

Ruth Baker

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/5413153/ruth-baker-publications-by-year.pdf>

Version: 2024-04-28

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

186
papers

4,998
citations

35
h-index

62
g-index

225
ext. papers

6,214
ext. citations

4.2
avg, IF

5.98
L-index

#	Paper	IF	Citations
186	Mathematical modelling of autoimmune myocarditis and the effects of immune checkpoint inhibitors.. <i>Journal of Theoretical Biology</i> , 2022 , 537, 111002	2.3	0
185	Control of diffusion-driven pattern formation behind a wave of competency. <i>Physica D: Nonlinear Phenomena</i> , 2022 , 133297	3.3	0
184	Parameter identifiability and model selection for sigmoid population growth models.. <i>Journal of Theoretical Biology</i> , 2021 , 110998	2.3	3
183	Bayesian uncertainty quantification for data-driven equation learning.. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021 , 477, 20210426	2.4	0
182	Learning differential equation models from stochastic agent-based model simulations. <i>Journal of the Royal Society Interface</i> , 2021 , 18, 20200987	4.1	8
181	The role of mechanical interactions in EMT. <i>Physical Biology</i> , 2021 , 18,	3	2
180	Profile likelihood analysis for a stochastic model of diffusion in heterogeneous media. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021 , 477, 20210214	2.4	4
179	Multifidelity Approximate Bayesian Computation with Sequential Monte Carlo Parameter Sampling. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2021 , 9, 788-817	1.8	3
178	Quantifying the impact of electric fields on single-cell motility. <i>Biophysical Journal</i> , 2021 , 120, 3363-3373.	3.9	0
177	Effects of different discretisations of the Laplacian upon stochastic simulations of reaction-diffusion systems on both static and growing domains. <i>Journal of Computational and Applied Mathematics</i> , 2021 , 395, 113570	2.4	
176	Practical parameter identifiability for spatio-temporal models of cell invasion. <i>Journal of the Royal Society Interface</i> , 2020 , 17, 20200055	4.1	21
175	Visualizing mesoderm and neural crest cell dynamics during chick head morphogenesis. <i>Developmental Biology</i> , 2020 , 461, 184-196	3.1	7
174	Multifidelity Approximate Bayesian Computation. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2020 , 8, 114-138	1.8	4
173	Biologically-informed neural networks guide mechanistic modeling from sparse experimental data. <i>PLoS Computational Biology</i> , 2020 , 16, e1008462	5	16
172	Pakman: a modular, efficient and portable tool for approximate Bayesian inference. <i>Journal of Open Source Software</i> , 2020 , 5, 1716	5.2	3
171	Chaste: Cancer, Heart and Soft Tissue Environment. <i>Journal of Open Source Software</i> , 2020 , 5, 1848	5.2	22
170	Mechanical Cell Competition in Heterogeneous Epithelial Tissues. <i>Bulletin of Mathematical Biology</i> , 2020 , 82, 130	2.1	6

