

Alexander Nikolaevich Gorban

List of Publications by Year in Descending Order

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

190
papers

3,795
citations

34
h-index

53
g-index

208
ext. papers

4,622
ext. citations

3.4
avg, IF

5.96
L-index

#	Paper	IF	Citations
190	Modeling Progression of Single Cell Populations Through the Cell Cycle as a Sequence of Switches.. <i>Frontiers in Molecular Biosciences</i> , 2021 , 8, 793912	5.6	0
189	Social stress drives the multi-wave dynamics of COVID-19 outbreaks. <i>Scientific Reports</i> , 2021 , 11, 22497	4.9	2
188	It is useful to analyze correlation graphs: Reply to comments on "Dynamic and thermodynamic models of adaptation". <i>Physics of Life Reviews</i> , 2021 , 40, 15-15	2.1	0
187	Scikit-Dimension: A Python Package for Intrinsic Dimension Estimation. <i>Entropy</i> , 2021 , 23,	2.8	5
186	Modeling Working Memory in a Spiking Neuron Network Accompanied by Astrocytes. <i>Frontiers in Cellular Neuroscience</i> , 2021 , 15, 631485	6.1	9
185	General stochastic separation theorems with optimal bounds. <i>Neural Networks</i> , 2021 , 138, 33-56	9.1	4
184	What can the randomness of missing values tell you about clinical practice in large data sets of children's vital signs?. <i>Pediatric Research</i> , 2021 , 89, 16-21	3.2	2
183	Transient concentration extremum and conservatively perturbed equilibrium. <i>Chemical Engineering Science</i> , 2021 , 231, 116295	4.4	3
182	. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2021 , 1-15	8.1	0
181	Transition states and entangled mass action law. <i>Results in Physics</i> , 2021 , 22, 103922	3.7	1
180	Dynamic and thermodynamic models of adaptation. <i>Physics of Life Reviews</i> , 2021 , 37, 17-64	2.1	22
179	Blessing of dimensionality at the edge and geometry of few-shot learning. <i>Information Sciences</i> , 2021 , 564, 124-143	7.7	2
178	High-Dimensional Separability for One- and Few-Shot Learning. <i>Entropy</i> , 2021 , 23,	2.8	1
177	Fractional Norms and Quasinorms Do Not Help to Overcome the Curse of Dimensionality. <i>Entropy</i> , 2020 , 22,	2.8	6
176	Automatic short answer grading and feedback using text mining methods. <i>Procedia Computer Science</i> , 2020 , 169, 726-743	1.6	13
175	High-Dimensional Brain in a High-Dimensional World: Blessing of Dimensionality. <i>Entropy</i> , 2020 , 22,	2.8	13
174	Robust and Scalable Learning of Complex Intrinsic Dataset Geometry via ELPiGraph. <i>Entropy</i> , 2020 , 22,	2.8	16

