Benjamin Binder

List of Publications by Year
in descending order

58	1,195	361413	434195
papers	citations	20 h-index	31 g-index

58	58	58	723
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Quantifying the roles of cell motility and cell proliferation in a circular barrier assay. Journal of the Royal Society Interface, 2013, 10, 20130007.	3.4	102
2	Modeling proliferative tissue growth: A general approach and an avian case study. Physical Review E, 2008, 78, 031912.	2.1	73
3	Neural crest regionalisation for enteric nervous system formation: Implications for Hirschsprung's disease and stem cell therapy. Developmental Biology, 2010, 339, 280-294.	2.0	59
4	Distinguishing between mechanisms of cell aggregation using pair-correlation functions. Journal of Theoretical Biology, 2014, 352, 16-23.	1.7	54
5	Forced solitary waves and fronts past submerged obstacles. Chaos, 2005, 15, 037106.	2.5	52
6	Exclusion processes on a growing domain. Journal of Theoretical Biology, 2009, 259, 541-551.	1.7	50
7	Experimental and Modelling Investigation of Monolayer Development with Clustering. Bulletin of Mathematical Biology, 2013, 75, 871-889.	1.9	49
8	Interpreting scratch assays using pair density dynamics and approximate Bayesian computation. Open Biology, 2014, 4, 140097.	3.6	47
9	Quantifying spatial structure in experimental observations and agent-based simulations using pair-correlation functions. Physical Review E, 2013, 88, 022705.	2.1	46
10	Quantifying the effect of experimental design choices for in vitro scratch assays. Journal of Theoretical Biology, 2016, 400, 19-31.	1.7	46
11	Cell lineage tracing in the developing enteric nervous system: superstars revealed by experiment and simulation. Journal of the Royal Society Interface, 2014, 11, 20130815.	3.4	40
12	Spatial Analysis of Multi-species Exclusion Processes: Application to Neural Crest Cell Migration in the Embryonic Gut. Bulletin of Mathematical Biology, 2012, 74, 474-490.	1.9	34
13	Steady Free-surface Flow Past an Uneven Channel Bottom. Theoretical and Computational Fluid Dynamics, 2006, 20, 125-144.	2.2	31
14	Assessing the role of spatial correlations during collective cell spreading. Scientific Reports, 2015, 4, 5713.	3.3	28
15	A mechanistic study on tumour spheroid formation in thermosensitive hydrogels: experiments and mathematical modelling. RSC Advances, 2016, 6, 73282-73291.	3.6	27
16	Free surface flow past topography: A beyond-all-orders approach. European Journal of Applied Mathematics, 2012, 23, 441-467.	2.9	26
17	Diffusion-Limited Growth of Microbial Colonies. Scientific Reports, 2018, 8, 5992.	3.3	26
18	Influence of rapid changes in a channel bottom on free-surface flows. IMA Journal of Applied Mathematics, 2007, 73, 254-273.	1.6	25

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19	The effect of disturbances on the flows under a sluice gate and past an inclined plate. Journal of Fluid Mechanics, 2007, 576, 475-490.	3.4	23
20	Identifying the necrotic zone boundary in tumour spheroids with pair-correlation functions. Journal of the Royal Society Interface, 2016, 13, 20160649.	3.4	23
21	Free surface flows past surfboards and sluice gates. European Journal of Applied Mathematics, 2005, 16, 601.	2.9	22
22	Spectral analysis of pair-correlation bandwidth: application to cell biology images. Royal Society Open Science, 2015, 2, 140494.	2.4	22
23	Free-surface flow past arbitrary topography and an inverse approach for wave-free solutions. IMA Journal of Applied Mathematics, 2013, 78, 685-696.	1.6	21
24	Non-uniqueness of steady free-surface flow at critical Froude number. Europhysics Letters, 2014, 105, 44003.	2.0	18
25	Understanding interactions between populations: Individual based modelling and quantification using pair correlation functions. Journal of Theoretical Biology, 2018, 439, 50-64.	1.7	17
26	Quantifying evenly distributed states in exclusion and nonexclusion processes. Physical Review E, 2011, 83, 041914.	2.1	16
27	Quantifying the dominant growth mechanisms of dimorphic yeast using a lattice-based model. Journal of the Royal Society Interface, 2017, 14, 20170314.	3.4	16
28	A mixer design for the pigtail braid. Fluid Dynamics Research, 2008, 40, 34-44.	1.3	15
29	Nutrient-limited growth with non-linear cell diffusion as a mechanism for floral pattern formation in yeast biofilms. Journal of Theoretical Biology, 2018, 448, 122-141.	1.7	15
30	Quantifying Two-Dimensional Filamentous and Invasive Growth Spatial Patterns in Yeast Colonies. PLoS Computational Biology, 2015, 11, e1004070.	3.2	14
31	Ghost rods adopting the role of withdrawn baffles in batch mixer designs. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 3483-3486.	2.1	11
32	Minimising wave drag for free surface flow past a two-dimensional stern. Physics of Fluids, 2011, 23, 072101.	4.0	11
33	A thin-film extensional flow model for biofilm expansion by sliding motility. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20190175.	2.1	11
34	On satisfying the radiation condition in free-surface flows. Journal of Fluid Mechanics, 2009, 624, 179-189.	3.4	10
35	Generalized index for spatial data sets as a measure of complete spatial randomness. Physical Review E, 2012, 85, 061908.	2.1	10
36	On the derivation of approximations to cellular automata models and the assumption of independence. Mathematical Biosciences, 2014, 253, 63-71.	1.9	9

