
93	A mechanism for morphogen-controlled domain growth. Journal of Mathematical Biology, 2007, 54, 597-622.	0.8	43
94	Modeling the skin pattern of fishes. Physical Review E, 2009, 79, 031908.	0.8	42
95	Patterns of non-normality in networked systems. Journal of Theoretical Biology, 2019, 480, 81-91.	0.8	42
96	A Numerical Approach to the Study of Spatial Pattern Formation in the Ligaments of Arcoid Bivalves. Bulletin of Mathematical Biology, 2002, 64, 501-530.	0.9	41
97	Macroscopic limits of individual-based models for motile cell populations with volume exclusion. Physical Review E, 2012, 86, 031903.	0.8	41
98	Advection, diffusion, and delivery over a network. Physical Review E, 2012, 86, 021905.	0.8	41
99	A Fibrocontractive Mechanochemical Model of Dermal Wound Closure Incorporating Realistic Growth Factor Kinetics. Bulletin of Mathematical Biology, 2012, 74, 1143-1170.	0.9	41
100	Logistic Proliferation of Cells in Scratch Assays is Delayed. Bulletin of Mathematical Biology, 2017, 79, 1028-1050.	0.9	41
101	Clock and induction model for somitogenesis. , 2000, 217, 415-420.		40
102	A mathematical investigation of a Clock and Wavefront model for somitogenesis. Journal of Mathematical Biology, 2006, 52, 458-482.	0.8	40
103	A mechanochemical model of striae distensae. Mathematical Biosciences, 2012, 240, 141-147.	0.9	40
104	Abnormal morphology biases hematocrit distribution in tumor vasculature and contributes to heterogeneity in tissue oxygenation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 27811-27819.	3.3	40
105	Inference of the SARS-CoV-2 generation time using UK household data. ELife, 2022, 11, .	2.8	40
106	Using mathematical models to help understand biological pattern formation. Comptes Rendus - Biologies, 2004, 327, 225-234.	0.1	39
107	Incorporating chemical signalling factors into cell-based models of growing epithelial tissues. Journal of Mathematical Biology, 2012, 65, 441-463.	0.8	39
108	Mathematical Models for Somite Formation. Current Topics in Developmental Biology, 2008, 81, 183-203.	1.0	38

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109	Multidisciplinary approaches to understanding collective cell migration in developmental biology. Open Biology, 2016, 6, 160056.	1.5	38
110	The Goldilocks Window of Personalized Chemotherapy: Getting the Immune Response Just Right. Cancer Research, 2019, 79, 5302-5315.	0.4	38
111	Travelling wave phenomena in non-linear diffusion degenerate Nagumo equations. Journal of Mathematical Biology, 1997, 35, 713-728.	0.8	37
112	Mathematical Oncology. Bulletin of Mathematical Biology, 2018, 80, 945-953.	0.9	37
113	Mesenchymal stem cells used as carrier cells of oncolytic adenovirus results in enhanced oncolytic virotherapy. Scientific Reports, 2020, 10, 425.	1.6	37
114	Mathematical modelling of tumour acidity. Journal of Theoretical Biology, 2008, 255, 106-112.	0.8	36
115	A mathematical model of tumour and blood pHe regulation: The buffering system. Mathematical Biosciences, 2011, 230, 1-11.	0.9	36
116	Collagen bundle morphometry in skin and scar tissue: a novel distance mapping method provides superior measurements compared to Fourier analysis. Journal of Microscopy, 2012, 245, 82-89.	0.8	36
117	Biological Pattern Formation on Two-Dimensional Spatial Domains: A Nonlinear Bifurcation Analysis. SIAM Journal on Applied Mathematics, 1997, 57, 1485-1509.	0.8	35
118	Mode Transitions in a Model Reactionâ€“Diffusion System Driven by Domain Growth and Noise. Bulletin of Mathematical Biology, 2006, 68, 981-995.	0.9	35
119	Prey Switching with a Linear Preference Trade-Off. SIAM Journal on Applied Dynamical Systems, 2014, 13, 658-682.	0.7	35
