Mark A J Chaplain

List of Publications by Year
in descending order

179 papers	11,351 citations	31976 53 h-index	32842 100 g-index
195 all docs	195 docs citations	195 times ranked	6041 citing authors

#	Article	IF	Citations
1	Continuous and Discrete Mathematical Models of Tumor-induced Angiogenesis. Bulletin of Mathematical Biology, 1998, 60, 857-899.	1.9	937
2	Growth of nonnecrotic tumors in the presence and absence of inhibitors. Mathematical Biosciences, 1995, 130, 151-181.	1.9	370
3	Mathematical modelling of dynamic adaptive tumour-induced angiogenesis: Clinical implications and therapeutic targeting strategies. Journal of Theoretical Biology, 2006, 241, 564-589.	1.7	352
4	Multiscale modelling and nonlinear simulation of vascular tumour growth. Journal of Mathematical Biology, 2009, 58, 765-798.	1.9	319
5	Modelling the role of cell-cell adhesion in the growth and development of carcinomas. Mathematical and Computer Modelling, 1996, 24, 1-17.	2.0	295
6	Mathematical Modelling of Flow Through Vascular Networks: Implications for Tumour-induced Angiogenesis and Chemotherapy Strategies. Bulletin of Mathematical Biology, 2002, 64, 673-702.	1.9	264
7	Mathematical modelling of cancer cell invasion of tissue: Local and non-local models and the effect of adhesion. Journal of Theoretical Biology, 2008, 250, 684-704.	1.7	246
8	MATHEMATICAL MODELLING OF CANCER CELL INVASION OF TISSUE: THE ROLE OF THE UROKINASE PLASMINOGEN ACTIVATION SYSTEM. Mathematical Models and Methods in Applied Sciences, 2005, 15, 1685-1734.	3.3	245
9	Growth of necrotic tumors in the presence and absence of inhibitors. Mathematical Biosciences, 1996, 135, 187-216.	1.9	243
10	MATHEMATICAL MODELING OF TUMOR-INDUCED ANGIOGENESIS. Annual Review of Biomedical Engineering, 2006, 8, 233-257.	12.3	242
11	Quantifying the Role of Angiogenesis in Malignant Progression of Gliomas: <i>In Silico</i> Modeling Integrates Imaging and Histology. Cancer Research, 2011, 71, 7366-7375.	0.9	217
12	Modeling the Influence of the E-Cadherin-Î²-Catenin Pathway in Cancer Cell Invasion: A Multiscale Approach. Biophysical Journal, 2008, 95, 155-165.	0.5	215
13	A new mathematical model for avascular tumour growth. Journal of Mathematical Biology, 2001, 43, 291-312.	1.9	211
14	Avascular growth, angiogenesis and vascular growth in solid tumours: The mathematical modelling of the stages of tumour development. Mathematical and Computer Modelling, 1996, 23, 47-87.	2.0	203
15	The effect of interstitial pressure on tumor growth: Coupling with the blood and lymphatic vascular systems. Journal of Theoretical Biology, 2013, 320, 131-151.	1.7	183
16	A mathematical model of breast cancer development, local treatment and recurrence. Journal of Theoretical Biology, 2007, 246, 245-259.	1.7	176
17	Paradoxical Dependencies of Tumor Dormancy and Progression on Basic Cell Kinetics. Cancer Research, 2009, 69, 8814-8821.	0.9	175
18	A model mechanism for the chemotactic response of endothelial cells to tumour angiogenesis factor. Mathematical Medicine and Biology, 1993, 10, 149-168.	1.2	169

#	Article	IF	Citations
19	Spatio-temporal pattern formation on spherical surfaces: numerical simulation and application to solid tumour growth. Journal of Mathematical Biology, 2001, 42, 387-423.	1.9	169
20	Mathematical modelling of the loss of tissue compression responsiveness and its role in solid tumour development. Mathematical Medicine and Biology, 2006, 23, 197-229.	1.2	161
21	Free boundary value problems associated with the growth and development of multicellular spheroids. European Journal of Applied Mathematics, 1997, 8, 639-658.	2.9	153
