Viktor Avrutin

List of Publications by Year
in descending order

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75	1,103	394390	454934
papers	citations	19 h-index	30 g-index

76	76	76	284
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Border collision bifurcation of a resonant closed invariant curve. Chaos, 2022, 32, 043101.	2.5	1
2	Noise-induced and border-collision-induced bubbling. Physica D: Nonlinear Phenomena, 2022, 435, 133277.	2.8	0
3	Transformations of Closed Invariant Curves and Closed-Invariant-Curve-Like Chaotic Attractors in Piecewise Smooth Systems. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2021, 31, 2130009.	1.7	2
4	A geometric approach to bubbling. Physica D: Nonlinear Phenomena, 2021, 417, 132808.	2.8	2
5	Dynamics of Systems with a Discontinuous Hysteresis Operator and Interval Translation Maps. Axioms, 2021, 10, 80.	1.9	1
6	Complex dynamics of a vibration machine caused by a relay feedback control. Physica D: Nonlinear Phenomena, 2021, 420, 132870.	2.8	3
7	Chronic hepatitis B in pregnant women: Current trends and approaches. World Journal of Gastroenterology, 2021, 27, 3279-3289.	3.3	10
8	Bifurcations of hidden orbits in discontinuous maps. Nonlinearity, 2021, 34, 6140-6172.	1.4	4
9	Border collision bifurcations of chaotic attractors in one-dimensional maps with multiple discontinuities. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2021, 477, 20210432.	2.1	3
10	Doubling of a closed invariant curve in an impulsive Goodwinâ€™s oscillator with delay. Chaos, Solitons and Fractals, 2021, 153, 111571.	5.1	5
11	Center Bifurcation in the Lozi Map. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2021, 31, .	1.7	5
12	Bistability in a One-Dimensional Model of a Two-Predators-One-Prey Population Dynamics System. Lobachevskii Journal of Mathematics, 2021, 42, 3486-3496.	0.9	0
13	Non-observable chaos in piecewise smooth systems. Nonlinear Dynamics, 2020, 99, 2031-2048.	5.2	6
14	Non-visible transformations of chaotic attractors due to their ultra-low density in ACâ€“DC power factor correction converters. Nonlinear Dynamics, 2020, 102, 2905-2924.	5.2	3
15	Nordmark map and the problem of large-amplitude chaos in impact oscillators. Physical Review E, 2020, 102, 022211.	2.1	11
16	Piecewise-Linear Map for Studying Border Collision Phenomena in DC/AC Converters. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2020, 30, 2030015.	1.7	8
17	Nested Closed Invariant Curves in Piecewise Smooth Maps. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2019, 29, 1930017.	1.7	6
18	Nonlinear dynamics and entrainment in a continuously forced pulse-modulated model of testosterone regulation. Nonlinear Dynamics, 2018, 94, 1165-1181.	5.2	5