169	A practical guide to pseudo-marginal methods for computational inference in systems biology. <i>Journal of Theoretical Biology</i> , 2020 , 496, 110255	2.3	5
168	An automatic adaptive method to combine summary statistics in approximate Bayesian computation. <i>PLoS ONE</i> , 2020 , 15, e0236954	3.7	2
167	Identifiability analysis for stochastic differential equation models in systems biology. <i>Journal of the Royal Society Interface</i> , 2020 , 17, 20200652	4.1	11
166	Neural crest cells bulldoze through the microenvironment using Aquaporin 1 to stabilize filopodia. <i>Development (Cambridge)</i> , 2020 , 147,	6.6	11
165	Modelling collective cell migration: neural crest as a model paradigm. <i>Journal of Mathematical Biology</i> , 2020 , 80, 481-504	2	11
164	Global Dynamics of a Novel Delayed Logistic Equation Arising from Cell Biology. <i>Journal of Nonlinear Science</i> , 2020 , 30, 397-418	2.8	8
163	An interdisciplinary approach to investigate collective cell migration in neural crest. <i>Developmental Dynamics</i> , 2020 , 249, 270-280	2.9	5
162	Accurate and efficient discretizations for stochastic models providing near agent-based spatial resolution at low computational cost. <i>Journal of the Royal Society Interface</i> , 2019 , 16, 20190421	4.1	10
161	Continuum descriptions of spatial spreading for heterogeneous cell populations: Theory and experiment. <i>Journal of Theoretical Biology</i> , 2019 , 482, 109997	2.3	
160	Self-assembly of biological networks via adaptive patterning revealed by avian intradermal muscle network formation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 10858-10867	11.5	1
159	Uniformization techniques for stochastic simulation of chemical reaction networks. <i>Journal of Chemical Physics</i> , 2019 , 150, 154107	3.9	4
158	Simulation and inference algorithms for stochastic biochemical reaction networks: from basic concepts to state-of-the-art. <i>Journal of the Royal Society Interface</i> , 2019 , 16, 20180943	4.1	38
157	Quasi-Monte Carlo Methods Applied to Tau-Leaping in Stochastic Biological Systems. <i>Bulletin of Mathematical Biology</i> , 2019 , 81, 2931-2959	2.1	4
156	Mechanistic and experimental models of cell migration reveal the importance of cell-to-cell pushing in cell invasion. <i>Biomedical Physics and Engineering Express</i> , 2019 , 5, 045009	1.5	3
155	A one-dimensional individual-based mechanical model of cell movement in heterogeneous tissues and its coarse-grained approximation. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2019 , 475, 20180838	2.4	13
154	Convergence of Solutions in a Mean-Field Model of Go-or-Grow Type with Reservation of Sites for Proliferation and Cell Cycle Delay. <i>Mathematics in Industry</i> , 2019 , 381-387	0.2	
153	Using Experimental Data and Information Criteria to Guide Model Selection for Reaction-Diffusion Problems in Mathematical Biology. <i>Bulletin of Mathematical Biology</i> , 2019 , 81, 1760-1804	2.1	35
152	Testing Models of mRNA Localization Reveals Robustness Regulated by Reducing Transport between Cells. <i>Biophysical Journal</i> , 2019 , 117, 2154-2165	2.9	0

151	A free boundary model of epithelial dynamics. <i>Journal of Theoretical Biology</i> , 2019 , 481, 61-74	2.3	11
150	Approximate Bayesian computation reveals the importance of repeated measurements for parameterising cell-based models of growing tissues. <i>Journal of Theoretical Biology</i> , 2018 , 443, 66-81	2.3	10
149	Discrete and Continuum Approximations for Collective Cell Migration in a Scratch Assay with Cell Size Dynamics. <i>Bulletin of Mathematical Biology</i> , 2018 , 80, 738-757	2.1	14
148	Multilevel rejection sampling for approximate Bayesian computation. <i>Computational Statistics and Data Analysis</i> , 2018 , 124, 71-86	1.6	11
147	Topology-dependent density optima for efficient simultaneous network exploration. <i>Physical Review E</i> , 2018 , 97, 062301	2.4	1
146	Scalable population-level modelling of biological cells incorporating mechanics and kinetics in continuous time. <i>Royal Society Open Science</i> , 2018 , 5, 180379	3.3	8
145	The impact of experimental design choices on parameter inference for models of growing cell colonies. <i>Royal Society Open Science</i> , 2018 , 5, 180384	3.3	3
144	Robustly simulating biochemical reaction kinetics using multi-level Monte Carlo approaches. <i>Journal of Computational Physics</i> , 2018 , 375, 1401-1423	4.1	2
143	Mechanistic models versus machine learning, a fight worth fighting for the biological community?. <i>Biology Letters</i> , 2018 , 14,	3.6	97
142	The impact of temporal sampling resolution on parameter inference for biological transport models. <i>PLoS Computational Biology</i> , 2018 , 14, e1006235	5	2
141	Continuum approximations for lattice-free multi-species models of collective cell migration. <i>Journal of Theoretical Biology</i> , 2017 , 422, 1-11	2.3	18
140	Turing Theory of Morphogenesis: Where We Started, Where We Are and Where We Want to Go. <i>Theory and Applications of Computability</i> , 2017 , 219-235		8
139	Efficient parameter sensitivity computation for spatially extended reaction networks. <i>Journal of Chemical Physics</i> , 2017 , 146, 044106	3.9	3
138	Mechanocellular models of epithelial morphogenesis. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2017 , 372,	5.8	55
137	Numerical Analysis of the Immersed Boundary Method for Cell-Based Simulation. <i>SIAM Journal of Scientific Computing</i> , 2017 , 39, B943-B967	2.6	4
136	Optimal Quantification of Contact Inhibition in Cell Populations. <i>Biophysical Journal</i> , 2017 , 113, 1920-1924		21
135	DAN (NBL1) promotes collective neural crest migration by restraining uncontrolled invasion. <i>Journal of Cell Biology</i> , 2017 , 216, 3339-3354	7.3	24
134	A new and accurate continuum description of moving fronts. <i>New Journal of Physics</i> , 2017 , 19, 033010	2.9	2