22	Thermostats for â€œSlowâ€•Configurational Modes. Journal of Statistical Physics, 2007, 128, 1321-1336.	1.2	150
23	Mathematical modelling of the spatio-temporal response of cytotoxic T-lymphocytes to a solid tumour. Mathematical Medicine and Biology, 2004, 21, 1-34.	1.2	145
24	Mathematical Modeling of Tumor Growth and Treatment. Current Pharmaceutical Design, 2014, 20, 4934-4940.	1.9	145
25	Mathematical modelling of flow in 2D and 3D vascular networks: Applications to anti-angiogenic and chemotherapeutic drug strategies. Mathematical and Computer Modelling, 2005, 41, 1137-1156.	2.0	139
26	MATHEMATICAL MODELLING OF CANCER INVASION OF TISSUE: THE ROLE AND EFFECT OF NONLOCAL INTERACTIONS. Mathematical Models and Methods in Applied Sciences, 2009, 19, 257-281.	3.3	132
27	Multi-scale modelling of cancer cell intravasation: the role of cadherins in metastasis. Physical Biology, 2009, 6, 016008.	1.8	131
28	Modelling the effects of cell-cycle heterogeneity on the response of a solid tumour to chemotherapy: Biological insights from a hybrid multiscale cellular automaton model. Journal of Theoretical Biology, 2012, 308, 1-19.	1.7	130
29	Mathematical models for tumour angiogenesis: Numerical simulations and nonlinear wave solutions. Bulletin of Mathematical Biology, 1995, 57, 461-486.	1.9	129
30	Mathematical modeling of cancer cell invasion of tissue: biological insight from mathematical analysis and computational simulation. Journal of Mathematical Biology, 2011, 63, 141-171.	1.9	123
31	Mathematical modelling of angiogenesis. , 2000, 50, 37-51.		121
32	Mathematical modelling of the influence of blood rheological properties upon adaptative tumour-induced angiogenesis. Mathematical and Computer Modelling, 2006, 44, 96-123.	2.0	120
33	Mathematical modelling of cancer invasion: Implications of cell adhesion variability for tumour infiltrative growth patterns. Journal of Theoretical Biology, 2014, 361, 41-60.	1.7	107
34	Mathematical modelling of cancer cell invasion of tissue. Mathematical and Computer Modelling, 2008, 47, 533-545.	2.0	106
35	A multiscale model of virus pandemic: Heterogeneous interactive entities in a globally connected world. Mathematical Models and Methods in Applied Sciences, 2020, 30, 1591-1651.	3.3	105
36	Two-dimensional models of tumour angiogenesis and anti-angiogenesis strategies. Mathematical Medicine and Biology, 1997, 14, 189-205.	1.2	104

#	Article	IF	Citations
37	A mathematical model of vascular tumour growth and invasion. Mathematical and Computer Modelling, 1996, 23, 43-60.	2.0	101
38	Computational Modeling of Single-Cell Migration: The Leading Role of Extracellular Matrix Fibers. Biophysical Journal, 2012, 103, 1141-1151.	0.5	96
39	Mathematical modelling of radiotherapy strategies for early breast cancer. Journal of Theoretical Biology, 2006, 241, 158-171.	1.7	95
40	Towards Predicting the Response of a Solid Tumour to Chemotherapy and Radiotherapy Treatments: Clinical Insights from a Computational Model. PLoS Computational Biology, 2013, 9, e1003120.	3.2	91
41	The effect of interstitial pressure on therapeutic agent transport: Coupling with the tumor blood and lymphatic vascular systems. Journal of Theoretical Biology, 2014, 355, 194-207.	1.7	91
42	The mathematical modelling of tumour angiogenesis and invasion. Acta Biotheoretica, 1995, 43, 387-402.	1.5	89
43	Integrated intravital microscopy and mathematical modeling to optimize nanotherapeutics delivery to tumors. AIP Advances, 2012, 2, 11208.	1.3	84
44	MATHEMATICAL MODELLING OF CANCER INVASION: THE IMPORTANCE OF CELLâ€"CELL ADHESION AND CELLâ€"MATRIX ADHESION. Mathematical Models and Methods in Applied Sciences, 2011, 21, 719-743.	3.3	82
