Grigory Osipov

List of Publications by Year
in descending order

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104 papers	5,494 citations	201674 27 h-index	79698 73 g-index
105 all docs	105 docs citations	105 times ranked	2778 citing authors

#	Article	IF	Citations
1	The synchronization of chaotic systems. Physics Reports, 2002, 366, 1-101.	25.6	2,314
2	Phase synchronization of chaotic oscillators by external driving. Physica D: Nonlinear Phenomena, 1997, 104, 219-238.	2.8	497
3	Synchronization in Oscillatory Networks. Springer Series in Synergetics, 2007, , .	0.4	321
4	Phase synchronization effects in a lattice of nonidentical RÃ¶ssler oscillators. Physical Review E, 1997, 55, 2353-2361.	2.1	239
5	Attractor-Repeller Collision and Eyelet Intermittency at the Transition to Phase Synchronization. Physical Review Letters, 1997, 79, 47-50.	7.8	209
6	Three Types of Transitions to Phase Synchronization in Coupled Chaotic Oscillators. Physical Review Letters, 2003, 91, 024101.	7.8	146
7	Phase Synchronization in Ensembles of Bursting Oscillators. Physical Review Letters, 2004, 93, 134101.	7.8	138
8	Phase synchronization of chaotic oscillations in terms of periodic orbits. Chaos, 1997, 7, 680-687.	2.5	119
9	Cluster synchronization in oscillatory networks. Chaos, 2008, 18, 037106.	2.5	98
10	Introduction to Focus Issue: Synchronization in Complex Networks. Chaos, 2008, 18, 037101.	2.5	68
11	Coherence resonance in excitable and oscillatory systems: The essential role of slow and fast dynamics. Physical Review E, 1999, 60, 6407-6410.	2.1	67
12	Suppressing arrhythmias in cardiac models using overdrive pacing and calcium channel blockers. Chaos, 2002, 12, 931-940.	2.5	66
13	Locking-Based Frequency Measurement and Synchronization of Chaotic Oscillators with Complex Dynamics. Physical Review Letters, 2002, 89, 264102.	7.8	62
14	Synchronized clusters and multistability in arrays of oscillators with different natural frequencies. Physical Review E, 1998, 58, 7198-7207.	2.1	50
15	Cluster synchronization and spatio-temporal dynamics in networks of oscillatory and excitable Luo-Rudy cells. Chaos, 2007, 17, 015111.	2.5	45
16	Synchronization phenomena in mixed media of passive, excitable, and oscillatory cells. Chaos, 2008, 18, 037129.	2.5	42
17	Synchronization Analysis of Coupled Noncoherent Oscillators. Nonlinear Dynamics, 2006, 44, 135-149.	5.2	41
18	Synchronization of two non-scalar-coupled limit-cycle oscillators. Physica D: Nonlinear Phenomena, 2004, 189, 8-30.	2.8	37

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19	Controlled movement and suppression of spiral waves in excitable media. Physical Review E, 1998, 58, 6955-6958.	2.1	34
20	Using weak impulses to suppress traveling waves in excitable media. Physical Review E, 1999, 60, 54-57.	2.1	34
21	Phase Synchronization of Chaotic Rotators. Physical Review Letters, 2002, 88, 054102.	7.8	33
22	Network Mechanism for Burst Generation. Physical Review Letters, 2007, 98, 108101.	7.8	32
23	Spatiotemporal control of heart rate in a rabbit heart. Journal of Electrocardiology, 2011, 44, 626-634.	0.9	32
24	LUDB: A New Open-Access Validation Tool for Electrocardiogram Delineation Algorithms. IEEE Access, 2020, 8, 186181-186190.	4.2	32
25	Coexisting synchronous and asynchronous states in locally coupled array of oscillators by partial self-feedback control. Chaos, 2017, 27, 073108.	2.5	28
26	Automatic control of phase synchronization in coupled complex oscillators. Physica D: Nonlinear Phenomena, 2005, 200, 81-104.	2.8	27
27	Chimera patterns in the Kuramotoâ€“Battogtokh model. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 08LT01.	2.1	27
28	Simple and complex chimera states in a nonlinearly coupled oscillatory medium. Chaos, 2018, 28, 045101.	2.5	27
29	Suppressing chaos in the duffing oscillator by impulsive actions. Chaos, Solitons and Fractals, 1998, 9, 307-321.	5.1	26
30	Impulse control of chaos in continuous systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 247, 119-128.	2.1	24
31	Deep Learning for ECG Segmentation. Studies in Computational Intelligence, 2020, , 246-254.	0.9	24
32	Regular and chaotic phase synchronization of coupled circle maps. Physical Review E, 2001, 65, 016216.	2.1	22
33	Sequentially activated groups in neural networks. Europhysics Letters, 2009, 86, 60006.	2.0	22
34	Numerical studies of slow rhythms emergence in neural microcircuits: Bifurcations and stability. Chaos, 2009, 19, 015107.	2.5	21
35	A motion control for a spherical robot with pendulum drive. Journal of Computer and Systems Sciences International, 2013, 52, 650-663.	0.6	20
36	Patterns in networks of oscillators formed via synchronization and oscillator death. Mathematics and Computers in Simulation, 2002, 58, 443-467.	4.4	18