133	Impact of implementation choices on quantitative predictions of cell-based computational models. <i>Journal of Computational Physics</i> , 2017 , 345, 752-767	4.1	12
132	Semblance of Heterogeneity in Collective Cell Migration. <i>Cell Systems</i> , 2017 , 5, 119-127.e1	10.6	10
131	Self-organization process in newborn skin organoid formation inspires strategy to restore hair regeneration of adult cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E7101-E7110	11.5	69
130	Variable species densities are induced by volume exclusion interactions upon domain growth. <i>Physical Review E</i> , 2017 , 95, 032416	2.4	5
129	Co-operation, Competition and Crowding: A Discrete Framework Linking Allee Kinetics, Nonlinear Diffusion, Shocks and Sharp-Fronted Travelling Waves. <i>Scientific Reports</i> , 2017 , 7, 42134	4.9	24
128	Using approximate Bayesian computation to quantify cell-cell adhesion parameters in a cell migratory process. <i>Npj Systems Biology and Applications</i> , 2017 , 3, 9	5	10
127	Extending the Multi-level Method for the Simulation of Stochastic Biological Systems. <i>Bulletin of Mathematical Biology</i> , 2016 , 78, 1640-77	2.1	9
126	Coupling volume-excluding compartment-based models of diffusion at different scales: Voronoi and pseudo-compartment approaches. <i>Journal of the Royal Society Interface</i> , 2016 , 13,	4.1	7
125	Filling the gaps: A robust description of adhesive birth-death-movement processes. <i>Physical Review E</i> , 2016 , 93, 042413	2.4	5
124	Robust cell tracking in epithelial tissues through identification of maximum common subgraphs. <i>Journal of the Royal Society Interface</i> , 2016 , 13,	4.1	6
123	Modeling transport through an environment crowded by a mixture of obstacles of different shapes and sizes. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2016 , 449, 74-84	3.3	12
122	Multidisciplinary approaches to understanding collective cell migration in developmental biology. <i>Open Biology</i> , 2016 , 6,	7	27
121	Reconciling diverse mammalian pigmentation patterns with a fundamental mathematical model. <i>Nature Communications</i> , 2016 , 7, 10288	17.4	36
120	Multi-level methods and approximating distribution functions. <i>AIP Advances</i> , 2016 , 6, 075020	1.5	6
119	How domain growth is implemented determines the long-term behavior of a cell population through its effect on spatial correlations. <i>Physical Review E</i> , 2016 , 94, 012408	2.4	11
118	Communication: Distinguishing between short-time non-Fickian diffusion and long-time Fickian diffusion for a random walk on a crowded lattice. <i>Journal of Chemical Physics</i> , 2016 , 144, 171104	3.9	10
117	Exits in order: How crowding affects particle lifetimes. <i>Journal of Chemical Physics</i> , 2016 , 144, 244107	3.9	0
116	Multiparameter Estimation in Voltammetry When an Electron Transfer Process Is Coupled to a Chemical Reaction. <i>Analytical Chemistry</i> , 2016 , 88, 4724-32	7.8	16

