Philip K Maini

List of Publications by Year in Descending Order

272 papers	10,607 citations	54 h-index	91 g-index
358 ext. papers	12,445 ext. citations	4.4 avg, IF	6.42 L-index

#	Paper	IF	Citations
272	Dependence of cell-free-layer width on rheological parameters: Combining empirical data on flow separation at microvascular bifurcations with geometrical considerations.. *Physical Review E*, **2022**, 105, 014414	2.4	
271	Inference of the SARS-CoV-2 generation time using UK household data.. *ELife*, **2022**, 11,	8.9	5
270	Generation time of the alpha and delta SARS-CoV-2 variants: an epidemiological analysis.. *Lancet Infectious Diseases, The*, **2022**,	25.5	16
269	A Method to Coarse-Grain MultiAgent Stochastic Systems with Regions of Multistability. *Multiscale Modeling and Simulation*, **2022**, 20, 404-432	1.8	
268	Spatial structure impacts adaptive therapy by shaping intra-tumoral competition. *Communications Medicine*, **2022**, 2,		6
267	Control of diffusion-driven pattern formation behind a wave of competency. *Physica D: Nonlinear Phenomena*, **2022**, 133297	3.3	0
266	Introduction to PRecent progress and open frontiers in TuringP theory of morphogenesisP. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2021**, 379, 20200280	3	1
265	Modern perspectives on near-equilibrium analysis of Turing systems. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2021**, 379, 20200268	3	5
264	Smoothing and the environmental manifold. *Ecological Informatics*, **2021**, 66, 101472	4.2	2
263	High infectiousness immediately before COVID-19 symptom onset highlights the importance of continued contact tracing. *ELife*, **2021**, 10,	8.9	19
262	Isolating Patterns in Open Reaction-Diffusion Systems. *Bulletin of Mathematical Biology*, **2021**, 83, 82	2.1	6
261	Turnover Modulates the Need for a Cost of Resistance in Adaptive Therapy. *Cancer Research*, **2021**, 81, 1135-1147	10.1	18
260	A multiscale model of complex endothelial cell dynamics in early angiogenesis. *PLoS Computational Biology*, **2021**, 17, e1008055	5	7
259	Comparative analysis of continuum angiogenesis models. *Journal of Mathematical Biology*, **2021**, 82, 21	2	1
258	Infection, inflammation and intervention: mechanistic modelling of epithelial cells in COVID-19. *Journal of the Royal Society Interface*, **2021**, 18, 20200950	4.1	10
257	Travelling-wave analysis of a model of tumour invasion with degenerate, cross-dependent diffusion.. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2021**, 477, 20210593	2.4	2
256	A multiscale model of complex endothelial cell dynamics in early angiogenesis **2021**, 17, e1008055		

255	A multiscale model of complex endothelial cell dynamics in early angiogenesis **2021**, 17, e1008055		
254	A multiscale model of complex endothelial cell dynamics in early angiogenesis **2021**, 17, e1008055		
253	A multiscale model of complex endothelial cell dynamics in early angiogenesis **2021**, 17, e1008055		
252	Comparative study between discrete and continuum models for the evolution of competing phenotype-structured cell populations in dynamical environments. *Physical Review E*, **2020**, 102, 042404	2.4	4
251	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	4.1	11
250	A Mathematical Dissection of the Adaptation of Cell Populations to Fluctuating Oxygen Levels. *Bulletin of Mathematical Biology*, **2020**, 82, 81	2.1	9
249	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	3	8
248	Mix and Match: Phenotypic Coexistence as a Key Facilitator of Cancer Invasion. *Bulletin of Mathematical Biology*, **2020**, 82, 15	2.1	8
247	Visualizing mesoderm and neural crest cell dynamics during chick head morphogenesis. *Developmental Biology*, **2020**, 461, 184-196	3.1	7
246	Modeling perspectives on the intestinal crypt, a canonical system for growth, mechanics, and remodeling. *Current Opinion in Biomedical Engineering*, **2020**, 15, 32-39	4.4	7
245	Mesenchymal stem cells used as carrier cells of oncolytic adenovirus results in enhanced oncolytic virotherapy. *Scientific Reports*, **2020**, 10, 425	4.9	25
244	Stochastic growth pattern of untreated human glioblastomas predicts the survival time for patients. *Scientific Reports*, **2020**, 10, 6642	4.9	1
243	Evaluating snail-trail frameworks for leader-follower behavior with agent-based modeling. *Physical Review E*, **2020**, 102, 062417	2.4	1
242	Chaste: Cancer, Heart and Soft Tissue Environment. *Journal of Open Source Software*, **2020**, 5, 1848	5.2	22
241	Dynamics of hierarchical weighted networks of van der Pol oscillators. *Chaos*, **2020**, 30, 123146	3.3	1
240	Evolutionary dynamics of competing phenotype-structured populations in periodically fluctuating environments. *Journal of Mathematical Biology*, **2020**, 80, 775-807	2	15
239	Inferring Tumor Proliferative Organization from Phylogenetic Tree Measures in a Computational Model. *Systematic Biology*, **2020**, 69, 623-637	8.4	6
238	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	11.5	20