120	HTLV-I infection: A dynamic struggle between viral persistence and host immunity. Journal of Theoretical Biology, 2014, 352, 92-108.	0.8	35
121	Investigating the Turing conditions for diffusion-driven instability in the presence of a binding immobile substrate. Journal of Theoretical Biology, 2015, 367, 286-295.	0.8	35
122	A design principle for vascular beds: the effects of complex blood rheology. Microvascular Research, 2005, 69, 156-172.	1.1	34
123	Waves and patterning in developmental biology: vertebrate segmentation and feather bud formation as case studies. International Journal of Developmental Biology, 2009, 53, 783-794.	0.3	34
124	Modern perspectives on near-equilibrium analysis of Turing systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200268.	1.6	34
125	Modelling collective cell migration: neural crest as a model paradigm. Journal of Mathematical Biology, 2020, 80, 481-504.	0.8	33
126	Role of fibroblast migration in collagen fiber formation during fetal and adult dermal wound healing. Bulletin of Mathematical Biology, 1997, 59, 1077-1100.	0.9	32

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127	Incorporating spatial correlations into multispecies mean-field models. Physical Review E, 2013, 88, 052713.	0.8	32
128	Theoretical Insights into the Retinal Dynamics of Vascular Endothelial Growth Factor in Patients Treated with Ranibizumab, Based on an Ocular Pharmacokinetic/Pharmacodynamic Model. Molecular Pharmaceutics, 2018, 15, 2770-2784.	2.3	32
129	Phase differences in reaction-diffusion-advection systems and applications to morphogenesis. IMA Journal of Applied Mathematics, 1995, 55, 19-33.	0.8	31
130	Periodic pattern formation in reaction-diffusion systems: An introduction for numerical simulation. Kaibogaku Zasshi Journal of Anatomy, 2004, 79, 112-123.	1.2	31
131	From segment to somite: Segmentation to epithelialization analyzed within quantitative frameworks. Developmental Dynamics, 2007, 236, 1392-1402.	0.8	31
132	An efficient and robust numerical algorithm for estimating parameters in Turing systems. Journal of Computational Physics, 2010, 229, 7058-7071.	1.9	31
133	A multiscale model of complex endothelial cell dynamics in early angiogenesis. PLoS Computational Biology, 2021, 17, e1008055.	1.5	31
134	Pattern Formation of Scale Cells in Lepidoptera by Differential Origin-dependent Cell Adhesion. Bulletin of Mathematical Biology, 1999, 61, 807-828.	0.9	30
135	A Mathematical Model for Germinal Centre Kinetics and Affinity Maturation. Journal of Theoretical Biology, 2002, 219, 153-175.	0.8	30
136	Streaming instability of slime mold amoebae: An analytical model. Physical Review E, 1997, 56, 2074-2080.	0.8	29
137	Modeling Chemotaxis Reveals the Role of Reversed Phosphotransfer and a Bi-Functional Kinase-Phosphatase. PLoS Computational Biology, 2010, 6, e1000896.	1.5	29
138	Microvessel Chaste: An Open Library for Spatial Modeling of Vascularized Tissues. Biophysical Journal, 2017, 112, 1767-1772.	0.2	29
139	Modeling angiogenesis: A discrete to continuum description. Physical Review E, 2017, 95, 012410.	0.8	28
140	DAN (NBL1) promotes collective neural crest migration by restraining uncontrolled invasion. Journal of Cell Biology, 2017, 216, 3339-3354.	2.3	27
141	Integrating Models to Quantify Environment-Mediated Drug Resistance. Cancer Research, 2017, 77, 5409-5418.	0.4	27
142	Selfâ€organizing hair pegâ€like structures from dissociated skin progenitor cells: New insights for human hair follicle organoid engineering and Turing patterning in an asymmetric morphogenetic field. Experimental Dermatology, 2019, 28, 355-366.	1.4	27
143	Spatially varying equilibria of mechanical models: Application to dermal wound contraction. Mathematical Biosciences, 1998, 147, 113-129.	0.9	26