115	An analytical method for disentangling the roles of adhesion and crowding for random walk models on a crowded lattice. <i>Physical Biology</i> , 2016 , 13, 05LT02	3	5
114	Choosing an Appropriate Modelling Framework for Analysing Multispecies Co-culture Cell Biology Experiments. <i>Bulletin of Mathematical Biology</i> , 2015 , 77, 713-34	2.1	3
113	The importance of volume exclusion in modelling cellular migration. <i>Journal of Mathematical Biology</i> , 2015 , 71, 691-711	2	26
112	Global contraction or local growth, bleb shape depends on more than just cell structure. <i>Journal of Theoretical Biology</i> , 2015 , 380, 83-97	2.3	14
111	Inference of cell-cell interactions from population density characteristics and cell trajectories on static and growing domains. <i>Mathematical Biosciences</i> , 2015 , 264, 108-18	3.9	8
110	Theoretical Analysis of the Relative Significance of Thermodynamic and Kinetic Dispersion in the dc and ac Voltammetry of Surface-Confined Molecules. <i>Langmuir</i> , 2015 , 31, 4996-5004	4	24
109	Survival probability for a diffusive process on a growing domain. <i>Physical Review E</i> , 2015 , 91, 042701	2.4	15
108	An adaptive multi-level simulation algorithm for stochastic biological systems. <i>Journal of Chemical Physics</i> , 2015 , 142, 024113	3.9	16
107	VEGF signals induce trailblazer cell identity that drives neural crest migration. <i>Developmental Biology</i> , 2015 , 407, 12-25	3.1	57
106	Exact calculations of survival probability for diffusion on growing lines, disks, and spheres: The role of dimension. <i>Journal of Chemical Physics</i> , 2015 , 143, 094109	3.9	15
105	Rethinking Models of Pattern Formation in Somitogenesis. <i>Cell Systems</i> , 2015 , 1, 248-9	10.6	3
104	Incorporating pushing in exclusion-process models of cell migration. <i>Physical Review E</i> , 2015 , 91, 052711	2.4	12
103	Reconciling transport models across scales: The role of volume exclusion. <i>Physical Review E</i> , 2015 , 92, 040701	2.4	9
102	Capabilities and Limitations of Tissue Size Control through Passive Mechanical Forces. <i>PLoS Computational Biology</i> , 2015 , 11, e1004679	5	27
101	Neural crest migration is driven by a few trailblazer cells with a unique molecular signature narrowly confined to the invasive front. <i>Development (Cambridge)</i> , 2015 , 142, 2014-25	6.6	86
100	Calculating the Fickian diffusivity for a lattice-based random walk with agents and obstacles of different shapes and sizes. <i>Physical Biology</i> , 2015 , 12, 066010	3	9
99	Patterning of wound-induced intercellular Ca(2+) flashes in a developing epithelium. <i>Physical Biology</i> , 2015 , 12, 056005	3	24
98	Modelling the movement of interacting cell populations: a moment dynamics approach. <i>Journal of Theoretical Biology</i> , 2015 , 370, 81-92	2.3	17

