

Dmitrii I Rachinskii

List of Publications by Year in descending order

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125
papers

1,225
citations

489802

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29
g-index

130
all docs

130
docs citations

130
times ranked

743
citing authors

#	ARTICLE	IF	CITATIONS
1	Dynamics of SIR model with heterogeneous response to intervention policy. Theoretical Population Biology, 2022, , .	0.5	0
2	Patterns of non-radial solutions to coupled semilinear elliptic systems on a disc. Nonlinear Analysis: Theory, Methods & Applications, 2021, 202, 112094.	0.6	2
3	Dynamics of Systems with a Discontinuous Hysteresis Operator and Interval Translation Maps. Axioms, 2021, 10, 80.	0.9	1
4	Dynamics of SIR model with vaccination and heterogeneous behavioral response of individuals modeled by the Preisach operator. Journal of Mathematical Biology, 2021, 83, 11.	0.8	11
5	A deterministic model for non-monotone relationship between translation of upstream and downstream open reading frames. Mathematical Medicine and Biology, 2021, 38, 490-515.	0.8	1
6	Real Options Problem with Nonsmooth Obstacle. SIAM Journal on Financial Mathematics, 2021, 12, 1508-1552.	0.7	0
7	Competing barnacle species with a time dependent reproduction rate. Theoretical Population Biology, 2020, 131, 12-24.	0.5	3
8	Global dynamics of SIR model with switched transmission rate. Journal of Mathematical Biology, 2020, 80, 1209-1233.	0.8	22
9	Guaranteed Estimates for the Length of Branches of Periodic Orbits for Equivariant Hopf Bifurcation. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2020, 30, 2050198.	0.7	0
10	The global stability of a class of history-dependent macroeconomic models. Mathematical Modelling of Natural Phenomena, 2020, 15, 49.	0.9	1
11	Topological properties of strongly monotone planar vector fields. Mathematische Nachrichten, 2019, 292, 2108-2128.	0.4	0
12	The Devil is in the details: Spectrum and eigenvalue distribution of the discrete Preisach memory model. Communications in Nonlinear Science and Numerical Simulation, 2019, 77, 1-17.	1.7	6
13	Regular Polygon Formations With Fixed Size and Cyclic Sensing Constraint. IEEE Transactions on Automatic Control, 2019, 64, 5156-5163.	3.6	5
14	Chaos in Saw Map. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2019, 29, 1930005.	0.7	1
15	Distributed Formation Control via Mixed Barycentric Coordinate and Distance-Based Approach. , 2019, , .		10
16	Mixed global dynamics of forced vibro-impact oscillator with Coulomb friction. Chaos, 2019, 29, 113116.	1.0	9
17	Periodic pulsating dynamics of slow-fast delayed systems with a period close to the delay. European Journal of Applied Mathematics, 2019, 30, 39-62.	1.4	0
18	Discrete-Time Adaptive Hysteresis Filter for Parallel Computing and Recursive Identification of Preisach Model. , 2018, , .		2