173	Astrocytes Organize Associative Memory. <i>Studies in Computational Intelligence</i> , 2020 , 384-391	0.8	2
172	Multivariate Gaussian and Student-t process regression for multi-output prediction. <i>Neural Computing and Applications</i> , 2020 , 32, 3005-3028	4.8	20
171	Singularities of transient processes in dynamics and beyond: Comment on "Long transients in ecology: Theory and applications" by Andrew Morozov et al. <i>Physics of Life Reviews</i> , 2020 , 32, 46-49	2.1	4
170	Trajectories, bifurcations, and pseudo-time in large clinical datasets: applications to myocardial infarction and diabetes data. <i>GigaScience</i> , 2020 , 9,	7.6	7
169	On Adversarial Examples and Stealth Attacks in Artificial Intelligence Systems 2020 ,		6
168	Using Convolutional Neural Networks to Distinguish Different Sign Language Alphanumerics. <i>Proceedings of the International Neural Networks Society</i> , 2020 , 276-285	0.5	
167	How Deep Should be the Depth of Convolutional Neural Networks: a Backyard Dog Case Study. <i>Cognitive Computation</i> , 2020 , 12, 388-397	4.4	31
166	Do Fractional Norms and Quasinorms Help to Overcome the Curse of Dimensionality? 2019 ,		1
165	Independent Component Analysis for Unraveling the Complexity of Cancer Omics Datasets. <i>International Journal of Molecular Sciences</i> , 2019 , 20,	6.3	32
164	Methods of Data Analysis 2019 , 35-59		
163	Single-cell trajectories reconstruction, exploration and mapping of omics data with STREAM. <i>Nature Communications</i> , 2019 , 10, 1903	17.4	97
162	Drug Use and Personality Profiles 2019 , 5-33		1
161	Results of Data Analysis 2019 , 61-120		
160	Personality Traits and Drug Consumption 2019 ,		6
159	One-trial correction of legacy AI systems and stochastic separation theorems. <i>Information Sciences</i> , 2019 , 484, 237-254	7.7	13
158	Functional CT imaging for identification of the spatial determinants of small-airways disease in adults with asthma. <i>Journal of Allergy and Clinical Immunology</i> , 2019 , 144, 83-93	11.5	19
157	Simple model of complex dynamics of activity patterns in developing networks of neuronal cultures. <i>PLoS ONE</i> , 2019 , 14, e0218304	3.7	4
156	Universal Lyapunov functions for non-linear reaction networks. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2019 , 79, 104910	3.7	3

155	Symphony of high-dimensional brain: Reply to comments on "The unreasonable effectiveness of small neural ensembles in high-dimensional brain". <i>Physics of Life Reviews</i> , 2019 , 29, 115-119	2.1	2
154	Basic, simple and extendable kinetic model of protein synthesis. <i>Mathematical Biosciences and Engineering</i> , 2019 , 16, 6602-6622	2.1	1
153	Fast construction of correcting ensembles for legacy Artificial Intelligence systems: Algorithms and a case study. <i>Information Sciences</i> , 2019 , 485, 230-247	7.7	7
152	Kernel Stochastic Separation Theorems and Separability Characterizations of Kernel Classifiers 2019 ,		2
151	The unreasonable effectiveness of small neural ensembles in high-dimensional brain. <i>Physics of Life Reviews</i> , 2019 , 29, 55-88	2.1	24
150	High-Dimensional Brain: A Tool for Encoding and Rapid Learning of Memories by Single Neurons. <i>Bulletin of Mathematical Biology</i> , 2019 , 81, 4856-4888	2.1	15
149	Basic model of purposeful kinesis. <i>Ecological Complexity</i> , 2018 , 33, 75-83	2.6	3
148	Model reduction in chemical dynamics: slow invariant manifolds, singular perturbations, thermodynamic estimates, and analysis of reaction graph. <i>Current Opinion in Chemical Engineering</i> , 2018 , 21, 48-59	5.4	23
147	Blessing of dimensionality: mathematical foundations of the statistical physics of data. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018 , 376,	3	44
146	Mobility cost and degenerated diffusion in kinesis models. <i>Ecological Complexity</i> , 2018 , 36, 16-21	2.6	2
145	Correction of AI systems by linear discriminants: Probabilistic foundations. <i>Information Sciences</i> , 2018 , 466, 303-322	7.7	31
144	Fast Numerical Evaluation of Periodic Solutions for a Class of Nonlinear Systems and Its Applications for Parameter Estimation Problems. <i>Communications in Computer and Information Science</i> , 2018 , 137-151	0.3	
143	Hilbert's sixth problem: the endless road to rigour. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018 , 376,	3	9
142	Theoretical aspects of peptide imprinting: screening of MIP (virtual) binding sites for their interactions with amino acids, di- and tripeptides. <i>Journal of the Chinese Advanced Materials Society</i> , 2018 , 6, 301-310		3
141	Exploring Automated Pottery Identification [Arch-I-Scan]. <i>Internet Archaeology</i> , 2018 ,	1	8
140	2018 ,		1
139	Efficiency of Shallow Cascades for Improving Deep Learning AI Systems 2018 ,		1
138	Data analysis with arbitrary error measures approximated by piece-wise quadratic PQSQ functions 2018 ,		2