97	Neural crest migration is driven by a few trailblazer cells with a unique molecular signature narrowly confined to the invasive front. <i>Journal of Cell Science</i> , 2015 , 128, e1207-e1207	5.3	2
96	Exact Solutions of Coupled Multispecies Linear Reaction-Diffusion Equations on a Uniformly Growing Domain. <i>PLoS ONE</i> , 2015 , 10, e0138894	3.7	8
95	Deriving appropriate boundary conditions, and accelerating position-jump simulations, of diffusion using non-local jumping. <i>Physical Biology</i> , 2014 , 12, 016006	3	10
94	Modelling and analysis of bacterial tracks suggest an active reorientation mechanism in <i>Rhodobacter sphaeroides</i> . <i>Journal of the Royal Society Interface</i> , 2014 , 11, 20140320	4.1	14
93	Inappropriate use of the quasi-reversible electrode kinetic model in simulation-experiment comparisons of voltammetric processes that approach the reversible limit. <i>Analytical Chemistry</i> , 2014 , 86, 8408-17	7.8	32
92	Comparing methods for modelling spreading cell fronts. <i>Journal of Theoretical Biology</i> , 2014 , 353, 95-103.	3	7
91	Distinguishing between mean-field, moment dynamics and stochastic descriptions of birth-death-movement processes. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2014 , 395, 236-246	3.3	10
90	Are in vitro estimates of cell diffusivity and cell proliferation rate sensitive to assay geometry?. <i>Journal of Theoretical Biology</i> , 2014 , 356, 71-84	2.3	39
89	Vertex models of epithelial morphogenesis. <i>Biophysical Journal</i> , 2014 , 106, 2291-304	2.9	299
88	Modelling collective cell behaviour. <i>Discrete and Continuous Dynamical Systems</i> , 2014 , 34, 5123-5133	2	7
87	Assessing the role of spatial correlations during collective cell spreading. <i>Scientific Reports</i> , 2014 , 4, 5713.	4.9	20
86	Three mechanical models for blebbing and multi-blebbing. <i>IMA Journal of Applied Mathematics</i> , 2014 , 79, 636-660	1	13
85	Characterizing transport through a crowded environment with different obstacle sizes. <i>Journal of Chemical Physics</i> , 2014 , 140, 054108	3.9	23
84	Mathematical modelling of digit specification by a sonic hedgehog gradient. <i>Developmental Dynamics</i> , 2014 , 243, 290-8	2.9	13
83	Cellular blebs: pressure-driven, axisymmetric, membrane protrusions. <i>Biomechanics and Modeling in Mechanobiology</i> , 2014 , 13, 463-76	3.8	18
82	Modelling Collective Cell Motion in Biology. <i>Springer Proceedings in Mathematics and Statistics</i> , 2014 , 1-11	0.2	1
81	Optimal barrier zones for stopping the invasion of <i>Aedes aegypti</i> mosquitoes via transgenic or sterile insect techniques. <i>Theoretical Ecology</i> , 2013 , 6, 427-442	1.6	12
80	A comparison of fully automated methods of data analysis and computer assisted heuristic methods in an electrode kinetic study of the pathologically variable $[\text{Fe}(\text{CN})_6]^{3-/4-}$ process by AC voltammetry. <i>Analytical Chemistry</i> , 2013 , 85, 11780-7	7.8	30