144	Distinct mechanisms underlie pattern formation in the skin and skin appendages. Birth Defects Research Part C: Embryo Today Reviews, 2006, 78, 280-291.	3.6	26

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145	Dispersion relation in oscillatory reaction-diffusion systems with self-consistent flow in true slime mold. Journal of Mathematical Biology, 2007, 54, 745-760.	0.8	26
146	Hybrid approaches for multiple-species stochastic reactionâ€“diffusion models. Journal of Computational Physics, 2015, 299, 429-445.	1.9	26
147	A theoretical framework for transitioning from patient-level to population-scale epidemiological dynamics: influenza A as a case study. Journal of the Royal Society Interface, 2020, 17, 20200230.	1.5	26
148	The impact of cell crowding and active cell movement on vascular tumour growth. Networks and Heterogeneous Media, 2006, 1, 515-535.	0.5	26
149	Spatial structure impacts adaptive therapy by shaping intra-tumoral competition. Communications Medicine, 2022, 2, .	1.9	26
150	Mathematical Modeling of Cortical Neurogenesis Reveals that the Founder Population does not Necessarily Scale with Neurogenic Output. Cerebral Cortex, 2018, 28, 2540-2550.	1.6	25
151	Models for pattern formation in somitogenesis: a marriage of cellular and molecular biology. Comptes Rendus - Biologies, 2002, 325, 179-189.	0.1	24
152	Directional persistence and the optimality of run-and-tumble chemotaxis. Computational Biology and Chemistry, 2009, 33, 269-274.	1.1	24
153	Neural crest cells bulldoze through the microenvironment using Aquaporin-1 to stabilize filopodia. Development (Cambridge), 2020, 147, .	1.2	24
154	Evolutionary dynamics of competing phenotype-structured populations in periodically fluctuating environments. Journal of Mathematical Biology, 2020, 80, 775-807.	0.8	24
155	An integrated approach to quantitative modelling in angiogenesis research. Journal of the Royal Society Interface, 2015, 12, 20150546.	1.5	23
156	Multisite Phosphorylation Modulates the T Cell Receptor Î¶-Chain Potency but not the Switchlike Response. Biophysical Journal, 2016, 110, 1896-1906.	0.2	23
157	Hierarchically coupled ultradian oscillators generating robust circadian rhythms. Bulletin of Mathematical Biology, 1997, 59, 517-532.	0.9	22
158	A theoretical study of the response of vascular tumours to different types of chemotherapy. Mathematical and Computer Modelling, 2008, 47, 560-579.	2.0	22
159	Modelling Hair Follicle Growth Dynamics as an Excitable Medium. PLoS Computational Biology, 2012, 8, e1002804.	1.5	22
160	Predicting the Influence of Microvascular Structure On Tumor Response to Radiotherapy. IEEE Transactions on Biomedical Engineering, 2017, 64, 504-511.	2.5	22
161	Tuneable superradiant thermal emitter assembly. Physical Review B, 2017, 95, .	1.1	22
162	Modeling perspectives on the intestinal crypt, a canonical system for growth, mechanics, and remodeling. Current Opinion in Biomedical Engineering, 2020, 15, 32-39.	1.8	22

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163	Infection, inflammation and intervention: mechanistic modelling of epithelial cells in COVID-19. Journal of the Royal Society Interface, 2021, 18, 20200950.	1.5	22
164	Travelling gradients in interacting morphogen systems. Mathematical Biosciences, 2007, 209, 30-50.	0.9	21
165	Theoretical insights into bacterial chemotaxis. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2012, 4, 247-259.	6.6	21
166	Multiscale modelling of intestinal crypt organization and carcinogenesis. Mathematical Models and Methods in Applied Sciences, 2015, 25, 2563-2585.	1.7	21