237	Neural crest cells bulldoze through the microenvironment using Aquaporin 1 to stabilize filopodia. *Development (Cambridge)*, **2020**, 147,	6.6	11
236	Modelling collective cell migration: neural crest as a model paradigm. *Journal of Mathematical Biology*, **2020**, 80, 481-504	2	11
235	An interdisciplinary approach to investigate collective cell migration in neural crest. *Developmental Dynamics*, **2020**, 249, 270-280	2.9	5
234	A mathematical model of the use of supplemental oxygen to combat surgical site infection. *Journal of Theoretical Biology*, **2019**, 466, 11-23	2.3	
233	Self-organizing hair peg-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	4	12
232	Age Structure Can Account for Delayed Logistic Proliferation of Scratch Assays. *Bulletin of Mathematical Biology*, **2019**, 81, 2706-2724	2.1	3
231	Clonal hematopoiesis of indeterminate potential and its impact on patient trajectories after stem cell transplantation. *PLoS Computational Biology*, **2019**, 15, e1006913	5	11
230	Elevated apoptosis impairs epithelial cell turnover and shortens villi in TNF-driven intestinal inflammation. *Cell Death and Disease*, **2019**, 10, 108	9.8	30
229	Recasting the Cancer Stem Cell Hypothesis: Unification Using a Continuum Model of Microenvironmental Forces. *Current Stem Cell Reports*, **2019**, 5, 22-30	1.8	7
228	In vitro cell migration quantification method for scratch assays. *Journal of the Royal Society Interface*, **2019**, 16, 20180709	4.1	20
227	The Goldilocks Window of Personalized Chemotherapy: Getting the Immune Response Just Right. *Cancer Research*, **2019**, 79, 5302-5315	10.1	17
226	Patterns of non-normality in networked systems. *Journal of Theoretical Biology*, **2019**, 480, 81-91	2.3	16
225	A mathematical insight into cell labelling experiments for clonal analysis. *Journal of Anatomy*, **2019**, 235, 687-696	2.9	5
224	Superradiant Cancer Hyperthermia Using a Buckyball Assembly of Quantum Dot Emitters. *IEEE Journal of Selected Topics in Quantum Electronics*, **2019**, 25, 1-8	3.8	7
223	Post-buckling behaviour of a growing elastic rod. *Journal of Mathematical Biology*, **2019**, 78, 777-814	2	5
222	The impact of exclusion processes on angiogenesis models. *Journal of Mathematical Biology*, **2018**, 77, 1721-1759	2	5
221	The Evolution of Tumour Composition During Fractionated Radiotherapy: Implications for Outcome. *Bulletin of Mathematical Biology*, **2018**, 80, 1207-1235	2.1	25
220	Mathematical Oncology. *Bulletin of Mathematical Biology*, **2018**, 80, 945-953	2.1	29