79	Incorporating spatial correlations into multispecies mean-field models. <i>Physical Review E</i> , 2013 , 88, 052713	2.4	24
78	Multiple types of data are required to identify the mechanisms influencing the spatial expansion of melanoma cell colonies. <i>BMC Systems Biology</i> , 2013 , 7, 137	3.5	39
77	Simplified approach for calculating moments of action for linear reaction-diffusion equations. <i>Physical Review E</i> , 2013 , 88, 054102	2.4	10
76	Access to enhanced differences in Marcus-Hush and Butler-Volmer electron transfer theories by systematic analysis of higher order AC harmonics. <i>Physical Chemistry Chemical Physics</i> , 2013 , 15, 2210-21	3.6	10
75	Modelling Delta-Notch perturbations during zebrafish somitogenesis. <i>Developmental Biology</i> , 2013 , 373, 407-21	3.1	11
74	Modelling <i>Aedes aegypti</i> mosquito control via transgenic and sterile insect techniques: endemics and emerging outbreaks. <i>Journal of Theoretical Biology</i> , 2013 , 331, 78-90	2.3	19
73	Noise-induced temporal dynamics in Turing systems. <i>Physical Review E</i> , 2013 , 87, 042719	2.4	16
72	Experimental and modelling investigation of monolayer development with clustering. <i>Bulletin of Mathematical Biology</i> , 2013 , 75, 871-89	2.1	34
71	Novel methods for analysing bacterial tracks reveal persistence in <i>Rhodobacter sphaeroides</i> . <i>PLoS Computational Biology</i> , 2013 , 9, e1003276	5	15
70	Quantifying the roles of cell motility and cell proliferation in a circular barrier assay. <i>Journal of the Royal Society Interface</i> , 2013 , 10, 20130007	4.1	79
69	Design and interpretation of cell trajectory assays. <i>Journal of the Royal Society Interface</i> , 2013 , 10, 201300630	4.3	3
68	The effect of sampling rate on observed statistics in a correlated random walk. <i>Journal of the Royal Society Interface</i> , 2013 , 10, 20130273	4.1	19
67	CRITICAL TIMESCALES AND TIME INTERVALS FOR COUPLED LINEAR PROCESSES. <i>ANZIAM Journal</i> , 2013 , 54, 127-142	0.5	4
66	Importance of the Voronoi domain partition for position-jump reaction-diffusion processes on nonuniform rectilinear lattices. <i>Physical Review E</i> , 2013 , 88, 054701	2.4	6
65	Isotropic model for cluster growth on a regular lattice. <i>Physical Review E</i> , 2013 , 88, 023304	2.4	4
64	Simplified method for including spatial correlations in mean-field approximations. <i>Physical Review E</i> , 2013 , 87, 062702	2.4	31
63	Modelling Oscillator Synchronisation During Vertebrate Axis Segmentation. <i>Springer Proceedings in Mathematics</i> , 2013 , 95-105		0
62	Models of collective cell motion for cell populations with different aspect ratio: Diffusion, proliferation and travelling waves. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2012 , 391, 3729-3730	3.3	15

61	Understanding hair follicle cycling: a systems approach. <i>Current Opinion in Genetics and Development</i> , 2012 , 22, 607-12	4.9	16
60	Turing's model for biological pattern formation and the robustness problem. <i>Interface Focus</i> , 2012 , 2, 487-96	3.9	138
59	Theoretical analysis of the two-electron transfer reaction and experimental studies with surface-confined cytochrome c peroxidase using large-amplitude Fourier transformed AC voltammetry. <i>Langmuir</i> , 2012 , 28, 9864-77	4	20
58	Multiscale mechanisms of cell migration during development: theory and experiment. <i>Development (Cambridge)</i> , 2012 , 139, 2935-44	6.6	104
57	Mean-field descriptions of collective migration with strong adhesion. <i>Physical Review E</i> , 2012 , 85, 051922-4	2.4	42
56	Reply to Correspondence: No Oscillations in Real Activator-Inhibitor Systems in Accomplishing Pattern Formation. <i>Bulletin of Mathematical Biology</i> , 2012 , 74, 2268-2271	2.1	
55	Modelling cell migration and adhesion during development. <i>Bulletin of Mathematical Biology</i> , 2012 , 74, 2793-809	2.1	17
54	Incorporating chemical signalling factors into cell-based models of growing epithelial tissues. <i>Journal of Mathematical Biology</i> , 2012 , 65, 441-63	2	28
53	Nonlinear effects on Turing patterns: time oscillations and chaos. <i>Physical Review E</i> , 2012 , 86, 026201	2.4	29
52	Mathematical models of morphogen gradients and their effects on gene expression. <i>Wiley Interdisciplinary Reviews: Developmental Biology</i> , 2012 , 1, 715-30	5.9	27
51	Age-related changes in speed and mechanism of adult skeletal muscle stem cell migration. <i>Stem Cells</i> , 2012 , 30, 1182-95	5.8	54
50	The influence of receptor-mediated interactions on reaction-diffusion mechanisms of cellular self-organisation. <i>Bulletin of Mathematical Biology</i> , 2012 , 74, 935-57	2.1	49
49	Modelling hair follicle growth dynamics as an excitable medium. <i>PLoS Computational Biology</i> , 2012 , 8, e1002804	5	17
48	Multi-cellular rosettes in the mouse visceral endoderm facilitate the ordered migration of anterior visceral endoderm cells. <i>PLoS Biology</i> , 2012 , 10, e1001256	9.7	86
47	Critical time scales for advection-diffusion-reaction processes. <i>Physical Review E</i> , 2012 , 85, 041135	2.4	28
46	Going from microscopic to macroscopic on nonuniform growing domains. <i>Physical Review E</i> , 2012 , 86, 021921	2.4	29
45	Effects of intrinsic stochasticity on delayed reaction-diffusion patterning systems. <i>Physical Review E</i> , 2012 , 85, 051914	2.4	20
44	Moments of action provide insight into critical times for advection-diffusion-reaction processes. <i>Physical Review E</i> , 2012 , 86, 031136	2.4	22