45	A mathematical model of the first steps of tumour-related angiogenesis: Capillary sprout formation and secondary branching. Mathematical Medicine and Biology, 1996, 13, 73-98.	1.2	79
46	On immunotherapies and cancer vaccination protocols: A mathematical modelling approach. Journal of Theoretical Biology, 2009, 259, 820-827.	1.7	78
47	Modelling the growth of solid tumours and incorporating a method for their classification using nonlinear elasticity theory. Journal of Mathematical Biology, 1993, 31, 431-73.	1.9	71
48	Robust numerical methods for taxisâ€"diffusionâ€"reaction systems: Applications to biomedical problems. Mathematical and Computer Modelling, 2006, 43, 49-75.	2.0	71
49	Quantitative Modeling of Tumor Dynamics and Radiotherapy. Acta Biotheoretica, 2010, 58, 341-353.	1.5	70
50	Systems oncology: Towards patient-specific treatment regimes informed by multiscale mathematical modelling. Seminars in Cancer Biology, 2015, 30, 13-20.	9.6	68
51	Integrating Intracellular Dynamics Using CompuCell3D and Bionetsolver: Applications to Multiscale Modelling of Cancer Cell Growth and Invasion. PLoS ONE, 2012, 7, e33726.	2.5	66
52	Spatio-temporal modelling of the Hes1 and p53-Mdm2 intracellular signalling pathways. Journal of Theoretical Biology, 2011, 273, 15-31.	1.7	64
53	Modeling Gastrulation in the Chick Embryo: Formation of the Primitive Streak. PLoS ONE, 2010, 5, e10571.	2.5	63
54	A Mathematical Framework for Modelling the Metastatic Spread of Cancer. Bulletin of Mathematical Biology, 2019, 81, 1965-2010.	1.9	63

#	Article	IF	Citations
55	Spatial stochastic modelling of the Hes1 gene regulatory network: intrinsic noise can explain heterogeneity in embryonic stem cell differentiation. Journal of the Royal Society Interface, 2013, 10, 20120988.	3.4	59
56	Physical Oncology: A Bench-to-Bedside Quantitative and Predictive Approach. Cancer Research, 2011, 71, 298-302.	0.9	52
57	A qualitative analysis of some models of tissue growth. Mathematical Biosciences, 1993, 113, 77-89.	1.9	51
58	Persistence and global stability of a ratio-dependent predatorâ€“prey model with stage structure. Applied Mathematics and Computation, 2004, 158, 729-744.	2.2	50
59	Dynamics of Angiogenesis During Wound Healing: A Coupled <i>In Vivo</i> and <i>In Silico</i> Study. Microcirculation, 2011, 18, 183-197.	1.8	50
60	A mathematical analysis of a model for tumour angiogenesis. Journal of Mathematical Biology, 1995, 33, 744-70.	1.9	48
61	Periodic solutions for a delayed predator-prey model of prey dispersal in two-patch environments. Nonlinear Analysis: Real World Applications, 2004, 5, 183-206.	1.7	48
62	A computational model of cell migration coupling the growth of focal adhesions with oscillatory cell protrusions. Journal of Theoretical Biology, 2008, 253, 701-716.	1.7	46
63	Evasion of tumours from the control of the immune system: consequences of brief encounters. Biology Direct, 2012, 7, 31.	4.6	45
64	A Hybrid Discrete-Continuum Mathematical Model of Pattern Prediction in the Developing Retinal Vasculature. Bulletin of Mathematical Biology, 2012, 74, 2272-2314.	1.9	44
65	Bystander effects and their implications for clinical radiation therapy: Insights from multiscale in silico experiments. Journal of Theoretical Biology, 2016, 401, 1-14.	1.7	44
66	A Multiscale Moving Boundary Model Arising in Cancer Invasion. Multiscale Modeling and Simulation, 2013, 11, 309-335.	1.6	43
67	Modeling the temporal evolution of the spindle assembly checkpoint and role of Aurora B kinase. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20215-20220.	7.1	42