137	Knowledge Transfer Between Artificial Intelligence Systems. <i>Frontiers in Neurobotics</i> , 2018 , 12, 49	3.4	12
136	Stochastic separation theorems. <i>Neural Networks</i> , 2017 , 94, 255-259	9.1	31
135	Pseudo-outcrop Visualization of Borehole Images and Core Scans. <i>Mathematical Geosciences</i> , 2017 , 49, 947-964	2.5	2
134	Beyond Navier-Stokes equations: capillarity of ideal gas. <i>Contemporary Physics</i> , 2017 , 58, 70-90	3.3	10
133	The Five Factor Model of Personality and Evaluation of Drug Consumption Risk. <i>Studies in Classification, Data Analysis, and Knowledge Organization</i> , 2017 , 231-242	0.2	11
132	Piece-wise quadratic approximations of arbitrary error functions for fast and robust machine learning. <i>Neural Networks</i> , 2016 , 84, 28-38	9.1	7
131	Coupling-modulated multi-stability and coherent dynamics in directed networks of heterogeneous nonlinear oscillators with modular topology. <i>IFAC-PapersOnLine</i> , 2016 , 49, 62-67	0.7	4
130	Fluorescence-based assay as a new screening tool for toxic chemicals. <i>Scientific Reports</i> , 2016 , 6, 33922	4.9	11
129	Fast Sampling of Evolving Systems with Periodic Trajectories. <i>Mathematical Modelling of Natural Phenomena</i> , 2016 , 11, 73-88	3	2
128	Handling missing data in large healthcare dataset: A case study of unknown trauma outcomes. <i>Computers in Biology and Medicine</i> , 2016 , 75, 203-16	7	29
127	Approximation with random bases: Pro et Contra. <i>Information Sciences</i> , 2016 , 364-365, 129-145	7.7	63
126	Evolution of adaptation mechanisms: Adaptation energy, stress, and oscillating death. <i>Journal of Theoretical Biology</i> , 2016 , 405, 127-39	2.3	21
125	SOM: Stochastic initialization versus principal components. <i>Information Sciences</i> , 2016 , 364-365, 213-221	7.7	35
124	The Blessing of Dimensionality: Separation Theorems in the Thermodynamic Limit**The work is partially supported by Innovate UK, Technology Strategy Board, Knowledge Transfer Partnership grant KTP009890. <i>IFAC-PapersOnLine</i> , 2016 , 49, 64-69	0.7	15
123	Simple model of complex bursting dynamics in developing networks of neuronal cultures. <i>IFAC-PapersOnLine</i> , 2016 , 49, 68-73	0.7	1
122	Directed cycles and multi-stability of coherent dynamics in systems of coupled nonlinear oscillators. <i>IFAC-PapersOnLine</i> , 2015 , 48, 19-24	0.7	1
121	Leaders Do Not Look Back, or Do They?. <i>Mathematical Modelling of Natural Phenomena</i> , 2015 , 10, 212-234	3.4	9
120	Generalized Mass Action Law and Thermodynamics of Nonlinear Markov Processes. <i>Mathematical Modelling of Natural Phenomena</i> , 2015 , 10, 16-46	3	10