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19	Equivariant degree method for analysis of Hopf bifurcation of relative periodic solutions: Case study of a ring of oscillators. <i>Journal of Differential Equations</i> , 2018, 265, 4530-4574.	1.1	1
20	Restrictions to the use of time-delayed feedback control in symmetric settings. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2018, 23, 543-556.	0.5	0
21	Dynamics of Discrete Time Systems with a Hysteresis Stop Operator. <i>SIAM Journal on Applied Dynamical Systems</i> , 2017, 16, 91-119.	0.7	9
22	Distributed formation control under arbitrarily changing topology. , 2017, , .		13
23	Use of Prandtl-Ishlinskii hysteresis operators for Coulomb friction modeling with presliding. <i>Journal of Physics: Conference Series</i> , 2017, 811, 012013.	0.3	11
24	Noninvasive Stabilization of Periodic Orbits in O4-Symmetrically Coupled Systems Near a Hopf Bifurcation Point. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2017, 27, 1750087.	0.7	4
25	Memory and adaptive behavior in population dynamics: anti-predator behavior as a case study. <i>Journal of Mathematical Biology</i> , 2017, 74, 1533-1559.	0.8	8
26	An asymptotic solution to a passive biped walker model. <i>Journal of Physics: Conference Series</i> , 2017, 811, 012018.	0.3	2
27	A model of hysteresis arising from social interaction within a firm. <i>Journal of Physics: Conference Series</i> , 2017, 811, 012011.	0.3	9
28	On the rationale for hysteresis in economic decisions. <i>Journal of Physics: Conference Series</i> , 2017, 811, 012012.	0.3	3
29	Sliding Hopf bifurcation in interval systems. <i>Discrete and Continuous Dynamical Systems</i> , 2017, 37, 3545-3566.	0.5	3
30	Robust homoclinic orbits in planar systems with Preisach hysteresis operator. <i>Journal of Physics: Conference Series</i> , 2016, 727, 012012.	0.3	2
31	Distributed control of cyclic formations with local relative position measurements. , 2016, , .		8
32	Analysis of an operator-differential model for magnetostrictive energy harvesting. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2016, 39, 504-519.	1.7	16
33	Convergence of Direct Recursive Algorithm for Identification of Preisach Hysteresis Model with Stochastic Input. <i>SIAM Journal on Applied Mathematics</i> , 2016, 76, 1270-1295.	0.8	8
34	Globally asymptotically stable distributed control for distance and bearing based multi-agent formations. , 2016, , .		21
35	The Kurzweil integral in financial market modeling. <i>Mathematica Bohemica</i> , 2016, 141, 261-286.	0.2	4
36	Timing jitter of passively-mode-locked semiconductor lasers subject to optical feedback: A semi-analytic approach. <i>Physical Review A</i> , 2015, 92, .	1.0	36

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37	A preliminary threshold model of parasitism in the Cockle <i>Cerastoderma edule</i> using delayed exchange of stability. <i>Journal of Physics: Conference Series</i> , 2015, 585, 012013.	0.3	0
38	6th International Workshop on Multi-Rate Processes and Hysteresis (MURPHYS2012). <i>Journal of Physics: Conference Series</i> , 2015, 585, 011001.	0.3	0
39	Switching behaviour of two-phenotype bacteria in varying environment. <i>Journal of Physics: Conference Series</i> , 2015, 585, 012012.	0.3	6
40	Asymptotics of sign-changing patterns in hysteretic systems with diffusive thresholds. <i>Asymptotic Analysis</i> , 2015, 96, 1-22.	0.2	0
41	Adaptive behaviour and multiple equilibrium states in a predator–prey model. <i>Theoretical Population Biology</i> , 2015, 101, 24-30.	0.5	10
42	Pattern formation in parabolic equations containing hysteresis with diffusive thresholds. <i>Journal of Mathematical Analysis and Applications</i> , 2015, 424, 1103-1124.	0.5	3
43	Online identification of piezoelectric hysteresis by direct recursive algorithm of Preisach model. , 2015, , .		3
44	Kurzweil integral representation of interacting Prandtl-Ishlinskii operators. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2015, 20, 2949-2965.	0.5	5
45	Realization of arbitrary hysteresis by a low-dimensional gradient flow. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2015, 21, 227-243.	0.5	12
46	Effect of dynamical instability on timing jitter in passively mode-locked quantum-dot lasers. <i>Optics Letters</i> , 2014, 39, 6815.	1.7	18
47	Analytical solution for a class of network dynamics with mechanical and financial applications. <i>Physical Review E</i> , 2014, 90, 032822.	0.8	14
48	Bistability and hysteresis in an optically injected two-section semiconductor laser. <i>Physical Review E</i> , 2014, 89, 052903.	0.8	13
49	Hysteresis Can Grant Fitness in Stochastically Varying Environment. <i>PLoS ONE</i> , 2014, 9, e103241.	1.1	16
50	Chaos in a seasonally perturbed SIR model: avian influenza in a seabird colony as a paradigm. <i>Journal of Mathematical Biology</i> , 2013, 67, 293-327.	0.8	13
51	Well-posedness of parabolic equations containing hysteresis with diffusive thresholds. <i>Proceedings of the Steklov Institute of Mathematics</i> , 2013, 283, 87-109.	0.1	5
52	Hybrid Mode Locking in Semiconductor Lasers: Simulations, Analysis, and Experiments. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2013, 19, 1100208-1100208.	1.9	41
53	Cascading effects in the moving Preisach model. , 2013, , .		0
54	Theoretical analysis of timing jitter in two-section passively mode-locked semiconductor lasers. , 2013, , .		0