219	A stochastic model for tumour control probability that accounts for repair from sublethal damage. *Mathematical Medicine and Biology*, **2018**, 35, 181-202	1.3	6
218	Chronic TNF□driven injury delays cell migration to villi in the intestinal epithelium. *Journal of the Royal Society Interface*, **2018**, 15,	4.1	6
217	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	5.6	21
216	Mathematical Modeling of Cortical Neurogenesis Reveals that the Founder Population does not Necessarily Scale with Neurogenic Output. *Cerebral Cortex*, **2018**, 28, 2540-2550	5.1	15
215	The importance of geometry in the corneal micropocket angiogenesis assay. *PLoS Computational Biology*, **2018**, 14, e1006049	5	3
214	Unraveling the Control of Cell Cycle Periods during Intestinal Stem Cell Differentiation. *Biophysical Journal*, **2018**, 115, 2250-2258	2.9	3
213	Inferring parameters of prey switching in a 1 predator-2 prey plankton system with a linear preference tradeoff. *Journal of Theoretical Biology*, **2018**, 456, 108-122	2.3	3
212	Identification of a Novel Clinical Phenotype of Severe Malaria using a Network-Based Clustering Approach. *Scientific Reports*, **2018**, 8, 12849	4.9	2
211	3D hybrid modelling of vascular network formation. *Journal of Theoretical Biology*, **2017**, 414, 254-268	2.3	37
210	Predicting the Influence of Microvascular Structure On Tumor Response to Radiotherapy. *IEEE Transactions on Biomedical Engineering*, **2017**, 64, 504-511	5	14
209	A Predator--2 Prey Fast--Slow Dynamical System for Rapid Predator Evolution. *SIAM Journal on Applied Dynamical Systems*, **2017**, 16, 54-90	2.8	14
208	Modeling angiogenesis: A discrete to continuum description. *Physical Review E*, **2017**, 95, 012410	2.4	14
207	Logistic Proliferation of Cells in Scratch Assays is Delayed. *Bulletin of Mathematical Biology*, **2017**, 79, 1028-1050	2.1	22
206	Comparing individual-based approaches to modelling the self-organization of multicellular tissues. *PLoS Computational Biology*, **2017**, 13, e1005387	5	111
205	A hierarchical Bayesian model for understanding the spatiotemporal dynamics of the intestinal epithelium. *PLoS Computational Biology*, **2017**, 13, e1005688	5	13
204	DAN (NBL1) promotes collective neural crest migration by restraining uncontrolled invasion. *Journal of Cell Biology*, **2017**, 216, 3339-3354	7.3	24
203	Microvessel Chaste: An Open Library for Spatial Modeling of Vascularized Tissues. *Biophysical Journal*, **2017**, 112, 1767-1772	2.9	19
202	Integrating Models to Quantify Environment-Mediated Drug Resistance. *Cancer Research*, **2017**, 77, 5409-5418	11.2	21

201	Semblance of Heterogeneity in Collective Cell Migration. *Cell Systems*, **2017**, 5, 119-127.e1	10.6	10
200	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	5.6	36
199	Tuneable superradiant thermal emitter assembly. *Physical Review B*, **2017**, 95,	3.3	19
198	An age-structured multi-strain epidemic model for antigenically diverse infectious diseases: A multi-locus framework. *Nonlinear Analysis: Real World Applications*, **2017**, 34, 275-315	2.1	6
197	Cell proliferation within small intestinal crypts is the principal driving force for cell migration on villi. *FASEB Journal*, **2017**, 31, 636-649	0.9	46
196	The critical domain size of stochastic population models. *Journal of Mathematical Biology*, **2017**, 74, 755-782	2	6
195	From invasion to latency: intracellular noise and cell motility as key controls of the competition between resource-limited cellular populations. *Journal of Mathematical Biology*, **2016**, 72, 123-56	2	9
194	The spatial patterning potential of nonlinear diffusion: Comment on "Phase separation driven by density-dependent movement: A novel mechanism for ecological patterns" by Quan-Xing Liu et al. *Physics of Life Reviews*, **2016**, 19, 128-130	2.1	1
193	Multisite Phosphorylation Modulates the T Cell Receptor Chain Potency but not the Switchlike Response. *Biophysical Journal*, **2016**, 110, 1896-1906	2.9	18
192	Multidisciplinary approaches to understanding collective cell migration in developmental biology. *Open Biology*, **2016**, 6,	7	27
191	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, 2941-50	5.6	44
190	Fast solvers for optimal control problems from pattern formation. *Journal of Computational Physics*, **2016**, 304, 27-45	4.1	9
189	Spatial Metrics of Tumour Vascular Organisation Predict Radiation Efficacy in a Computational Model. *PLoS Computational Biology*, **2016**, 12, e1004712	5	29
188	Optimisation of simulations of stochastic processes by removal of opposing reactions. *Journal of Chemical Physics*, **2016**, 144, 084105	3.9	4
187	Approximating the Critical Domain Size of Integrodifference Equations. *Bulletin of Mathematical Biology*, **2016**, 78, 72-109	2.1	10
186	Investigating the Turing conditions for diffusion-driven instability in the presence of a binding immobile substrate. *Journal of Theoretical Biology*, **2015**, 367, 286-295	2.3	24
185	Hybrid approaches for multiple-species stochastic reaction-diffusion models. *Journal of Computational Physics*, **2015**, 299, 429-445	4.1	23
184	Multiscale modelling of intestinal crypt organization and carcinogenesis. *Mathematical Models and Methods in Applied Sciences*, **2015**, 25, 2563-2585	3.5	19