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37	Incomplete penetrance: The role of stochasticity in developmental cell colonization. Journal of Theoretical Biology, 2015, 380, 309-314.	1.7	9
38	On the critical free-surface flow over localisedÂtopography. Journal of Fluid Mechanics, 2017, 832, 73-96.	3.4	8
39	Nonautonomous analysis of steady Kortewegâ€“de Vries waves under nonlocalised forcing. Physica D: Nonlinear Phenomena, 2014, 285, 28-41.	2.8	7
40	Predicting channel bed topography in hydraulic falls. Physics of Fluids, 2015, 27, 112106.	4.0	7
41	TAMMiCol: Tool for analysis of the morphology of microbial colonies. PLoS Computational Biology, 2018, 14, e1006629.	3.2	7
42	Steady Two-Dimensional Free-Surface Flow Past Disturbances in an Open Channel: Solutions of the Kortewegâ€“De Vries Equation and Analysis of the Weakly Nonlinear Phase Space. Fluids, 2019, 4, 24.	1.7	7
43	Electrified free-surface flow of an inviscid liquid past topography. Physics of Fluids, 2012, 24, .	4.0	6
44	On the free-surface flow of very steep forced solitary waves. Journal of Fluid Mechanics, 2014, 739, 1-21.	3.4	6
45	Steep waves in free-surface flow past narrow topography. Physics of Fluids, 2017, 29, 062107.	4.0	6
46	Characterizing the shape patterns of dimorphic yeast pseudohyphae. Royal Society Open Science, 2018, 5, 180820.	2.4	4
47	Characterising shape patterns using features derived from best-fitting ellipsoids. Pattern Recognition, 2018, 83, 365-374.	8.1	4
48	Thin-film lubrication model for biofilm expansion under strong adhesion. Physical Review E, 2022, 105, 014408.	2.1	4
49	Steady free-surface flow over spatially periodic topography. Journal of Fluid Mechanics, 2015, 781, .	3.4	3
50	Modeling Uniaxial Nonuniform Cell Proliferation. Bulletin of Mathematical Biology, 2019, 81, 2220-2238.	1.9	3
51	A Non-Linear Dynamical System: Flow Past a Sluice Gate. Australasian Journal of Engineering Education, 2009, 15, 27-34.	1.4	2
52	Tissue Growth and the PÃ³lya Distribution. Australasian Journal of Engineering Education, 2009, 15, 35-42.	1.4	2
53	A MODIFIED PÃ“LYA URN PROCESS AND AN INDEX FOR SPATIAL DISTRIBUTIONS WITH VOLUME EXCLUSION. ANZIAM Journal, 2011, 53, 122-133.	0.2	2
54	A HYBRID MODEL FOR STUDYING SPATIAL ASPECTS OF INFECTIOUS DISEASES. ANZIAM Journal, 2012, 54, 37-49.	0.2	2

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55	Approximating spatially exclusive invasion processes. Physical Review E, 2014, 89, 052709.	2.1	2
56	Discrete Manhattan and Chebyshev pair correlation functions in k dimensions. Physical Review E, 2020, 102, 012130.	2.1	2
57	Steady two-dimensional free-surface flow over semi-infinite and finite-length corrugations in an open channel. Physical Review Fluids, 2018, 3, .	2.5	2
58	Modelling uniaxial non-uniform yeast colony growth: Comparing an agent-based model and continuum approximations. Journal of Theoretical Biology, 2021, 523, 110715.	1.7	1