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19	Persistence border collisions in a vibrating system excited by an unbalanced motor with a relay control. AIP Conference Proceedings, 2018, , .	0.4	2
20	REAL-TIME ELASTOGRAPHY AND ITS CLINICAL APPLICATION COMPARED WITH OTHER METHODS FOR EVALUATION OF THE LIVER FIBROSIS DEGREE IN PATIENTS WITH CHRONIC HEPATITIS C. Jurnal Infektologii, 2018, 10, 84-90.	0.3	0
21	Cascades of alternating pitchfork and flip bifurcations in H-bridge inverters. Physica D: Nonlinear Phenomena, 2017, 345, 27-39.	2.8	11
22	Bubbling in a power electronic inverter: Onset, development and detection. Chaos, Solitons and Fractals, 2017, 104, 135-152.	5.1	8
23	Bifurcation Structures in a Bimodal Piecewise Linear Map. Frontiers in Applied Mathematics and Statistics, 2017, 3, .	1.3	0
24	Disrupted bandcount doubling in an AC-DC boost PFC circuit modeled by a time varying map. Journal of Physics: Conference Series, 2016, 692, 012003.	0.4	0
25	Dangerous Bifurcations Revisited. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2016, 26, 1630040.	1.7	8
26	Nonsmooth one-dimensional maps: some basic concepts and definitions. Journal of Difference Equations and Applications, 2016, 22, 1816-1870.	1.1	27
27	Bifurcation structure in the skew tent map and its application as a border collision normal form. Journal of Difference Equations and Applications, 2016, 22, 1040-1087.	1.1	29
28	Border collisions inside the stability domain of a fixed point. Physica D: Nonlinear Phenomena, 2016, 321-322, 1-15.	2.8	13
29	Dynamics in Braess Paradox with Nonimpulsive Commuters. Discrete Dynamics in Nature and Society, 2015, 2015, 1-12.	0.9	1
30	Period adding structure in a 2D discontinuous model of economic growth. Applied Mathematics and Computation, 2015, 253, 262-273.	2.2	3
31	Symmetry breaking in a bull and bear financial market model. Chaos, Solitons and Fractals, 2015, 79, 57-72.	5.1	11
32	Dynamics of a 2D Piecewise Linear Braess Paradox Model: Effect of the Third Partition. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2015, 25, 1530031.	1.7	2
33	Bifurcation Structures in a Bimodal Piecewise Linear Map: Chaotic Dynamics. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2015, 25, 1530006.	1.7	18
34	Onset of chaos in a single-phase power electronic inverter. Chaos, 2015, 25, 043114.	2.5	29
35	Bandcount adding structure and collapse of chaotic attractors in a piecewise linear bimodal map. Physica D: Nonlinear Phenomena, 2015, 309, 37-56.	2.8	2
36	Calculation of homoclinic and heteroclinic orbits in 1D maps. Communications in Nonlinear Science and Numerical Simulation, 2015, 22, 1201-1214.	3.3	10

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37	The Role of Constraints in a Segregation Model: The Asymmetric Case. Discrete Dynamics in Nature and Society, 2014, 2014, 1-17.	0.9	9
38	Bifurcation Structure in a Bimodal Piecewise Linear Business Cycle Model. Abstract and Applied Analysis, 2014, 2014, 1-12.	0.7	3
39	Codimension-2 Border Collision, Bifurcations in One-Dimensional, Discontinuous Piecewise Smooth Maps. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2014, 24, 1450024.	1.7	33
40	Cyclicity of chaotic attractors in one-dimensional discontinuous maps. Mathematics and Computers in Simulation, 2014, 95, 126-136.	4.4	10
41	The role of constraints in a segregation model: The symmetric case. Chaos, Solitons and Fractals, 2014, 66, 103-119.	5.1	17
42	Bifurcations of Chaotic Attractors in One-Dimensional Piecewise Smooth Maps. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2014, 24, 1440012.	1.7	25
43	Bandcount incrementing scenario revisited and floating regions within robust chaos. Mathematics and Computers in Simulation, 2014, 95, 23-38.	4.4	3
44	A Gallery of Bifurcation Scenarios in Piecewise Smooth 1D Maps. , 2013, , 369-395.		8
45	BIFURCATION STRUCTURES IN A BIMODAL PIECEWISE LINEAR MAP: REGULAR DYNAMICS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2013, 23, 1330040.	1.7	26
46	PERIOD ADDING IN PIECEWISE LINEAR MAPS WITH TWO DISCONTINUITIES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250068.	1.7	23
47	Organizing centers in parameter space of discontinuous 1D maps. The case of increasing/decreasing branches. ESAIM: Proceedings and Surveys, 2012, 36, 106-120.	0.4	5
48	Breaking the continuity of a piecewise linear map. ESAIM: Proceedings and Surveys, 2012, 36, 73-105.	0.4	4
49	Unstable Orbits and Milnor Attractors in the Discontinuous Flat Top Tent Map. ESAIM: Proceedings and Surveys, 2012, 36, 126-158.	0.4	2
50	The discontinuous flat top tent map and the nested period incrementing bifurcation structure. Chaos, Solitons and Fractals, 2012, 45, 465-482.	5.1	16
51	Occurrence of multiple attractor bifurcations inÂtheÂtwo-dimensional piecewise linear normal form map. Nonlinear Dynamics, 2012, 67, 293-307.	5.2	18
52	Virtual orbits and two-parameter bifurcation analysis inÂaÂZAD-controlled buck converter. Nonlinear Dynamics, 2011, 63, 19-33.	5.2	9
53	Critical homoclinic orbits lead to snap-back repellers. Chaos, Solitons and Fractals, 2011, 44, 433-449.	5.1	39
54	On a bifurcation structure mimicking period adding. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2011, 467, 1503-1518.	2.1	8