183	An integrated approach to quantitative modelling in angiogenesis research. *Journal of the Royal Society Interface*, **2015**, 12, 0546	4.1	17
182	VEGF signals induce trailblazer cell identity that drives neural crest migration. *Developmental Biology*, **2015**, 407, 12-25	3.1	57
181	Mesoscopic and continuum modelling of angiogenesis. *Journal of Mathematical Biology*, **2015**, 70, 485-532	2	52
180	Steering Evolution with Sequential Therapy to Prevent the Emergence of Bacterial Antibiotic Resistance. *PLoS Computational Biology*, **2015**, 11, e1004493	5	93
179	On the mathematical modeling of wound healing angiogenesis in skin as a reaction-transport process. *Frontiers in Physiology*, **2015**, 6, 262	4.6	34
178	What has mathematics done for biology?. *Bulletin of Mathematical Biology*, **2015**, 77, 735-8	2.1	6
177	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, 2014-25	6.6	86
176	Models, measurement and inference in epithelial tissue dynamics. *Mathematical Biosciences and Engineering*, **2015**, 12, 1321-40	2.1	9
175	HTLV-I infection: a dynamic struggle between viral persistence and host immunity. *Journal of Theoretical Biology*, **2014**, 352, 92-108	2.3	28
174	A filter-flow perspective of haematogenous metastasis offers a non-genetic paradigm for personalised cancer therapy. *European Journal of Cancer*, **2014**, 50, 3068-75	7.5	14
173	Enabling multiscale modeling in systems medicine. *Genome Medicine*, **2014**, 6, 21	14.4	61
172	Glucose-lactate metabolic cooperation in cancer: insights from a spatial mathematical model and implications for targeted therapy. *Journal of Theoretical Biology*, **2014**, 361, 190-203	2.3	11
171	Phenotypic models of T cell activation. *Nature Reviews Immunology*, **2014**, 14, 619-29	36.5	103
170	Metabolic alterations during the growth of tumour spheroids. *Cell Biochemistry and Biophysics*, **2014**, 68, 615-28	3.2	14
169	Comparing methods for modelling spreading cell fronts. *Journal of Theoretical Biology*, **2014**, 353, 95-103	2.3	7
168	A general reaction-diffusion model of acidity in cancer invasion. *Journal of Mathematical Biology*, **2014**, 68, 1199-224	2	30
167	Modelling collective cell behaviour. *Discrete and Continuous Dynamical Systems*, **2014**, 34, 5123-5133	2	7
166	Prey Switching with a Linear Preference Trade-Off. *SIAM Journal on Applied Dynamical Systems*, **2014**, 13, 658-682	2.8	25