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37	Breathing chimera in a system of phase oscillators. JETP Letters, 2017, 106, 393-399.	1.4	18
38	High Performance Computing in Biomedical Applications. Procedia Computer Science, 2013, 18, 10-19.	2.0	17
39	MULTISCROLL IN COUPLED DOUBLE SCROLL TYPE OSCILLATORS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 2965-2980.	1.7	16
40	Synchronized chaotic intermittent and spiking behavior in coupled map chains. Physical Review E, 2005, 71, 056209.	2.1	15
41	Synchronization in growing heterogeneous media. Europhysics Letters, 2009, 86, 18001.	2.0	15
42	ECG Segmentation by Neural Networks: Errors and Correction. , 2019, , .		15
43	Phase Synchronization of Chaotic Intermittent Oscillations. Physical Review Letters, 2004, 92, 134101.	7.8	14
44	Variety of synchronous regimes in neuronal ensembles. Chaos, 2008, 18, 037121.	2.5	14
45	Fibroblasts alter spiral wave stability. Chaos, 2010, 20, 045103.	2.5	14
46	Marginal chimera state at cross-frequency locking of pulse-coupled neural networks. Physical Review E, 2016, 93, 032202.	2.1	14
47	Mixed-mode synchronization between two inhibitory neurons with post-inhibitory rebound. Communications in Nonlinear Science and Numerical Simulation, 2016, 36, 175-191.	3.3	14
48	Adaptive functional systems: Learning with chaos. Chaos, 2010, 20, 045119.	2.5	13
49	Heteroclinic contours in oscillatory ensembles. Physical Review E, 2013, 87, 022909.	2.1	13
50	The dynamics of ensemble of neuron-like elements with excitatory couplings. Communications in Nonlinear Science and Numerical Simulation, 2019, 71, 38-49.	3.3	13
51	Synchronous regimes in ensembles of coupled Bonhoefferâ€“van der Pol oscillators. Physical Review E, 2009, 79, 046209.	2.1	11
52	Dynamics of the finite-dimensional Kuramoto model: Global and cluster synchronization. Regular and Chaotic Dynamics, 2015, 20, 37-48.	0.8	10
53	Analytical approach to synchronous states of globally coupled noisy rotators. New Journal of Physics, 2020, 22, 023036.	2.9	10
54	Metastable states and transient activity in ensembles of excitatory and inhibitory elements. Europhysics Letters, 2010, 91, 20006.	2.0	9

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55	Bistability of rotational modes in a system of coupled pendulums. Regular and Chaotic Dynamics, 2016, 21, 849-861.	0.8	9
56	Coherent structures in coupled chains of self-excited oscillators. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 201, 205-212.	2.1	8
57	Oscillatory and rotatory synchronization of chaotic autonomous phase systems. Physical Review E, 2003, 67, 066216.	2.1	8
58	Influence of passive elements on the dynamics of oscillatory ensembles of cardiac cells. Physical Review E, 2009, 79, 046219.	2.1	8
59	Distant synchronization through a passive medium. Physical Review E, 2010, 82, 026208.	2.1	7
60	Sequential activity and multistability in an ensemble of coupled Van der Pol oscillators. European Physical Journal: Special Topics, 2013, 222, 2417-2428.	2.6	7
61	Sequential switching activity in ensembles of inhibitory coupled oscillators. Europhysics Letters, 2013, 101, 20009.	2.0	7
62	Twisted States in a System of Nonlinearly Coupled Phase Oscillators. Regular and Chaotic Dynamics, 2019, 24, 717-724.	0.8	7
63	Locking and regularization of chimeras by periodic forcing. Physical Review E, 2020, 102, 042218.	2.1	7
64	Partial synchronization in the second-order Kuramoto model: An auxiliary system method. Chaos, 2021, 31, 113113.	2.5	7
65	Disorder fosters chimera in an array of motile particles. Physical Review E, 2021, 104, 034205.	2.1	6
66	Stability of rotatory solitary states in Kuramoto networks with inertia. Physical Review E, 2022, 105, 024203.	2.1	6
67	Solitary synchronization waves in distributed oscillator populations. Physical Review E, 2018, 98, .	2.1	5
68	Kuramoto Phase Model with Inertia: Bifurcations Leading to the Loss of Synchrony and to the Emergence of Chaos. Modelirovanie I Analiz Informacionnyh Sistem, 2015, 22, 595.	0.3	5
69	Map-based model of the cardiac action potential. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 2894-2902.	2.1	4
70	Variety of rotation modes in a small chain of coupled pendulums. Chaos, 2019, 29, 033109.	2.5	4
71	Spatiotemporal Regimes in the Kuramotoâ€“Battogtokh System of Nonidentical Oscillators. Journal of Experimental and Theoretical Physics, 2021, 132, 127-147.	0.9	4
72	Synchronization structures in the chain of rotating pendulums. Nonlinear Dynamics, 2021, 104, 2117-2125.	5.2	4