167	A hierarchical Bayesian model for understanding the spatiotemporal dynamics of the intestinal epithelium. PLoS Computational Biology, 2017, 13, e1005688.	1.5	21
168	DISPERSAL CAN SHARPEN PARAPATRIC BOUNDARIES ON A SPATIALLY VARYING ENVIRONMENT. Ecology, 2000, 81, 749-760.	1.5	20
169	Feedback Control Architecture and the Bacterial Chemotaxis Network. PLoS Computational Biology, 2011, 7, e1001130.	1.5	20
170	A Mathematical Dissection of the Adaptation of Cell Populations to Fluctuating Oxygen Levels. Bulletin of Mathematical Biology, 2020, 82, 81.	0.9	20
171	Novel Methods for Analysing Bacterial Tracks Reveal Persistence in Rhodobacter sphaeroides. PLoS Computational Biology, 2013, 9, e1003276.	1.5	19
172	A filter-flow perspective of haematogenous metastasis offers a non-genetic paradigm for personalised cancer therapy. European Journal of Cancer, 2014, 50, 3068-3075.	1.3	19
173	Fat versus Thin Threading Approach on GPUs: Application to Stochastic Simulation of Chemical Reactions. IEEE Transactions on Parallel and Distributed Systems, 2012, 23, 280-287.	4.0	18
174	Mathematical modelling of digit specification by a sonic hedgehog gradient. Developmental Dynamics, 2014, 243, 290-298.	0.8	18
175	Glucoseâ€“lactate metabolic cooperation in cancer: Insights from a spatial mathematical model and implications for targeted therapy. Journal of Theoretical Biology, 2014, 361, 190-203.	0.8	18
176	Systems biology and cancer. Progress in Biophysics and Molecular Biology, 2011, 106, 337-339.	1.4	17
177	A Predator–2 Prey Fast–Slow Dynamical System for Rapid Predator Evolution. SIAM Journal on Applied Dynamical Systems, 2017, 16, 54-90.	0.7	17
178	How the mouse got its stripes. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 9656-9657.	3.3	16
179	What Has Mathematics Done for Biology?. Bulletin of Mathematical Biology, 2015, 77, 735-738.	0.9	16
180	Clonal hematopoiesis of indeterminate potential and its impact on patient trajectories after stem cell transplantation. PLoS Computational Biology, 2019, 15, e1006913.	1.5	16

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181	A shooting argument approach to a Sharp-type solution for nonlinear degenerate Fisher-KPP equations. IMA Journal of Applied Mathematics, 1996, 57, 211-221.	0.8	15
182	Turing patterns in fish skin?. Nature, 1996, 380, 678-678.	13.7	15
183	AGGREGATIVE MOVEMENT AND FRONT PROPAGATION FOR BI-STABLE POPULATION MODELS. Mathematical Models and Methods in Applied Sciences, 2007, 17, 1351-1368.	1.7	15
184	Metabolic Alterations During the Growth of Tumour Spheroids. Cell Biochemistry and Biophysics, 2014, 68, 615-628.	0.9	15
185	Semblance of Heterogeneity in Collective Cell Migration. Cell Systems, 2017, 5, 119-127.e1.	2.9	15
186	A three phase model to investigate the effects of dead material on the growth of avascular tumours. Mathematical Modelling of Natural Phenomena, 2020, 15, 22.	0.9	15
187	Models, measurement and inference in epithelial tissue dynamics. Mathematical Biosciences and Engineering, 2015, 12, 1321-1340.	1.0	15
188	Formation of Vertebral Precursors: Past Models and Future Predictions. Journal of Theoretical Medicine, 2003, 5, 23-35.	0.5	14
189	Modelling Delta-Notch perturbations during zebrafish somitogenesis. Developmental Biology, 2013, 373, 407-421.	0.9	14
190	Conformational Spread in the Flagellar Motor Switch: A Model Study. PLoS Computational Biology, 2012, 8, e1002523.	1.5	13
191	Inferring Tumor Proliferative Organization from Phylogenetic Tree Measures in a Computational Model. Systematic Biology, 2020, 69, 623-637.	2.7	13
192	Mix and Match: Phenotypic Coexistence as a Key Facilitator of Cancer Invasion. Bulletin of Mathematical Biology, 2020, 82, 15.	0.9	13
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