Christian A Yates

List of Publications by Year
in descending order

54	1,162	516561 16	454834 30
papers	citations	h-index	g-index

66	66	66	1243
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	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
2	From Microscopic to Macroscopic Descriptions of Cell Migration on Growing Domains. Bulletin of Mathematical Biology, 2010, 72, 719-762.	0.9	87
3	A Multi-stage Representation of Cell Proliferation as a Markov Process. Bulletin of Mathematical Biology, 2017, 79, 2905-2928.	0.9	70
4	Reconciling diverse mammalian pigmentation patterns with a fundamental mathematical model. Nature Communications, 2016, 7, 10288.	5.8	53
5	Ten Simple Rules for Effective Computational Research. PLoS Computational Biology, 2014, 10, e1003506.	1.5	47
6	Ten Simple Rules for a Successful Cross-Disciplinary Collaboration. PLoS Computational Biology, 2015, 11, e1004214.	1.5	46
7	Going from microscopic to macroscopic on nonuniform growing domains. Physical Review E, 2012, 86, 021921.	0.8	37
8	A quantitative modelling approach to zebrafish pigment pattern formation. ELife, 2020, 9, .	2.8	35
9	Simplified Multitarget Tracking Using the PHD Filter for Microscopic Video Data. IEEE Transactions on Circuits and Systems for Video Technology, 2012, 22, 702-713.	5.6	32
10	Spatially extended hybrid methods: a review. Journal of the Royal Society Interface, 2018, 15, 20170931.	1.5	32
11	Discrete and continuous models for tissue growth and shrinkage. Journal of Theoretical Biology, 2014, 350, 37-48.	0.8	26
12	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
13	The pseudo-compartment method for coupling partial differential equation and compartment-based models of diffusion. Journal of the Royal Society Interface, 2015, 12, 20150141.	1.5	24
14	Modelling Cell Migration and Adhesion During Development. Bulletin of Mathematical Biology, 2012, 74, 2793-2809.	0.9	21
15	An adaptive multi-level simulation algorithm for stochastic biological systems. Journal of Chemical Physics, 2015, 142, 024113.	1.2	21
16	Novel Methods for Analysing Bacterial Tracks Reveal Persistence in Rhodobacter sphaeroides. PLoS Computational Biology, 2013, 9, e1003276.	1.5	19
17	Onset of collective motion in locusts is captured by a minimal model. Physical Review E, 2015, 92, 052708.	0.8	18
18	Using approximate Bayesian computation to quantify cellâ€“cell adhesion parameters in a cell migratory process. Npj Systems Biology and Applications, 2017, 3, 9.	1.4	18