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55	Sufficient conditions for a period incrementing big bang bifurcation in one-dimensional maps. Nonlinearity, 2011, 24, 2575-2598.	1.4	25
56	Coexistence of the Bandcount-Adding and Bandcount-Increment Scenarios. Discrete Dynamics in Nature and Society, 2011, 2011, 1-30.	0.9	7
57	Self-similarity of the bandcount adding structures: Calculation by map replacement. Regular and Chaotic Dynamics, 2010, 15, 685-703.	0.8	7
58	On a special type of border-collision bifurcations occurring at infinity. Physica D: Nonlinear Phenomena, 2010, 239, 1083-1094.	2.8	15
59	Influence of a square-root singularity on the behaviour of piecewise smooth maps. Nonlinearity, 2010, 23, 445-463.	1.4	22
60	CALCULATION OF BIFURCATION CURVES BY MAP REPLACEMENT. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2010, 20, 3105-3135.	1.7	47
61	BORDER-COLLISION BIFURCATIONS IN 1D PIECEWISE-LINEAR MAPS AND LEONOV'S APPROACH. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2010, 20, 3085-3104.	1.7	61
62	The bandcount increment scenario. III. Deformed structures. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2009, 465, 41-57.	2.1	15
63	On the fully developed bandcount adding scenario. Nonlinearity, 2008, 21, 1077-1103.	1.4	46
64	The bandcount increment scenario. II. Interior structures. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 2247-2263.	2.1	18
65	The bandcount increment scenario. I. Basic structures. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 1867-1883.	2.1	22
66	Codimension-three bifurcations: Explanation of the complex one-, two-, and three-dimensional bifurcation structures in nonsmooth maps. Physical Review E, 2007, 75, 066205.	2.1	34
67	On detection of multi-band chaotic attractors. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2007, 463, 1339-1358.	2.1	16
68	A Unified Architecture for the Control Software of a Robot Swarm: Design and Investigation Results. , 2006, , 41-48.		0
69	On multi-parametric bifurcations in a scalar piecewise-linear map. Nonlinearity, 2006, 19, 531-552.	1.4	81
70	Multi-parametric bifurcations in a piecewiseâ€“linear discontinuous map. Nonlinearity, 2006, 19, 1875-1906.	1.4	77
71	INVESTIGATION OF DYNAMICAL SYSTEMS USING SYMBOLIC IMAGES: EFFICIENT IMPLEMENTATION AND APPLICATIONS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2006, 16, 3451-3496.	1.7	7
72	PERIOD-DOUBLING SCENARIO WITHOUT FLIP BIFURCATIONS IN A ONE-DIMENSIONAL MAP. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2005, 15, 1267-1284.	1.7	15

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73	Border-collision period-doubling scenario. Physical Review E, 2004, 70, 026222.	2.1	21
74	On the scaling properties of the period-increment scenario in dynamical systems. Chaos, Solitons and Fractals, 2000, 11, 1949-1955.	5.1	12
75	Modeling and analysis of a simple manufacturing-oriented multi-agent system. Discrete Dynamics in Nature and Society, 2000, 5, 35-45.	0.9	1