165	Mathematical modelling of digit specification by a sonic hedgehog gradient. *Developmental Dynamics*, **2014**, 243, 290-8	2.9	13
164	Implementing vertex dynamics models of cell populations in biology within a consistent computational framework. *Progress in Biophysics and Molecular Biology*, **2013**, 113, 299-326	4.7	79
163	Incorporating spatial correlations into multispecies mean-field models. *Physical Review E*, **2013**, 88, 052713	2.4	24
162	Modelling Delta-Notch perturbations during zebrafish somitogenesis. *Developmental Biology*, **2013**, 373, 407-21	3.1	11
161	Systems model of T cell receptor proximal signaling reveals emergent ultrasensitivity. *PLoS Computational Biology*, **2013**, 9, e1003004	5	37
160	Novel methods for analysing bacterial tracks reveal persistence in Rhodobacter sphaeroides. *PLoS Computational Biology*, **2013**, 9, e1003276	5	15
159	A Modified Oster--Murray--Harris Mechanical Model of Morphogenesis. *SIAM Journal on Applied Mathematics*, **2013**, 73, 2124-2142	1.8	7
158	DendroBLAST: approximate phylogenetic trees in the absence of multiple sequence alignments. *PLoS ONE*, **2013**, 8, e58537	3.7	22
157	Modelling acidosis and the cell cycle in multicellular tumour spheroids. *Journal of Theoretical Biology*, **2012**, 298, 107-15	2.3	10
156	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	3.7	14
155	A mechanochemical model of striae distensae. *Mathematical Biosciences*, **2012**, 240, 141-7	3.9	29
154	The mathematics of nature at the Alan Turing centenary. *Interface Focus*, **2012**, 2, 393-396	3.9	6
153	TuringR^3 model for biological pattern formation and the robustness problem. *Interface Focus*, **2012**, 2, 487-96	3.9	138
152	Multiscale mechanisms of cell migration during development: theory and experiment. *Development (Cambridge)*, **2012**, 139, 2935-44	6.6	104
151	Modelling the within-host growth of viral infections in insects. *Journal of Theoretical Biology*, **2012**, 312, 34-43	2.3	7
150	A theoretical investigation of the effect of proliferation and adhesion on monoclonal conversion in the colonic crypt. *Journal of Theoretical Biology*, **2012**, 312, 143-56	2.3	52
149	A PHABULOSA/cytokinin feedback loop controls root growth in Arabidopsis. *Current Biology*, **2012**, 22, 1699-704	6.3	94
148	Incorporating chemical signalling factors into cell-based models of growing epithelial tissues. *Journal of Mathematical Biology*, **2012**, 65, 441-63	2	28

147	Theoretical insights into bacterial chemotaxis. *Wiley Interdisciplinary Reviews: Systems Biology and Medicine*, **2012**, 4, 247-59	6.6	18
146	Age-related changes in speed and mechanism of adult skeletal muscle stem cell migration. *Stem Cells*, **2012**, 30, 1182-95	5.8	54
145	A fibrocontractive mechanochemical model of dermal wound closure incorporating realistic growth factor kinetics. *Bulletin of Mathematical Biology*, **2012**, 74, 1143-70	2.1	31
144	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, 82-9	1.9	31
143	Modelling hair follicle growth dynamics as an excitable medium. *PLoS Computational Biology*, **2012**, 8, e1002804	5	17
142	Conformational spread in the flagellar motor switch: a model study. *PLoS Computational Biology*, **2012**, 8, e1002523	5	13
141	Multi-cellular rosettes in the mouse visceral endoderm facilitate the ordered migration of anterior visceral endoderm cells. *PLoS Biology*, **2012**, 10, e1001256	9.7	86
140	Macroscopic limits of individual-based models for motile cell populations with volume exclusion. *Physical Review E*, **2012**, 86, 031903	2.4	33
139	Advection, diffusion, and delivery over a network. *Physical Review E*, **2012**, 86, 021905	2.4	28
138	Stochastic reaction and diffusion on growing domains: understanding the breakdown of robust pattern formation. *Physical Review E*, **2011**, 84, 046216	2.4	48
137	A mathematical model of tumour and blood pHe regulation: The HCO3-/CO2 buffering system. *Mathematical Biosciences*, **2011**, 230, 1-11	3.9	27
136	Self-organizing and stochastic behaviors during the regeneration of hair stem cells. *Science*, **2011**, 332, 586-9	33.3	154
135	The clock and wavefront model revisited. *Journal of Theoretical Biology*, **2011**, 283, 227-38	2.3	43
134	Distinguishing graded and ultrasensitive signalling cascade kinetics by the shape of morphogen gradients in Drosophila. *Journal of Theoretical Biology*, **2011**, 285, 136-46	2.3	
133	Feedback control architecture and the bacterial chemotaxis network. *PLoS Computational Biology*, **2011**, 7, e1001130	5	14
132	Multiscale modelling of vascular tumour growth in 3D: the roles of domain size and boundary conditions. *PLoS ONE*, **2011**, 6, e14790	3.7	121
131	Ab initio identification of novel regulatory elements in the genome of Trypanosoma brucei by Bayesian inference on sequence segmentation. *PLoS ONE*, **2011**, 6, e25666	3.7	5
130	Growth-induced mass flows in fungal networks. *Proceedings of the Royal Society B: Biological Sciences*, **2010**, 277, 3265-74	4.4	39