119	Forward-Invariant Peeling in Chemical Dynamics: a Simple Case Study. <i>Mathematical Modelling of Natural Phenomena</i> , 2015 , 10, 126-134	3	1
118	Three Waves of Chemical Dynamics. <i>Mathematical Modelling of Natural Phenomena</i> , 2015 , 10, 1-5	3	18
117	Fast and user-friendly non-linear principal manifold learning by method of elastic maps 2015 ,		11
116	Is it possible to predict long-term success with k-NN? Case study of four market indices (FTSE100, DAX, HANGSENG, NASDAQ). <i>Journal of Physics: Conference Series</i> , 2014 , 490, 012082	0.3	1
115	Computational diagnosis of canine lymphoma. <i>Journal of Physics: Conference Series</i> , 2014 , 490, 012135	0.3	2
114	Detailed balance in micro- and macrokinetics and micro-distinguishability of macro-processes. <i>Results in Physics</i> , 2014 , 4, 142-147	3.7	9
113	Computational diagnosis and risk evaluation for canine lymphoma. <i>Computers in Biology and Medicine</i> , 2014 , 53, 279-90	7	8
112	General H-theorem and Entropies that Violate the Second Law. <i>Entropy</i> , 2014 , 16, 2408-2432	2.8	9
111	A statistical model of aggregate fragmentation. <i>New Journal of Physics</i> , 2014 , 16, 013031	2.9	8
110	Multiscale principal component analysis. <i>Journal of Physics: Conference Series</i> , 2014 , 490, 012081	0.3	7
109	A random six-phase switch regulates pneumococcal virulence via global epigenetic changes. <i>Nature Communications</i> , 2014 , 5, 5055	17.4	147
108	Learning optimization for decision tree classification of non-categorical data with information gain impurity criterion 2014 ,		8
107	Enhancement of the stability of lattice Boltzmann methods by dissipation control. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2014 , 414, 285-299	3.3	20
106	Maxallent: Maximizers of all entropies and uncertainty of uncertainty. <i>Computers and Mathematics With Applications</i> , 2013 , 65, 1438-1456	2.7	12
105	Local equivalence of reversible and general Markov kinetics. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2013 , 392, 1111-1121	3.3	6
104	Thermodynamics in the limit of irreversible reactions. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2013 , 392, 1318-1335	3.3	22
103	Mathematical modeling of microRNA-mediated mechanisms of translation repression. <i>Advances in Experimental Medicine and Biology</i> , 2013 , 774, 189-224	3.6	23
102	Thermodynamic Tree: The Space of Admissible Paths. <i>SIAM Journal on Applied Dynamical Systems</i> , 2013 , 12, 246-278	2.8	5

101	Hilbert's 6th Problem: exact and approximate hydrodynamic manifolds for kinetic equations. <i>Bulletin of the American Mathematical Society</i> , 2013 , 51, 187-246	1.3	29
100	Lyapunov-like Conditions of Forward Invariance and Boundedness for a Class of Unstable Systems. <i>SIAM Journal on Control and Optimization</i> , 2013 , 51, 2306-2334	1.9	3
99	Geometrical Complexity of Data Approximators. <i>Lecture Notes in Computer Science</i> , 2013 , 500-509	0.9	5
98	Reduction of dynamical biochemical reactions networks in computational biology. <i>Frontiers in Genetics</i> , 2012 , 3, 131	4.5	59
97	Kinetic signatures of microRNA modes of action. <i>Rna</i> , 2012 , 18, 1635-55	5.8	77
96	Allowed and forbidden regimes of entropy balance in lattice Boltzmann collisions. <i>Physical Review E</i> , 2012 , 86, 025701	2.4	5
95	Collective dynamics: when one plus one does not make two. <i>Mathematical Medicine and Biology</i> , 2011 , 28, 85-8	1.3	1
94	Extended detailed balance for systems with irreversible reactions. <i>Chemical Engineering Science</i> , 2011 , 66, 5388-5399	4.4	42
93	Law of the Minimum paradoxes. <i>Bulletin of Mathematical Biology</i> , 2011 , 73, 2013-44	2.1	42
92	Reciprocal relations between kinetic curves. <i>Europhysics Letters</i> , 2011 , 93, 20004	1.6	33
91	Kinetic path summation, multi-sheeted extension of master equation, and evaluation of ergodicity coefficient. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2011 , 390, 1009-1025	3.3	2
90	The Michaelis-Menten-Stueckelberg Theorem. <i>Entropy</i> , 2011 , 13, 966-1019	2.8	41
89	Quasichemical Models of Multicomponent Nonlinear Diffusion. <i>Mathematical Modelling of Natural Phenomena</i> , 2011 , 6, 184-262	3	45
88	Efficient simulations of detailed combustion fields via the lattice Boltzmann method. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2011 , 21, 494-517	4.5	15
87	Self-Simplification in Darwinian Systems. <i>Lecture Notes in Computational Science and Engineering</i> , 2011 , 311-344	0.3	2
86	A Numerical Analyst's View of the Lattice Boltzmann Method. <i>Springer Proceedings in Mathematics</i> , 2011 , 127-150		3
85	Time Step Expansions and the Invariant Manifold Approach to Lattice Boltzmann Models. <i>Lecture Notes in Computational Science and Engineering</i> , 2011 , 169-205	0.3	
84	Principal manifolds and graphs in practice: from molecular biology to dynamical systems. <i>International Journal of Neural Systems</i> , 2010 , 20, 219-32	6.2	84