68	Strategies of Eradicating Glioma Cells: A Multi-Scale Mathematical Model with MiR-451-AMPK-mTOR Control. PLoS ONE, 2015, 10, e0114370.	2.5	42
69	A Multiscale Mathematical Model of Tumour Invasive Growth. Bulletin of Mathematical Biology, 2017, 79, 389-429.	1.9	40
70	Role of extracellular matrix and microenvironment in regulation of tumor growth and LAR-mediated invasion in glioblastoma. PLoS ONE, 2018, 13, e0204865.	2.5	40
71	A Mathematical Model for the Diffusion of Tumour Angiogenesis Factor into the Surrounding Host Tissue. Mathematical Medicine and Biology, 1991, 8, 191-220.	1.2	37
72	Global stability of a Lotkaâ€“Volterra type predatorâ€“prey model with stage structure and time delay. Applied Mathematics and Computation, 2004, 159, 863-880.	2.2	36

#	Article	IF	Citations
73	Dynamics of angiogenesis during murine retinal development: a coupled<i>in vivo</i>and<i>in silico</i>study. Journal of the Royal Society Interface, 2012, 9, 2351-2364.	3.4	36
74	Mathematical Modeling of Cancer Invasion: The Role of Membrane-Bound Matrix Metalloproteinases. Frontiers in Oncology, 2013, 3, 70.	2.8	36
75	Influence of the Nuclear Membrane, Active Transport, and Cell Shape on the Hes1 and p53â€“Mdm2 Pathways: Insights from Spatio-temporal Modelling. Bulletin of Mathematical Biology, 2012, 74, 1531-1579.	1.9	35
76	The role of N-methyl-D-aspartate (NMDA) receptors in wind-up: A mathematical model. Mathematical Medicine and Biology, 1996, 13, 193-205.	1.2	34
77	Travelling-wave analysis of a model of the immune response to cancer. Comptes Rendus - Biologies, 2004, 327, 995-1008.	0.2	34
78	Multiscale mathematical modelling in biology and medicine. IMA Journal of Applied Mathematics, 2011, 76, 371-388.	1.6	34
79	Multi-scale modelling of the dynamics of cell colonies: insights into cell-adhesion forces and cancer invasion from <i>in silico</i> simulations. Journal of the Royal Society Interface, 2015, 12, 20141080.	3.4	34
80	Multimodality imaging and mathematical modelling of drug delivery to glioblastomas. Interface Focus, 2016, 6, 20160039.	3.0	34
81	Periodic solution of a Lotkaâ€“Volterra predatorâ€“prey model with dispersion and time delays. Applied Mathematics and Computation, 2004, 148, 537-560.	2.2	33
82	Modelling the spatio-temporal dynamics of multi-species hostâ€“parasitoid interactions: Heterogeneous patterns and ecological implications. Journal of Theoretical Biology, 2006, 241, 876-886.	1.7	33
83	Nonlinear diffusion of a growth inhibitory factor in multicell spheroids. Mathematical Biosciences, 1994, 121, 1-13.	1.9	32
84	Periodic solutions for a predatorâ€“prey model with Holling-type functional response and time delays. Applied Mathematics and Computation, 2005, 161, 637-654.	2.2	32
85	A Continuum Mathematical Model of the Developing Murine Retinal Vasculature. Bulletin of Mathematical Biology, 2011, 73, 2430-2451.	1.9	32
86	A positive splitting method for mixed hyperbolic-parabolic systems. Numerical Methods for Partial Differential Equations, 2001, 17, 152-168.	3.6	31
87	Three-scale convergence for processes in heterogeneous media. Applicable Analysis, 2012, 91, 1351-1373.	1.3	30
88	Mathematical Modelling of Tumour-induced Angiogenesis: Network Growth and Structure. Cancer Treatment and Research, 2004, 117, 51-75.	0.5	30
89	A mathematical model for the dynamics of large membrane deformations of isolated fibroblasts. Bulletin of Mathematical Biology, 2004, 66, 1119-1154.	1.9	29
90	Hopf bifurcation in a gene regulatory network model: Molecular movement causes oscillations. Mathematical Models and Methods in Applied Sciences, 2015, 25, 1179-1215.	3.3	29

#	Article	IF	Citations
91	The Strain Energy Function of an Ideal Plant Cell Wall. Journal of Theoretical Biology, 1993, 163, 77-97.	1.7	28