129	Modeling chemotaxis reveals the role of reversed phosphotransfer and a bi-functional kinase-phosphatase. *PLoS Computational Biology*, **2010**, 6, e1000896	5	26
128	Modelling spatially regulated beta-catenin dynamics and invasion in intestinal crypts. *Biophysical Journal*, **2010**, 99, 716-25	2.9	52
127	Conformational spread as a mechanism for cooperativity in the bacterial flagellar switch. *Science*, **2010**, 327, 685-9	33.3	151
126	Stability analysis of non-autonomous reaction-diffusion systems: the effects of growing domains. *Journal of Mathematical Biology*, **2010**, 61, 133-64	2	72
125	On the proportion of cancer stem cells in a tumour. *Journal of Theoretical Biology*, **2010**, 266, 708-11	2.3	51
124	An efficient and robust numerical algorithm for estimating parameters in Turing systems. *Journal of Computational Physics*, **2010**, 229, 7058-7071	4.1	21
123	Leaky vessels as a potential source of stromal acidification in tumours. *Journal of Theoretical Biology*, **2010**, 267, 454-60	2.3	3
122	Tumour-stromal interactions in acid-mediated invasion: a mathematical model. *Journal of Theoretical Biology*, **2010**, 267, 461-70	2.3	51
121	Reptile scale paradigm: Evo-Devo, pattern formation and regeneration. *International Journal of Developmental Biology*, **2009**, 53, 813-26	1.9	101
120	Waves and patterning in developmental biology: vertebrate segmentation and feather bud formation as case studies. *International Journal of Developmental Biology*, **2009**, 53, 783-94	1.9	26
119	From a discrete to a continuum model of cell dynamics in one dimension. *Physical Review E*, **2009**, 80, 031912	2.4	63
118	Inherent noise can facilitate coherence in collective swarm motion. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 5464-9	11.5	202
117	Chaste: A test-driven approach to software development for biological modelling. *Computer Physics Communications*, **2009**, 180, 2452-2471	4.2	166
116	Angiogenesis and vascular remodelling in normal and cancerous tissues. *Journal of Mathematical Biology*, **2009**, 58, 689-721	2	145
115	Directional persistence and the optimality of run-and-tumble chemotaxis. *Computational Biology and Chemistry*, **2009**, 33, 269-74	3.6	21
114	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, 369-82	3.1	50
113	Modeling the skin pattern of fishes. *Physical Review E*, **2009**, 79, 031908	2.4	36
112	Cyclic dermal BMP signalling regulates stem cell activation during hair regeneration. *Nature*, **2008**, 451, 340-4	50.4	507

111	Multiscale Modelling of Solid Tumour Growth **2008**, 1-25		4
110	Mathematical models for somite formation. *Current Topics in Developmental Biology*, **2008**, 81, 183-203	5.3	31
109	A NEW NEUROSURGICAL TOOL INCORPORATING DIFFERENTIAL GEOMETRY AND CELLULAR AUTOMATA TECHNIQUES. *Biophysical Reviews and Letters*, **2008**, 03, 103-110	1.2	1
108	"Extremotaxis" computing with a bacterial-inspired algorithm. *BioSystems*, **2008**, 94, 47-54	1.9	4
107	Mathematical modelling of tumour acidity. *Journal of Theoretical Biology*, **2008**, 255, 106-12	2.3	29
106	A theoretical study of the response of vascular tumours to different types of chemotherapy. *Mathematical and Computer Modelling*, **2008**, 47, 560-579		21
105	From segment to somite: segmentation to epithelialization analyzed within quantitative frameworks. *Developmental Dynamics*, **2007**, 236, 1392-402	2.9	25
104	Metabolic changes during carcinogenesis: potential impact on invasiveness. *Journal of Theoretical Biology*, **2007**, 244, 703-13	2.3	140
103	Velocity-induced numerical solutions of reaction-diffusion systems on continuously growing domains. *Journal of Computational Physics*, **2007**, 225, 100-119	4.1	59
102	A mechanism for morphogen-controlled domain growth. *Journal of Mathematical Biology*, **2007**, 54, 597-622		35
101	Dispersion relation in oscillatory reaction-diffusion systems with self-consistent flow in true slime mold. *Journal of Mathematical Biology*, **2007**, 54, 745-60	2	24
100	Quiescence as a mechanism for cyclical hypoxia and acidosis. *Journal of Mathematical Biology*, **2007**, 55, 767-79	2	7
99	AGGREGATIVE MOVEMENT AND FRONT PROPAGATION FOR BI-STABLE POPULATION MODELS. *Mathematical Models and Methods in Applied Sciences*, **2007**, 17, 1351-1368	3.5	13
98	Examples of mathematical modeling: tales from the crypt. *Cell Cycle*, **2007**, 6, 2106-12	4.7	46
97	Stability of spikes in the shadow Gierer-Meinhardt system with Robin boundary conditions. *Chaos*, **2007**, 17, 037106	3.3	10
96	Speed of reaction diffusion in embryogenesis. *Physical Review E*, **2007**, 76, 011902	2.4	2
95	Mathematical Models of Avascular Tumor Growth. *SIAM Review*, **2007**, 49, 179-208	7.4	371
94	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, 4008-13	11.5	219