83	Entropy: The Markov Ordering Approach. <i>Entropy</i> , 2010 , 12, 1145-1193	2.8	57
82	Correlations, risk and crisis: From physiology to finance. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2010 , 389, 3193-3217	3.3	63
81	Dynamical modeling of microRNA action on the protein translation process. <i>BMC Systems Biology</i> , 2010 , 4, 13	3.5	30
80	Asymptotology of chemical reaction networks. <i>Chemical Engineering Science</i> , 2010 , 65, 2310-2324	4.4	44
79	Coupling of the model reduction technique with the lattice Boltzmann method for combustion simulations. <i>Combustion and Flame</i> , 2010 , 157, 1833-1849	5.3	27
78	The Role of Thermodynamics in Model Reduction When Using Invariant Grids. <i>Communications in Computational Physics</i> , 2010 , 8, 701-734	2.4	8
77	General Laws of Adaptation to Environmental Factors: from Ecological Stress to Financial Crisis. <i>Mathematical Modelling of Natural Phenomena</i> , 2009 , 4, 1-53	3	7
76	Combustion simulation via lattice Boltzmann and reduced chemical kinetics. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2009 , 2009, P06013	1.9	23
75	Robust simplifications of multiscale biochemical networks. <i>BMC Systems Biology</i> , 2008 , 2, 86	3.5	76
74	PCA and K-Means Decipher Genome. <i>Lecture Notes in Computational Science and Engineering</i> , 2008 , 309-323	3.3	0
73	Chapter 3 Dynamic and Static Limitation in Multiscale Reaction Networks, Revisited. <i>Advances in Chemical Engineering</i> , 2008 , 103-173	0.6	32
72	Nonequilibrium entropy limiters in lattice Boltzmann methods. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2008 , 387, 385-406	3.3	36
71	Elastic Maps and Nets for Approximating Principal Manifolds and Their Application to Microarray Data Visualization. <i>Lecture Notes in Computational Science and Engineering</i> , 2008 , 96-130	0.3	9
70	Beyond The Concept of Manifolds: Principal Trees, Metro Maps, and Elastic Cubic Complexes. <i>Lecture Notes in Computational Science and Engineering</i> , 2008 , 219-237	0.3	2
69	Order-disorder separation: Geometric revision. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007 , 374, 85-102	3.3	13
68	Quasi-equilibrium lattice Boltzmann method. <i>European Physical Journal B</i> , 2007 , 56, 135-139	1.2	37
67	Stable simulation of fluid flow with high-Reynolds number using Ehrenfest's steps. <i>Numerical Algorithms</i> , 2007 , 45, 389-408	2.1	1
66	The mystery of two straight lines in bacterial genome statistics. <i>Bulletin of Mathematical Biology</i> , 2007 , 69, 2429-42	2.1	4