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55	Periodic canard trajectories with multiple segments following the unstable part of critical manifold. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2013, 18, 467-482.	0.5	5
56	Bistable regimes in an optically injected mode-locked laser. <i>Optics Express</i> , 2012, 20, 25572.	1.7	9
57	Memory Effects in Population Dynamics : Spread of Infectious Disease as a Case Study. <i>Mathematical Modelling of Natural Phenomena</i> , 2012, 7, 204-226.	0.9	20
58	Hopf Bifurcation in Symmetric Networks of Coupled Oscillators with Hysteresis. <i>Journal of Dynamics and Differential Equations</i> , 2012, 24, 713-759.	1.0	12
59	Characterization of memory states of the Preisach operator with stochastic inputs. <i>Physica B: Condensed Matter</i> , 2012, 407, 1404-1411.	1.3	2
60	Properties of solutions to a class of differential models incorporating Preisach hysteresis operator. <i>Physica D: Nonlinear Phenomena</i> , 2012, 241, 2010-2028.	1.3	27
61	The response of the woodpigeon (<i>Columba palumbus</i>) to relaxation of intraspecific competition: A hybrid modelling approach. <i>Ecological Modelling</i> , 2012, 224, 54-64.	1.2	6
62	Effect of positive feedback on Devil's staircase input-output relationship. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2012, 6, 1095-1112.	0.6	3
63	Topological degree in analysis of canard-type trajectories in 3-D systems. <i>Applicable Analysis</i> , 2011, 90, 1123-1139.	0.6	23
64	Optically injected mode-locked laser. <i>Physical Review E</i> , 2011, 83, 066202.	0.8	35
65	Distribution of return point memory states for systems with stochastic inputs. <i>Journal of Physics: Conference Series</i> , 2011, 268, 012001.	0.3	3
66	On the equivariant Hopf bifurcation in hysteretic networks of van der Pol oscillators. <i>Journal of Physics: Conference Series</i> , 2011, 268, 012002.	0.3	0
67	Attempts at a numerical realisation of stochastic differential equations containing Preisach operator. <i>Journal of Physics: Conference Series</i> , 2011, 268, 012019.	0.3	2
68	Modelling Energy Dissipation Due to Soil-Moisture Hysteresis. <i>Environmental Modeling and Assessment</i> , 2011, 16, 313-333.	1.2	9
69	Dynamics of couple mode-locked quantum dot semiconductor laser. , 2011, , .		1
70	Stability results for a soil model with singular hysteretic hydrology. <i>Journal of Physics: Conference Series</i> , 2011, 268, 012016.	0.3	13
71	Locking characteristics of a 40-GHz hybrid mode-locked monolithic quantum dot laser. , 2010, , .		5
72	Quantum-Dot Mode-Locked Lasers With Dual-Mode Optical Injection. <i>IEEE Photonics Technology Letters</i> , 2010, 22, 359-361.	1.3	43