92	Chemotaxis-induced spatio-temporal heterogeneity in multi-species host-parasitoid systems. Journal of Mathematical Biology, 2007, 55, 365-388.	1.9	27
93	Oscillations and bistability in the dynamics of cytotoxic reactions mediated by the response of immune cells to solid tumours. Mathematical and Computer Modelling, 2008, 47, 649-662.	2.0	27
94	The role of spatial variations of abiotic factors in mediating intratumour phenotypic heterogeneity. Journal of Theoretical Biology, 2018, 451, 101-110.	1.7	27
95	The Role of Dimerisation and Nuclear Transport in the Hes1 Gene Regulatory Network. Bulletin of Mathematical Biology, 2014, 76, 766-798.	1.9	26
96	A Hybrid Multiscale Model for Cancer Invasion of the Extracellular Matrix. Multiscale Modeling and Simulation, 2020, 18, 824-850.	1.6	26
97	Travelling wave and convergence in stage-structured reactionâ€"diffusion competitive models with nonlocal delays. Chaos, Solitons and Fractals, 2006, 30, 974-992.	5.1	25
98	Spatio-temporal modelling of the intracellular signalling pathway: The roles of diffusion, active transport, and cell geometry. Journal of Theoretical Biology, 2011, 290, 7-26.	1.7	25
99	Computational Modelling of Cancer Development and Growth: Modelling at Multiple Scales and Multiscale Modelling. Bulletin of Mathematical Biology, 2018, 80, 1366-1403.	1.9	25
100	Persistence and stability of a stage-structured predator-prey model with time delays. Applied Mathematics and Computation, 2004, 150, 259-277.	2.2	24
101	Structured models of cell migration incorporating molecular binding processes. Journal of Mathematical Biology, 2017, 75, 1517-1561.	1.9	24
102	Blackboard to Bedside: A Mathematical Modeling Bottom-Up Approach Toward Personalized Cancer Treatments. JCO Clinical Cancer Informatics, 2019, 3, 1-11.	2.1	24
103	A gradient-driven mathematical model of antiangiogenesis. Mathematical and Computer Modelling, 2000, 32, 1141-1152.	2.0	23
104	A novel â€œsandwichâ€• assay for quantifying chemo-regulated cell migration within 3-dimensional matrices: Wound healing cytokines exhibit distinct motogenic activities compared to the transmembrane assay. Cytoskeleton, 2006, 63, 287-300.	4.4	23
105	A Spatio-Temporal Model of Notch Signalling in the Zebrafish Segmentation Clock: Conditions for Synchronised Oscillatory Dynamics. PLoS ONE, 2011, 6, e16980.	2.5	23
106	Mathematical modelling of cancer invasion: The multiple roles of TGF-Î² pathway on tumour proliferation and cell adhesion. Mathematical Models and Methods in Applied Sciences, 2017, 27, 1929-1962.	3.3	23
107	Modelling the effects of bacterial cell state and spatial location on tuberculosis treatment: Insights from a hybrid multiscale cellular automaton model. Journal of Theoretical Biology, 2018, 446, 87-100.	1.7	23
108	Permanence and periodicity of a delayed ratio-dependent predatorâ€"prey model with stage structure. Journal of Mathematical Analysis and Applications, 2005, 303, 602-621.	1.0	22

#	Article	IF	Citations
109	Combining radiation with hyperthermia: a multiscale model informed by <i>in vitro</i> experiments. Journal of the Royal Society Interface, 2018, 15, 20170681.	3.4	22
110	Modelling the Immune Response to Cancer: An Individual-Based Approach Accounting for the Difference in Movement Between Inactive and Activated T Cells. Bulletin of Mathematical Biology, 2018, 80, 1539-1562.	1.9	21
111	Periodic solution for athree-species Lotka-Volterra food-chain model with time delays. Mathematical and Computer Modelling, 2004, 40, 823-837.	2.0	20