65	Topological grammars for data approximation. <i>Applied Mathematics Letters</i> , 2007 , 20, 382-386	3.5	25
64	Stability and stabilization of the lattice Boltzmann method. <i>Physical Review E</i> , 2007 , 75, 036711	2.4	52
63	Branching Principal Components: Elastic Graphs, Topological Grammars and Metro Maps. <i>Neural Networks (IJCNN), International Joint Conference on</i> , 2007 ,		1
62	Selection Theorem for Systems with Inheritance. <i>Mathematical Modelling of Natural Phenomena</i> , 2007 , 2, 1-45	3	46
61	Dynamical robustness of biological networks with hierarchical distribution of time scales. <i>IET Systems Biology</i> , 2007 , 1, 238-46	1.4	17
60	Stabilization of the lattice Boltzmann method using the Ehrenfests' coarse-graining idea. <i>Physical Review E</i> , 2006 , 74, 037703	2.4	21
59	Quasi-equilibrium closure hierarchies for the Boltzmann equation. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006 , 360, 325-364	3.3	19
58	Basic Types of Coarse-Graining 2006 , 117-176		6
57	Codon usage trajectories and 7-cluster structure of 143 complete bacterial genomic sequences. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2005 , 353, 365-387	3.3	11
56	Invariance correction to Grad equations: where to go beyond approximations?. <i>Continuum Mechanics and Thermodynamics</i> , 2005 , 17, 311-335	3.5	1
55	Elastic Principal Graphs and Manifolds and their Practical Applications. <i>Computing (Vienna/New York)</i> , 2005 , 75, 359-379	2.2	45
54	Invariant Manifolds for Physical and Chemical Kinetics. <i>Lecture Notes in Physics</i> , 2005 ,	0.8	108
53	Four basic symmetry types in the universal 7-cluster structure of microbial genomic sequences. <i>In Silico Biology</i> , 2005 , 5, 265-82	2	2
52	Invariant Grids: Method of Complexity Reduction in Reaction Networks. <i>Complexus</i> , 2004 , 2, 110-127		7
51	Uniqueness of thermodynamic projector and kinetic basis of molecular individualism. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004 , 336, 391-432	3.3	18
50	Legendre integrators, post-processing and quasiequilibrium. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2004 , 120, 149-167	2.7	5
49	Constructive methods of invariant manifolds for kinetic problems. <i>Physics Reports</i> , 2004 , 396, 197-403	27.7	112
48	Invariant grids for reaction kinetics. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004 , 333, 106-154		62

47	Self-Organizing Approach for Automated Gene Identification. <i>Open Systems and Information Dynamics</i> , 2003 , 10, 321-333	0.4	11
46	Method of invariant manifold for chemical kinetics. <i>Chemical Engineering Science</i> , 2003 , 58, 4751-4768	4.4	181
45	Irreversibility in the short memory approximation. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003 , 327, 399-424	3.3	14
44	Family of additive entropy functions out of thermodynamic limit. <i>Physical Review E</i> , 2003 , 67, 016104	2.4	28
43	Additive generalization of the Boltzmann entropy. <i>Physical Review E</i> , 2003 , 67, 067104	2.4	4
42	Geometry of Irreversibility 2003 , 19-43		2
41	Seven clusters in genomic triplet distributions. <i>In Silico Biology</i> , 2003 , 3, 471-82	2	7
40	Riabouchinsky flow with partially penetrable obstacle. <i>Mathematical and Computer Modelling</i> , 2002 , 35, 1365-1370		1
39	Modified Kirchhoff flow with a partially penetrable obstacle and its application to the efficiency of free flow turbines. <i>Mathematical and Computer Modelling</i> , 2002 , 35, 1371-1375		5
38	Hydrodynamics from Grad's equations: What can we learn from exact solutions?. <i>Annalen Der Physik</i> , 2002 , 11, 783-833	2.6	40
37	Duality in nonextensive statistical mechanics. <i>Physical Review E</i> , 2002 , 65, 036128	2.4	21
36	Macroscopic dynamics through coarse-graining: a solvable example. <i>Physical Review E</i> , 2002 , 65, 026116	2.4	8
35	The Filling of Gaps in Geophysical Time Series by Artificial Neural Networks. <i>Radiocarbon</i> , 2001 , 43, 365-376		12
34	Corrections and enhancements of quasi-equilibrium states. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2001 , 96, 203-219	2.7	43
33	Limits of the Turbine Efficiency for Free Fluid Flow. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2001 , 123, 311-317	2.6	124
32	Ehrenfest's argument extended to a formalism of nonequilibrium thermodynamics. <i>Physical Review E</i> , 2001 , 63, 066124	2.4	27
31	Reduced description in the reaction kinetics. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2000 , 275, 361-379	3.3	31
30	Classification of Symbol Sequences over Their Frequency Dictionaries: Towards the Connection between Structure and Natural Taxonomy. <i>Open Systems and Information Dynamics</i> , 2000 , 7, 1-17	0.4	15