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19	Pair correlation functions for identifying spatial correlation in discrete domains. Physical Review E, 2018, 97, 062104.	0.8	17
20	Mathematical modelling of turning delays in swarm robotics. IMA Journal of Applied Mathematics, 2015, 80, 1454-1474.	0.8	16
21	Incorporating pushing in exclusion-process models of cell migration. Physical Review E, 2015, 91, 052711.	0.8	15
22	Inference of cellâ€“cell interactions from population density characteristics and cell trajectories on static and growing domains. Mathematical Biosciences, 2015, 264, 108-118.	0.9	15
23	The invasion speed of cell migration models with realistic cell cycle time distributions. Journal of Theoretical Biology, 2019, 481, 91-99.	0.8	15
24	Ergodic directional switching in mobile insect groups. Physical Review E, 2010, 82, 011926.	0.8	14
25	Recycling random numbers in the stochastic simulation algorithm. Journal of Chemical Physics, 2013, 138, 094103.	1.2	14
26	How domain growth is implemented determines the long-term behavior of a cell population through its effect on spatial correlations. Physical Review E, 2016, 94, 012408.	0.8	14
27	A hybrid algorithm for coupling partial differential equation and compartment-based dynamics. Journal of the Royal Society Interface, 2016, 13, 20160335.	1.5	13
28	The auxiliary region method: a hybrid method for coupling PDE- and Brownian-based dynamics for reactionâ€“diffusion systems. Royal Society Open Science, 2018, 5, 180920.	1.1	13
29	Extending the Multi-level Method for the Simulation of Stochastic Biological Systems. Bulletin of Mathematical Biology, 2016, 78, 1640-1677.	0.9	12
30	Zebrafish adult pigment stem cells are multipotent and form pigment cells by a progressive fate restriction process. BioEssays, 2017, 39, 1600234.	1.2	12
31	Deriving appropriate boundary conditions, and accelerating position-jump simulations, of diffusion using non-local jumping. Physical Biology, 2015, 12, 016006.	0.8	11
32	Look before you leap: A confidence-based method for selecting species criticality while avoiding negative populations in Ï„-leaping. Journal of Chemical Physics, 2011, 134, 084109.	1.2	10
33	Stochastic and Deterministic Modeling of Cell Migration. Handbook of Statistics, 2018, 39, 37-91.	0.4	10
34	Reconciling transport models across scales: The role of volume exclusion. Physical Review E, 2015, 92, 040701.	0.8	9
35	Critical weaknesses in shielding strategies for COVID-19. PLOS Global Public Health, 2022, 2, e0000298.	0.5	9
36	Coupling volume-excluding compartment-based models of diffusion at different scales: Voronoi and pseudo-compartment approaches. Journal of the Royal Society Interface, 2016, 13, 20160336.	1.5	8

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37	Modeling persistence of motion in a crowded environment: The diffusive limit of excluding velocity-jump processes. Physical Review E, 2018, 97, 032416.	0.8	8
38	Hard-sphere interactions in velocity-jump models. Physical Review E, 2016, 94, 012129.	0.8	7
39	The effect of domain growth on spatial correlations. Physica A: Statistical Mechanics and Its Applications, 2017, 466, 334-345.	1.2	7
40	Importance of the Voronoi domain partition for position-jump reaction-diffusion processes on nonuniform rectilinear lattices. Physical Review E, 2013, 88, 054701.	0.8	6
41	Synchronized oscillations in growing cell populations are explained by demographic noise. Biophysical Journal, 2021, 120, 1314-1322.	0.2	6
42	Variable species densities are induced by volume exclusion interactions upon domain growth. Physical Review E, 2017, 95, 032416.	0.8	5
43	Misinformation can prevent the suppression of epidemics. Journal of the Royal Society Interface, 2022, 19, 20210668.	1.5	5
44	Pleiotropic constraints promote the evolution of cooperation in cellular groups. PLoS Biology, 2022, 20, e3001626.	2.6	5
45	Isotropic model for cluster growth on a regular lattice. Physical Review E, 2013, 88, 023304.	0.8	4
46	Incorporating domain growth into hybrid methods for reactionâ€“diffusion systems. Journal of the Royal Society Interface, 2021, 18, 20201047.	1.5	4
47	Efficient parameter sensitivity computation for spatially extended reaction networks. Journal of Chemical Physics, 2017, 146, 044106.	1.2	3
48	Robustly simulating biochemical reaction kinetics using multi-level Monte Carlo approaches. Journal of Computational Physics, 2018, 375, 1401-1423.	1.9	3
49	Pigment Patterning in Teleosts. , 2021, , 247-292.		3
50	Pulling in models of cell migration. Physical Review E, 2019, 99, 062413.	0.8	2
51	The blending region hybrid framework for the simulation of stochastic reactionâ€“diffusion processes. Journal of the Royal Society Interface, 2020, 17, 20200563.	1.5	2
52	Equivalence framework for an age-structured multistage representation of the cell cycle. Physical Review E, 2022, 105, .	0.8	2
53	Publisher's Note: Incorporating pushing in exclusion-process models of cell migration [Phys. Rev. E91, 052711 (2015)]. Physical Review E, 2015, 91, .	0.8	1
54	Unbiased on-lattice domain growth. Physical Review E, 2019, 100, 063307.	0.8	1