112	Modelling Aspects of Cancer Growth: Insight from Mathematical and Numerical Analysis and Computational Simulation. Lecture Notes in Mathematics, 2008, , 147-200.	0.2	20
113	Computational modelling and simulation of cancer growth and migration within a 3D heterogeneous tissue: The effects of fibre and vascular structure. Journal of Computational Science, 2020, 40, 101067.	2.9	20
114	Discrete and continuum phenotype-structured models for the evolution of cancer cell populations under chemotherapy. Mathematical Modelling of Natural Phenomena, 2020, 15, 14.	2.4	20
115	Bridging the gap between individual-based and continuum models of growing cell populations. Journal of Mathematical Biology, 2020, 80, 343-371.	1.9	19
116	The Development of a Spatial Pattern in a Model for Cancer Growth. , 1993, , 45-59.		19
117	Mathematical Modelling of Hostâ€"Parasitoid Systems: Effects of Chemically Mediated Parasitoid Foraging Strategies on Within- and Between-generation Spatio-temporal Dynamics. Journal of Theoretical Biology, 2002, 214, 31-47.	1.7	18
118	Disease induced dynamics in hostâ€"parasitoid systems: chaos and coexistence. Journal of the Royal Society Interface, 2007, 4, 463-471.	3.4	18
119	Spatio-Temporal Modelling of the p53â€"mdm2 Oscillatory System. Mathematical Modelling of Natural Phenomena, 2009, 4, 97-116.	2.4	18
120	Intracellular Modelling of Cell-Matrix Adhesion during Cancer Cell Invasion. Mathematical Modelling of Natural Phenomena, 2012, 7, 29-48.	2.4	15
121	Diffusion driven oscillations in gene regulatory networks. Journal of Theoretical Biology, 2016, 407, 51-70.	1.7	15
122	A Hybrid Discrete-Continuum Model of Tumour Induced Angiogenesis. , 2012, , 105-133.		15
123	A laguerre-legendre spectral-element method for the solution of partial differential equations on infinite domains: Application to the diffusion of tumour angiogenesis factors. Mathematical and Computer Modelling, 2005, 41, 1171-1192.	2.0	14
124	A stochastic individual-based model to explore the role of spatial interactions and antigen recognition in the immune response against solid tumours. Journal of Theoretical Biology, 2019, 480, 43-55.	1.7	13
125	Quantitative Predictive Modelling Approaches to Understanding Rheumatoid Arthritis: A Brief Review. Cells, 2020, 9, 74.	4.1	13
126	Modeling the Emergence of Phenotypic Heterogeneity in Vascularized Tumors. SIAM Journal on Applied Mathematics, 2021, 81, 434-453.	1.8	13

#	Article	IF	Citations
127	Evolution of searching and life history characteristics in individual-based models of hostâ€“parasitoidâ€“microbe associations. Journal of Theoretical Biology, 2005, 237, 1-16.	1.7	12
128	A mathematical multi-organ model for bidirectional epithelialâ€“mesenchymal transitions in the metastatic spread of cancer. IMA Journal of Applied Mathematics, 2020, 85, 724-761.	1.6	12
129	Modelling and analysis of a competitive model with stage structure. Mathematical and Computer Modelling, 2005, 41, 159-175.	2.0	11
130	A Lotkaâ€“Volterra type food chain model with stage structure and time delays. Journal of Mathematical Analysis and Applications, 2006, 315, 90-105.	1.0	11
131	Notes on configurational thermostat schemes. Journal of Chemical Physics, 2010, 132, 246101.	3.0	11
132	Evolutionary Dynamics in Vascularised Tumours under Chemotherapy: Mathematical Modelling, Asymptotic Analysis and Numerical Simulations. Vietnam Journal of Mathematics, 2021, 49, 143-167.	0.8	11
133	Visualisation of the numerical solution of partial differential equation systems in three space dimensions and its importance for mathematical models in biology. Mathematical Biosciences and Engineering, 2006, 3, 571-582.	1.9	11