93	Travelling gradients in interacting morphogen systems. *Mathematical Biosciences*, **2007**, 209, 30-50	3.9	15
92	Multiscale Modeling in Biology. *American Scientist*, **2007**, 95, 134	2.7	61
91	A mathematical investigation of a Clock and Wavefront model for somitogenesis. *Journal of Mathematical Biology*, **2006**, 52, 458-82	2	38
90	Mode transitions in a model reaction-diffusion system driven by domain growth and noise. *Bulletin of Mathematical Biology*, **2006**, 68, 981-95	2.1	28
89	Distinct mechanisms underlie pattern formation in the skin and skin appendages. *Birth Defects Research Part C: Embryo Today Reviews*, **2006**, 78, 280-91		19
88	An analysis of B cell selection mechanisms in germinal centers. *Mathematical Medicine and Biology*, **2006**, 23, 255-77	1.3	90
87	Multiscale Modelling of Tumour Growth and Therapy: The Influence of Vessel Normalisation on Chemotherapy. *Computational and Mathematical Methods in Medicine*, **2006**, 7, 85-119	2.8	55
86	Developmental biology. The Turing model comes of molecular age. *Science*, **2006**, 314, 1397-8	33.3	143
85	MODELLING THE RESPONSE OF VASCULAR TUMOURS TO CHEMOTHERAPY: A MULTISCALE APPROACH. *Mathematical Models and Methods in Applied Sciences*, **2006**, 16, 1219-1241	3.5	44
84	A clock and wavefront mechanism for somite formation. *Developmental Biology*, **2006**, 293, 116-26	3.1	95
83	Some Mathematical Modelling Challenges and Approaches in Cancer **2006**, 95-107		6
82	Viewpoint 3. *Experimental Dermatology*, **2006**, 15, 557-559	4	3
81	Mixed-mode pattern in Doublefoot mutant mouse limb--Turing reaction-diffusion model on a growing domain during limb development. *Journal of Theoretical Biology*, **2006**, 240, 562-73	2.3	85
80	The impact of cell crowding and active cell movement on vascular tumour growth. *Networks and Heterogeneous Media*, **2006**, 1, 515-535	1.6	22
79	A design principle for vascular beds: the effects of complex blood rheology. *Microvascular Research*, **2005**, 69, 156-72	3.7	23
78	Extracellular volume regulation and growth. *Medical Hypotheses*, **2005**, 64, 303-6	3.8	
77	Non-linear incidence and stability of infectious disease models. *Mathematical Medicine and Biology*, **2005**, 22, 113-28	1.3	174
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5	Inferring Tumour Proliferative Organisation from Phylogenetic Tree Measures in a Computational Model		1
4	Neural crest cells bulldoze through the microenvironment using Aquaporin-1 to stabilize filopodia		2

List of Publications

3	Head Mesoderm Tissue Growth, Dynamics and Neural Crest Cell Migration	1
2	Mix & Match: Phenotypic coexistence as a key facilitator of solid tumour invasion	1
1	Recasting the cancer stem cell hypothesis: unification using a continuum model of microenvironmental forces	1