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73	Dynamical regimes in a monolithic passively mode-locked quantum dot laser. Journal of the Optical Society of America B: Optical Physics, 2010, 27, 2102.	0.9	30
74	Linewidth narrowing and phase locking of quantum-dot mode-locked lasers employing single- and dual-mode injection locking. , 2009, , .		0
75	Mechanism of Synchronization in Frequency Dividers. IEEE Transactions on Circuits and Systems I: Regular Papers, 2009, 56, 190-199.	3.5	20
76	Rate-Independent Hysteresis in Terrestrial Hydrology. IEEE Control Systems, 2009, 29, 44-69.	1.0	31
77	Numerical Study of Dynamical Regimes in a Monolithic Passively Mode-Locked Semiconductor Laser. IEEE Journal of Quantum Electronics, 2009, 45, 462-468.	1.0	48
78	Single and dual-mode injection locked quantum-dot mode-locked lasers. , 2009, , .		1
79	Linear stability analysis of systems with Preisach memory. Discrete and Continuous Dynamical Systems - Series B, 2009, 11, 997-1018.	0.5	13
80	A new paradigm for modelling hysteresis in macroeconomic flows. Physica B: Condensed Matter, 2008, 403, 231-236.	1.3	30
81	Hopf bifurcation in a van der Pol type oscillator with magnetic hysteresis. Physica B: Condensed Matter, 2008, 403, 301-304.	1.3	20
82	Algorithm for linear stability analysis in systems with Preisach hysteresis. Physica B: Condensed Matter, 2008, 403, 305-307.	1.3	1
83	On disconnected unbounded sets of forced oscillations. Doklady Mathematics, 2008, 78, 660-664.	0.1	1
84	Andronov-Hopf bifurcation in systems with Preisach operator. Doklady Mathematics, 2008, 78, 705-709.	0.1	2
85	Criteria of resonance origin in a single-circuit control system with saturation. Automation and Remote Control, 2008, 69, 1297-1310.	0.4	0
86	Nonlocal branches of cycles, bistability, and topologically persistent mixed mode oscillations. Chaos, 2008, 18, 015109.	1.0	2
87	International Workshop on Multi-Rate Processes and Hysteresis. Journal of Physics: Conference Series, 2008, 138, 011001.	0.3	0
88	Arnold tongues for bifurcation from infinity. Discrete and Continuous Dynamical Systems - Series S, 2008, 1, 107-116.	0.6	1
89	Instabilities in quantum dot semiconductor lasers at 1.3 μm . , 2007, , .		0
90	Excitability in a Quantum Dot Semiconductor Laser with Optical Injection. Physical Review Letters, 2007, 98, 153903.	2.9	165

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91	Q-switching instability in a mode-locked semiconductor laser. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 663.	0.9	26
92	Differentiability of evolution operators for dynamical systems with hysteresis. Journal of Physics: Conference Series, 2006, 55, 171-190.	0.3	4
93	Subharmonic bifurcation from infinity. Journal of Differential Equations, 2006, 226, 30-53.	1.1	0
94	Arnold tongues in the problem of large-amplitude periodic trajectories. Doklady Mathematics, 2006, 74, 821-826.	0.1	0
95	Global stability of the Armstrong-Frederick model with periodic biaxial inputs. Nonlinear Differential Equations and Applications, 2006, 13, 385-411.	0.4	0
96	Pulse interaction via gain and loss dynamics in passive mode locking. Physica D: Nonlinear Phenomena, 2006, 218, 95-104.	1.3	34
97	Asymptotic stability of continuum sets of periodic solutions to systems with hysteresis. Journal of Mathematical Analysis and Applications, 2006, 319, 94-109.	0.5	14
98	Differential Equations with Hysteresis via a Canonical Example. , 2006, , 125-291.		17
99	Bifurcation of forced periodic oscillations for equations with Preisach hysteresis. Journal of Physics: Conference Series, 2005, 22, 93-102.	0.3	9
100	Dynamic Hopf bifurcations generated by nonlinear terms. Journal of Differential Equations, 2005, 210, 65-86.	1.1	9
101	On global stability of the scalar Chaboche models. Nonlinear Analysis: Real World Applications, 2005, 6, 67-82.	0.9	5
102	On the Number of Unbounded Solution Branches in a Neighborhood of an Asymptotic Bifurcation Point. Functional Analysis and Its Applications, 2005, 39, 194-206.	0.1	2
103	Guaranteed Convergence Rate Estimates for a Class of Iterative Procedures: Their Comparison. Automation and Remote Control, 2004, 65, 1635-1640.	0.4	1
104	On Bifurcation of Large-amplitude Stable Cycles for Equations with Hysteresis. Automation and Remote Control, 2004, 65, 1915-1937.	0.4	1
105	Remark on the Hopf Bifurcation Theorem. Mathematische Nachrichten, 2004, 272, 95-103.	0.4	1
106	On Natural Continua of Periodic Solutions of the Systems with Hysteresis. Automation and Remote Control, 2003, 64, 420-438.	0.4	3
107	Continua of Cycles of Higher-Order Equations. Differential Equations, 2003, 39, 1690-1702.	0.1	4
108	On a Nonlocal Condition for Existence of Cycles of Hysteresis Systems. Automation and Remote Control, 2003, 64, 231-251.	0.4	3