43	Macroscopic limits of individual-based models for motile cell populations with volume exclusion. <i>Physical Review E</i> , 2012 , 86, 031903	2.4	33
42	Multiscale mechanisms of cell migration during development: theory and experiment. <i>Journal of Cell Science</i> , 2012 , 125, e1-e1	5.3	1
41	Interactions between Shh, Sostdc1 and Wnt signaling and a new feedback loop for spatial patterning of the teeth. <i>Development (Cambridge)</i> , 2011 , 138, 1807-16	6.6	91
40	Stochastic reaction and diffusion on growing domains: understanding the breakdown of robust pattern formation. <i>Physical Review E</i> , 2011 , 84, 046216	2.4	48
39	Self-organizing and stochastic behaviors during the regeneration of hair stem cells. <i>Science</i> , 2011 , 332, 586-9	33.3	154
38	The clock and wavefront model revisited. <i>Journal of Theoretical Biology</i> , 2011 , 283, 227-38	2.3	43
37	Distinguishing graded and ultrasensitive signalling cascade kinetics by the shape of morphogen gradients in <i>Drosophila</i> . <i>Journal of Theoretical Biology</i> , 2011 , 285, 136-46	2.3	
36	The dynamics of Turing patterns for morphogen-regulated growing domains with cellular response delays. <i>Bulletin of Mathematical Biology</i> , 2011 , 73, 2527-51	2.1	26
35	Models of collective cell spreading with variable cell aspect ratio: a motivation for degenerate diffusion models. <i>Physical Review E</i> , 2011 , 83, 021901	2.4	39
34	Theoretical and experimental investigation of surface-confined two-center metalloproteins by large-amplitude Fourier transformed ac voltammetry. <i>Journal of Electroanalytical Chemistry</i> , 2011 , 656, 293-303	4.1	14
33	Power spectra methods for a stochastic description of diffusion on deterministically growing domains. <i>Physical Review E</i> , 2011 , 84, 021915	2.4	24
32	Influence of stochastic domain growth on pattern nucleation for diffusive systems with internal noise. <i>Physical Review E</i> , 2011 , 84, 041905	2.4	13
31	Corrected mean-field models for spatially dependent advection-diffusion-reaction phenomena. <i>Physical Review E</i> , 2011 , 83, 051922	2.4	43
30	A random cell motility gradient downstream of FGF controls elongation of an amniote embryo. <i>Nature</i> , 2010 , 466, 248-52	50.4	216
29	Correcting mean-field approximations for birth-death-movement processes. <i>Physical Review E</i> , 2010 , 82, 041905	2.4	83
28	Analysis of stationary droplets in a generic Turing reaction-diffusion system. <i>Physical Review E</i> , 2010 , 82, 051929	2.4	19
27	From microscopic to macroscopic descriptions of cell migration on growing domains. <i>Bulletin of Mathematical Biology</i> , 2010 , 72, 719-62	2.1	69
26	Reptile scale paradigm: Evo-Devo, pattern formation and regeneration. <i>International Journal of Developmental Biology</i> , 2009 , 53, 813-26	1.9	101