134	Dynamic heterogeneous spatio-temporal pattern formation in host-parasitoid systems with synchronised generations. Journal of Mathematical Biology, 2005, 50, 559-583.	1.9	10
135	A pharmacodynamic model of Aurora kinase inhibitors in the spindle assembly checkpoint. Frontiers in Bioscience - Landmark, 2010, 15, 249.	3.0	10
136	Aggregation and travelling wave dynamics in a two-population model of cancer cell growth and invasion. Mathematical Medicine and Biology, 2018, 35, 541-577.	1.2	10
137	A hybrid discrete-continuum approach to model Turing pattern formation. Mathematical Biosciences and Engineering, 2017, 17, 7442-7479.	1.9	10
138	Global convergence of a reactionâ€“diffusion predatorâ€“prey model with stage structure and nonlocal delays. Computers and Mathematics With Applications, 2007, 53, 770-788.	2.7	9
139	Computational Approaches and Analysis for a Spatio-Structural-Temporal Invasive Carcinoma Model. Bulletin of Mathematical Biology, 2018, 80, 701-737.	1.9	9
140	Derivation and Application of Effective Interface Conditions for Continuum Mechanical Models of Cell Invasion through Thin Membranes. SIAM Journal on Applied Mathematics, 2019, 79, 2011-2031.	1.8	9
141	Mechanical Models of Pattern and Form in Biological Tissues: The Role of Stressâ€“Strain Constitutive Equations. Bulletin of Mathematical Biology, 2021, 83, 80.	1.9	9
142	Examining the role of individual movement in promoting coexistence in a spatially explicit prisoner's dilemma. Journal of Theoretical Biology, 2017, 419, 323-332.	1.7	8
143	Mathematical Modelling of Cancer Invasion: A Review. Springer Proceedings in Mathematics and Statistics, 2021, , 153-172.	0.2	8
144	Modelling the Impact of Pericyte Migration and Coverage of Vessels on the Efficacy of Vascular Disrupting Agents. Mathematical Modelling of Natural Phenomena, 2010, 5, 163-202.	2.4	7

#	Article	IF	Citations
145	Spatial-Stochastic modelling of synthetic gene regulatory networks. Journal of Theoretical Biology, 2019, 468, 27-44.	1.7	7
146	Learningâ€induced switching costs in a parasitoid can maintain diversity of host aphid phenotypes although biocontrol is destabilized under abiotic stress. Journal of Animal Ecology, 2020, 89, 1216-1229.	2.8	7
147	A novel 3D atomistic-continuum cancer invasion model: In silico simulations of an in vitro organotypic invasion assay. Journal of Theoretical Biology, 2021, 522, 110677.	1.7	7
148	A model of breast carcinogenesis and recurrence after radiotherapy. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1121701-1121702.	0.2	6
149	Modelling contact spread of infection in hostâ€"parasitoid systems: Vertical transmission of pathogens can cause chaos. Journal of Theoretical Biology, 2010, 262, 441-451.	1.7	6
150	JTB Editorial Malpractice: A Case Report. Journal of Theoretical Biology, 2020, 488, 110171.	1.7	6
151	Targeting Cellular DNA Damage Responses in Cancer: An In Vitro-Calibrated Agent-Based Model Simulating Monolayer and Spheroid Treatment Responses to ATR-Inhibiting Drugs. Bulletin of Mathematical Biology, 2021, 83, 103.	1.9	6
152	Blood Flow and Tumour-Induced Angiogenesis: Dynamically Adapting Vascular Networks. , 2012, , 167-212.		6
153	Spatio-temporal models of synthetic genetic oscillators. Mathematical Biosciences and Engineering, 2017, 14, 249-262.	1.9	6
154	Quantifying ERK activity in response to inhibition of the BRAFV600E-MEK-ERK cascade using mathematical modelling. British Journal of Cancer, 2021, 125, 1552-1560.	6.4	6
155	A novel nonlocal partial differential equation model of endothelial progenitor cell cluster formation during the early stages of vasculogenesis. Journal of Theoretical Biology, 2022, 534, 110963.	1.7	6