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109	Hopf bifurcations in resonance 2:1. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 2003, 52, 943-960.	0.6	2
110	Delayed Loss of Stability in Systems with Degenerate Linear Parts. <i>Zeitschrift Fur Analysis Und Ihre Anwendung</i> , 2003, 22, 433-453.	0.8	7
111	Small Periodic Solutions Generated by Sublinear Terms. <i>Journal of Differential Equations</i> , 2002, 179, 97-132.	1.1	5
112	On a bifurcation governed by hysteresis nonlinearity. <i>Nonlinear Differential Equations and Applications</i> , 2002, 9, 93-115.	0.4	16
113	Title is missing!. <i>Mathematische Nachrichten</i> , 2002, 233-234, 171-195.	0.4	2
114	On Resonant Differential Equations with Unbounded Non-Linearities. <i>Zeitschrift Fur Analysis Und Ihre Anwendung</i> , 2002, 21, 639-668.	0.8	4
115	On the Hopf Bifurcation in Control Systems with a Bounded Nonlinearity Asymptotically Homogeneous at Infinity. <i>Journal of Differential Equations</i> , 2001, 175, 1-26.	1.1	17
116	Method of Potential Bounds in Periodic Problems for Control Systems. <i>Mathematische Nachrichten</i> , 2001, 225, 93-121.	0.4	0
117	Stability of large cycles in a nonsmooth problem with Hopf bifurcation at infinity. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 2000, 42, 1017-1031.	0.6	13
118	Asymptotic Stability of Large-amplitude Oscillations in Systems with Hysteresis. <i>Nonlinear Differential Equations and Applications</i> , 1999, 6, 267-288.	0.4	7
119	Potential bounds in problems on quasilinear elliptic equations. <i>Mathematische Nachrichten</i> , 1999, 207, 133-155.	0.4	1
120	On uniqueness of an initial-value problem for ODE with hysteresis. <i>Nonlinear Differential Equations and Applications</i> , 1997, 4, 391-399.	0.4	5
121	Potential Bounds in Nonpotential Two-Point Boundary - Value Problems. <i>Mathematische Nachrichten</i> , 1997, 188, 203-218.	0.4	4
122	Multivalent guiding functions in forced oscillation problems. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 1996, 26, 631-639.	0.6	12
123	On Canonical States of Continual Systems of Relays Plenary lecture held at the Annual GAMM Conference, Braunschweig, April 4-9, 1994, by M. Krasnosel'Skii. <i>MSC (1991): 78A25, 34C15, 73R05, 93A25. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 1995, 75, 515-522.	0.9	2
124	On the existence of a fixed point of the operator acting in the space of continuous functions. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 1993, 20, 1257-1259.	0.6	1
125	Delay differential equations for passive mode locking. , 0 , , .		0