25	Waves and patterning in developmental biology: vertebrate segmentation and feather bud formation as case studies. <i>International Journal of Developmental Biology</i> , 2009 , 53, 783-94	1.9	26
24	How can mathematics help us explore vertebrate segmentation?. <i>HFSP Journal</i> , 2009 , 3, 1-5		13
23	Designer based Fourier transformed voltammetry: A multi-frequency, variable amplitude, sinusoidal waveform. <i>Journal of Electroanalytical Chemistry</i> , 2009 , 634, 11-21	4.1	12
22	Spots and stripes: pleomorphic patterning of stem cells via p-ERK-dependent cell chemotaxis shown by feather morphogenesis and mathematical simulation. <i>Developmental Biology</i> , 2009 , 334, 369-82 ^{3,1}		50
21	Modeling the skin pattern of fishes. <i>Physical Review E</i> , 2009 , 79, 031908	2.4	36
20	Cyclic dermal BMP signalling regulates stem cell activation during hair regeneration. <i>Nature</i> , 2008 , 451, 340-4	50.4	507
19	Mathematical models for somite formation. <i>Current Topics in Developmental Biology</i> , 2008 , 81, 183-203	5.3	31
18	Partial differential equations for self-organization in cellular and developmental biology. <i>Nonlinearity</i> , 2008 , 21, R251-R290	1.7	48
17	From segment to somite: segmentation to epithelialization analyzed within quantitative frameworks. <i>Developmental Dynamics</i> , 2007 , 236, 1392-402	2.9	25
16	A mechanism for morphogen-controlled domain growth. <i>Journal of Mathematical Biology</i> , 2007 , 54, 597-622		35
15	Dispersion relation in oscillatory reaction-diffusion systems with self-consistent flow in true slime mold. <i>Journal of Mathematical Biology</i> , 2007 , 54, 745-60	2	24
14	A Study of the Temperature Dependence of Bienzyme Systems and Enzymatic Chains. <i>Computational and Mathematical Methods in Medicine</i> , 2007 , 8, 93-112	2.8	6
13	Travelling gradients in interacting morphogen systems. <i>Mathematical Biosciences</i> , 2007 , 209, 30-50	3.9	15
12	A mathematical investigation of a Clock and Wavefront model for somitogenesis. <i>Journal of Mathematical Biology</i> , 2006 , 52, 458-82	2	38
11	Distinct mechanisms underlie pattern formation in the skin and skin appendages. <i>Birth Defects Research Part C: Embryo Today Reviews</i> , 2006 , 78, 280-91		19
10	Developmental biology. The Turing model comes of molecular age. <i>Science</i> , 2006 , 314, 1397-8	33.3	143
9	A clock and wavefront mechanism for somite formation. <i>Developmental Biology</i> , 2006 , 293, 116-26	3.1	95
8	A mathematical formulation for the cell-cycle model in somitogenesis: analysis, parameter constraints and numerical solutions. <i>Mathematical Medicine and Biology</i> , 2004 , 21, 85-113	1.3	13

7	Formation of Vertebral Precursors: Past Models and Future Predictions. <i>Journal of Theoretical Medicine</i> , 2003 , 5, 23-35		11
6	Rapid Bayesian Inference for Expensive Stochastic Models. <i>Journal of Computational and Graphical Statistics</i> , 1-45	1.4	0
5	A free boundary model of epithelial dynamics		1
4	An individual-based mechanical model of cell movement in heterogeneous tissues and its coarse-grained approximation		1
3	Mechanistic and experimental models of cell migration reveal the importance of intercellular interactions in cell invasion		1
2	Neural crest cells bulldoze through the microenvironment using Aquaporin-1 to stabilize filopodia		2
1	Head Mesoderm Tissue Growth, Dynamics and Neural Crest Cell Migration		1