156	Periodic solutions of a predatorâ€"prey model with stage structure for predator. Applied Mathematics and Computation, 2004, 154, 847-870.	2.2	5
157	Persistence and periodicity of a delayed ratio-dependent predatorâ€"prey model with stage structure and prey dispersal. Applied Mathematics and Computation, 2004, 159, 823-846.	2.2	5
158	Global stability of a stage-structured predator-prey model with prey dispersal. Applied Mathematics and Computation, 2005, 171, 293-314.	2.2	5
159	Development of a coupled simulation toolkit for computational radiation biology based on Geant4 and CompuCell3D. Physics in Medicine and Biology, 2021, 66, 045026.	3.0	5
160	Global spatiotemporal order and induced stochastic resonance due to a locally applied signal. Physical Review E, 2004, 69, 045102.	2.1	4
161	Preface. Journal of Mathematical Biology, 2009, 58, 481-483.	1.9	4
162	Modelling rheumatoid arthritis: A hybrid modelling framework to describe pannus formation in a small joint. ImmunoInformatics, 2022, 6, 100014.	2.2	4

#	ARTICLE	IF	CITATIONS
163	Multiscale Modelling of Cancer Progression and Treatment Control: The Role of Intracellular Heterogeneities in Chemotherapy Treatment. Biophysical Reviews and Letters, 2015, 10, 97-114.	0.8	3
164	Calibrating models of cancer invasion: parameter estimation using approximate Bayesian computation and gradient matching. Royal Society Open Science, 2021, 8, 202237.	2.4	3
165	Modelling the Effects of Paclitaxel and Cisplatin on Breast and Ovarian Cancer. Journal of Theoretical Medicine, 2000, 3, 11-23.	0.5	2
166	Global convergence of a reactionâ€"diffusion predatorâ€"prey model with stage structure for the predator. Applied Mathematics and Computation, 2006, 176, 388-401.	2.2	2
167	Dissipative particle dynamics simulation of critical pore size in a lipid bilayer membrane. Royal Society Open Science, 2019, 6, 181657.	2.4	2
168	Spatio-Temporal Modelling of Intracellular Signalling Pathways: Transcription Factors, Negative Feedback Systems and Oscillations. SIMAI Springer Series, 2012, , 55-82.	0.4	2
169	The usage of a three-compartment model to investigate the metabolic differences between hepatic reductase null and wild-type mice. Mathematical Medicine and Biology, 2017, 34, 1-13.	1.2	1
170	Multiscale Modelling of Cancer Progression and Treatment Control: The Role of Intracellular Heterogeneities in Chemotherapy Treatment. , 2016, , 1-18.		1
171	Transparency and openness in science. Royal Society Open Science, 2017, 4, 160979.	2.4	1
172	Multiscale Modelling of Cancer: Micro-, Meso- and Macro-scales of Growth and Spread. Human Perspectives in Health Sciences and Technology, 2020, , 149-168.	0.4	1
173	Special Collection: Celebrating J.D. Murrayâ€™s Contributions to Mathematical Biology. Bulletin of Mathematical Biology, 2022, 84, 13.	1.9	1
174	Periodic solutions of a Lotkaâ€"Volterra type multi-species population model with time delays. Mathematische Nachrichten, 2006, 279, 911-927.	0.8	0
175	Correction: Physical Oncology: A Bench-to-Bedside Quantitative and Predictive Approach. Cancer Research, 2011, 71, 2024-2024.	0.9	0
176	Stochastic Modelling of Chromosomal Segregation: Errors Can Introduce Correction. Bulletin of Mathematical Biology, 2014, 76, 1590-1606.	1.9	0
177	Mathematical Modelling of Solid Tumour Growth: Applications of Pre-pattern Formation. , 2003, , 283-293.		0
178	A Hybrid Multiscale Approach in Cancer Modelling and Treatment Prediction. Modeling and Simulation in Science, Engineering and Technology, 2014, , 237-263.	0.6	0
179	Multiscale Analysis and Modelling for Cancer Growth and Development. Springer Proceedings in Mathematics and Statistics, 2014, , 45-53.	0.2	0