29	Two-step approximation of space-independent relaxation. <i>Transport Theory and Statistical Physics</i> , 1999 , 28, 271-296		7
28	Maximum Entropy Method in Analysis of Genetic Text and Measurement of its Information Content. <i>Open Systems and Information Dynamics</i> , 1998 , 5, 265-278	0.4	18
27	Approximation of continuous functions of several variables by an arbitrary nonlinear continuous function of one variable, linear functions, and their superpositions. <i>Applied Mathematics Letters</i> , 1998 , 11, 45-49	3.5	26
26	Maximum Entropy Principle for Lattice Kinetic Equations. <i>Physical Review Letters</i> , 1998 , 81, 6-9	7.4	129
25	Schrödinger operator in an overfull set. <i>Europhysics Letters</i> , 1998 , 42, 113-118	1.6	2
24	Dynamic correction to moment approximations. <i>Physical Review E</i> , 1998 , 57, 1668-1672	2.4	42
23	Relaxational trajectories: global approximations. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1996 , 231, 648-672	3.3	15
22	Scattering rates versus moments: Alternative Grad equations. <i>Physical Review E</i> , 1996 , 54, R3109-R3112	2.4	20
21	Short-Wave Limit of Hydrodynamics: A Soluble Example. <i>Physical Review Letters</i> , 1996 , 77, 282-285	7.4	50
20	Technical note: On Solid liquid limit of hydrodynamic equations. <i>Transport Theory and Statistical Physics</i> , 1995 , 24, 1419-1421		
19	General approach to constructing models of the Boltzmann equation. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1994 , 206, 401-420	3.3	47
18	Method of invariant manifolds and regularization of acoustic spectra. <i>Transport Theory and Statistical Physics</i> , 1994 , 23, 559-632		57
17	Nonarbitrary regularization of acoustic spectra. <i>Transport Theory and Statistical Physics</i> , 1993 , 22, 121-124		
16	Structure and approximations of the chapman-enskog expansion for the linearized grad equations. <i>Transport Theory and Statistical Physics</i> , 1992 , 21, 101-117		19
15	Jointly dissipative operators and their applications. <i>Siberian Mathematical Journal</i> , 1992 , 33, 19-23	0.5	
14	Thermodynamic parameterization. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1992 , 190, 393-404	4.3	38
13	Simplest model of self-oscillations in association reactions. <i>Reaction Kinetics and Catalysis Letters</i> , 1985 , 27, 153-155		
12	Description of nonisothermal reactions in terms of Marcelin-de-Donder kinetics and its generalizations. <i>Reaction Kinetics and Catalysis Letters</i> , 1982 , 20, 261-265		15

11	Macroscopic clusters induced by diffusion in catalytic oxidation reactions. <i>Chemical Engineering Science</i> , 1980 , 35, 2351-2352	4.4	9
10	Dynamics of chemical reactions and nonphysical steady states. <i>Reaction Kinetics and Catalysis Letters</i> , 1980 , 15, 245-250		5
9	Marcelin-de Donder kinetics near equilibrium. <i>Reaction Kinetics and Catalysis Letters</i> , 1979 , 12, 19-23		12
8	Invariant sets for kinetic equations. <i>Reaction Kinetics and Catalysis Letters</i> , 1979 , 10, 187-190		8
7	Principal Graphs and Manifolds 28-59		25
6	Application of the method of elastic maps in analysis of genetic texts		13
5	The general approximation theorem		9
4	Astrocytes mediate analogous memory in a multi-layer neuron-astrocyte network. <i>Neural Computing and Applications</i> , 1	4.8	5
3	STREAM: Single-cell Trajectories Reconstruction, Exploration And Mapping of omics data		4
2	High order orthogonal tensor networks: information capacity and reliability		1
1	Modeling Progression of Single Cell Populations Through the Cell Cycle as a Sequence of Switches		1