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73	Appearance of chaos and hyperchaos in evolving pendulum network. Chaos, 2021, 31, 063106.	2.5	4
74	Dynamics in a phase model of half-center oscillator: Two neurons with excitatory coupling. Communications in Nonlinear Science and Numerical Simulation, 2022, 104, 106045.	3.3	4
75	Coherence properties of cycling chaos. Communications in Nonlinear Science and Numerical Simulation, 2014, 19, 2734-2739.	3.3	3
76	Multistability of synchronous regimes in rotator ensembles. Chaos, 2015, 25, 123121.	2.5	3
77	Localization attractors in active quasiperiodic arrays. JETP Letters, 2015, 102, 603-609.	1.4	3
78	Heteroclinic and Homoclinic Structures in the System of Four Identical Globally Coupled Phase Oscillators with Nonpairwise Interactions. Regular and Chaotic Dynamics, 2018, 23, 974-982.	0.8	3
79	Describing dynamics of driven multistable oscillators with phase transfer curves. Chaos, 2018, 28, 106323.	2.5	3
80	Phase Control for the Dynamics of Connected Rotators. Automation and Remote Control, 2020, 81, 1499-1506.	0.8	3
81	Finite-density-induced motility and turbulence of chimera solitons. New Journal of Physics, 2022, 24, 043042.	2.9	3
82	Influence of sampling interval on the effect of false coupling between oscillators with different natural oscillation parameters. Technical Physics Letters, 2015, 41, 557-560.	0.7	2
83	Synchronization of elements with different dimensions of their ensembles in a complex network. Technical Physics Letters, 2015, 41, 69-71.	0.7	2
84	Influence of nonlinear amplitude dynamics on estimated delay time of coupling between self-oscillatory systems. Technical Physics Letters, 2016, 42, 287-290.	0.7	2
85	Ventricular fibrillation induced by 2-aminoethoxydiphenyl borate under conditions of hypoxia/reoxygenation. Minerva Cardioangiologica, 2020, 68, 619-628.	1.2	2
86	Synchronization Regimes in an Ensemble of Phase Oscillators Coupled Through a Diffusion Field. Radiophysics and Quantum Electronics, 2022, 64, 709-725.	0.5	2
87	Control of synchronous dynamics of chaotic bursts in ensembles of neuron-like elements. Radiophysics and Quantum Electronics, 2005, 48, 934-939.	0.5	1
88	Spectral power density of current oscillations in a semiconductor superlattice in the presence of a tilted magnetic field at various temperatures. Technical Physics Letters, 2015, 41, 98-101.	0.7	1
89	Application of continuous wavelet transform to the analysis of structural variations in complex networks. Technical Physics, 2015, 60, 785-788.	0.7	1
90	Regular and Chaotic Transition to Synchrony in a Star Configuration of Phase Oscillators. Advances in Dynamics, Patterns, Cognition, 2017, , 99-113.	0.3	1

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91	Synchronization Phenomena in Networks of Oscillatory and Excitable Luo-Rudy Cells. Understanding Complex Systems, 2009, , 107-126.	0.6	1
92	Announcement: Focus issue on â€œSynchronization in complex networksâ€• Chaos, 2007, 17, 030201.	2.5	0
93	Feedback Control Principles for Phase Synchronization. , 0, , 379-403.		0
94	Interaction-based transition from passivity to excitability. Physical Review E, 2014, 90, 032916.	2.1	0
95	On constructing simple examples of three-dimensional flows with multiple heteroclinic cycles. Regular and Chaotic Dynamics, 2015, 20, 679-690.	0.8	0
96	Sequential dynamics in the motif of excitatory coupled elements. Regular and Chaotic Dynamics, 2015, 20, 701-715.	0.8	0
97	Studying spatially distributed systems near the boundary of phase chaotic synchronization on various time scales of observation. Technical Physics Letters, 2015, 41, 160-163.	0.7	0
98	Transient and periodic spatiotemporal structures in a reaction-diffusion-mechanics system. Chaos, 2016, 26, 013101.	2.5	0
99	Excitation of spatiotemporal structures in elastic electroactive contractile fibers. Doklady Mathematics, 2016, 93, 108-111.	0.6	0
100	Analysis of Synchronous Dynamics of the Coupled Virtual Cathode Oscillators by Calculating the Spectrum of Lyapunov Exponents. Radiophysics and Quantum Electronics, 2016, 58, 793-797.	0.5	0
101	Controlling the motion of a group of mobile agents. Technical Physics Letters, 2016, 42, 298-301.	0.7	0
102	Collective dynamics of rotators coupled by a common pulsed field. Technical Physics Letters, 2017, 43, 9-11.	0.7	0
103	Chimera Patterns in One-Dimensional Oscillatory Medium. , 2018, , 159-180.		0
104	Problems of representation of electrocardiograms in convolutional neural networks. , 2020, , .		0