Andrey A Polezhaev

List of Publications by Year
in descending order

42 papers	438 citations	12 h-index (759190)	20 g-index (752679)
47 all docs	47 docs citations	47 times ranked	218 citing authors

#	Article	IF	Citations
1	Complexity of precipitation patterns: Comparison of simulation with experiment. Chaos, 1994, 4, 631-636.	2.5	53
2	A model of pattern formation by precipitation. Physica D: Nonlinear Phenomena, 1991, 54, 160-170.	2.8	48
3	Light-triggered pH Banding Profile in Chara Cells Revealed with a Scanning pH Microprobe and its Relation to Self-Organization Phenomena. Journal of Theoretical Biology, 2001, 212, 275-294.	1.7	42
4	A mathematical model of periodic processes in membranes (with application to cell cycle regulation). BioSystems, 1977, 9, 187-193.	2.0	38
5	Spatial patterns formed by chemotactic bacteria Escherichia coli. International Journal of Developmental Biology, 2006, 50, 309-314.	0.6	35
6	Period doubling and chaotic transient in a model of chain-branching combustion wave propagation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2010, 466, 2747-2769.	2.1	19
7	A mathematical model of the mechanism of vertebrate somitic segmentation. Journal of Theoretical Biology, 1992, 156, 169-181.	1.7	16
8	The effect of Lewis number variation on combustion waves in a model with chain-branching reaction. Journal of Mathematical Chemistry, 2008, 44, 816-830.	1.5	15
9	Autowaves in the Model of Infiltrative Tumour Growth with Migration-Proliferation Dichotomy. Mathematical Modelling of Natural Phenomena, 2011, 6, 27-38.	2.4	14
10	Analysing the stability of premixed rich hydrogenâ€“air flame with the use of two-step models. Combustion and Flame, 2013, 160, 1060-1069.	5.2	14
11	Pattern formation in a reaction-diffusion system of Fitzhugh-Nagumo type before the onset of subcritical Turing bifurcation. Physical Review E, 2017, 95, 052208.	2.1	13
12	Mathematical modelling of intercellular regulation causing the formation of spatial structures in bacterial colonies. Journal of Theoretical Biology, 1988, 135, 323-341.	1.7	12
13	Oscillatory thermal-diffusive instability of combustion waves in a model with chain-branching reaction and heat loss. Combustion Theory and Modelling, 2011, 15, 385-407.	1.9	12
14	PULSATING INSTABILITIES OF COMBUSTION WAVES IN A CHAIN-BRANCHING REACTION MODEL. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2009, 19, 873-887.	1.7	11
15	Stability of combustion waves in the Zeldovichâ€“LiÃ±Ã¡n model. Combustion and Flame, 2012, 159, 1185-1196.	5.2	11
16	Bistability of flame propagation in a model with competing exothermic reactions. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20130315.	2.1	10
17	Cell surface and cell division. Cell Biophysics, 1982, 4, 143-161.	0.4	8
18	MATHEMATICAL MODELLING OF THE MECHANISM OF VERTEBRATE SOMITIC SEGMENTATION. Journal of Biological Systems, 1995, 03, 1041-1051.	1.4	6

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19	Destabilization of cell aggregation under nonstationary conditions. Physical Review E, 1998, 58, 6328-6332.	2.1	6
20	Autowaves in a model of invasive tumor growth. Biophysics (Russian Federation), 2009, 54, 232-237.	0.7	6
21	Nonlinear dynamics of the distributed biochemical systems functioning in the dissipative structure formation mode. Biological Cybernetics, 1992, 68, 53-62.	1.3	5
22	The Role of Cell Motility in Metastatic Cell Dominance Phenomenon: Analysis by a Mathematical Model. Journal of Theoretical Medicine, 2000, 3, 63-77.	0.5	5
23	Transition from an excitable to an oscillatory statein Dictyostelium discoideum. IET Systems Biology, 2005, 152, 75.	2.0	5
24	Stabilization of combustion wave through the competitive endothermic reaction. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20150293.	2.1	5
25	On kinetics of phase transitions in cell membranes. BioSystems, 1981, 13, 171-179.	2.0	4
26	Widening the criteria for emergence of Turing patterns. Chaos, 2020, 30, 033106.	2.5	4
27	Phase waves in oscillatory media. Physica D: Nonlinear Phenomena, 1995, 84, 253-259.	2.8	3
28	Study of the Mechanism of the Autowave Structure Formation at the Reaction Front. Bulletin of the Lebedev Physics Institute, 2018, 45, 165-169.	0.6	3
29	Combustion wave in a two-layer solid fuel system. Applied Mathematical Modelling, 2020, 77, 1082-1094.	4.2	3
30	Influence of temperature on cell membranes and cell cycles of mammals. BioSystems, 1979, 11, 287-294.	2.0	2
31	Catastrophic extinction, noiseâ€stabilized turbulence and unpredictability of competition in a modified Volterraâ€“Lotka model. Chaos, 1996, 6, 78-86.	2.5	2
32	Investigation of the mechanism of emergence of autowave structures at the reaction front. Physical Review E, 2019, 99, 042215.	2.1	2
33	Spirals, Their Types and Peculiarities. The Frontiers Collection, 2019, , 91-112.	0.2	2
34	On the possible mechanism of cell cycle synchronization. Biological Cybernetics, 1981, 41, 81-89.	1.3	1
35	Pulsating instabilities in the Zeldovichâ€“LiÃ±Ã¡n model. Journal of Mathematical Chemistry, 2011, 49, 1054-1070.	1.5	1
36	Mathematical modeling of spatiotemporal patterns formed at a traveling reaction front. Chaos, 2020, 30, 083147.	2.5	1

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37	Modeling of wave patterns at the combustion front. Izvestiya Vysshikh Uchebnykh Zavedeniy Prikladnaya Nelineynaya Dinamika, 2021, 29, 538-548.	0.2	1
38	Hysteresis effects in hydrocarbon oxidation reactions. Bulletin of the Academy of Sciences of the USSR Division of Chemical Science, 1979, 28, 1122-1125.	0.0	0
39	On the possibility of reduction of dissipative structure models to a simple form. BioSystems, 1985, 18, 185-192.	2.0	0
40	Travelling Waves in a Two-Step Chain Branching Model with Heat Loss. Chemical Product and Process Modeling, 2009, 4, .	0.9	0
41	Propagation of combustion waves in the shellâ€“core energetic materials with external heat losses. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20160937.	2.1	0
42	On the Mechanisms for Formation of Segmented Waves in Active Media. Communications in Computer and Information Science, 2014, , 341-348.	0.5	0