

# Vladimir A Maksimenko

## List of Publications by Year in descending order

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Version: 2024-02-01

128  
papers

2,178  
citations

185998

28  
h-index

243296

44  
g-index

135  
all docs

135  
docs citations

135  
times ranked

942  
citing authors

#	ARTICLE	IF	CITATIONS
1	Analysis and Real-Time Classification of Motor-Related EEG and MEG Patterns. Springer Series in Synergetics, 2021, , 351-382.	0.2	0
2	Wavelet Approach to the Study of Rhythmic Neuronal Activity. Springer Series in Synergetics, 2021, , 211-242.	0.2	0
3	Noise amplification precedes extreme epileptic events on human EEG. Physical Review E, 2021, 103, 022310.	0.8	20
4	Effect of repetition on the behavioral and neuronal responses to ambiguous Necker cube images. Scientific Reports, 2021, 11, 3454.	1.6	27
5	Sensor-Level Wavelet Analysis Reveals EEG Biomarkers of Perceptual Decision-Making. Sensors, 2021, 21, 2461.	2.1	6
6	Synchronization of interacted spiking neuronal networks with inhibitory coupling. Chaos, Solitons and Fractals, 2021, 146, 110812.	2.5	28
7	The oxygen saturation in the primary motor cortex during a single hand movement: functional near-infrared spectroscopy (fNIRS) study. European Physical Journal Plus, 2021, 136, 1.	1.2	26
8	Physical principles of brain-computer interfaces and their applications for rehabilitation, robotics and control of human brain states. Physics Reports, 2021, 918, 1-133.	10.3	88
9	Monitoring the Cortical Activity of Children and Adults during Cognitive Task Completion. Sensors, 2021, 21, 6021.	2.1	11
10	Machine learning evaluates changes in functional connectivity under a prolonged cognitive load. Chaos, 2021, 31, 101106.	1.0	10
11	Studying the interaction between top-down and bottom-up processes during ambiguous perception. , 2021, , .		0
12	Synchronization in four interacting networks of Hodgkin-Huxley neurons. , 2021, , .		0
13	Brain activity during complex cognitive task completion: comparative study of children and adults. , 2021, , .		0
14	Using Convolutional Neural Network to Classify 2D EEG Scalp Topograms during Visual Task. , 2021, , .		0
15	Seizure prediction in genetic rat models of absence epilepsy: improved performance through multiple-site cortico-thalamic recordings combined with machine learning. ENeuro, 2021, , ENEURO.0160-21.2021.	0.9	0
16	Combining Statistical Analysis and Machine Learning for EEG Scalp Topograms Classification. Frontiers in Systems Neuroscience, 2021, 15, 716897.	1.2	11
17	Monitoring Brain State and Behavioral Performance during Repetitive Visual Stimulation. Applied Sciences (Switzerland), 2021, 11, 11544.	1.3	6
18	Route to Coherence in a Frequency-Heterogeneous Kuramoto Network. , 2020, , .		1

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19	The activity of the brain cortical network during solving tasks. , 2020, , .		0
20	Dissociating Cognitive Processes During Ambiguous Information Processing in Perceptual Decision-Making. <i>Frontiers in Behavioral Neuroscience</i> , 2020, 14, 95.	1.0	29
21	Chimera-like behavior in a heterogeneous Kuramoto model: The interplay between attractive and repulsive coupling. <i>Chaos</i> , 2020, 30, 081102.	1.0	29
22	Age-related slowing down in the motor initiation in elderly adults. <i>PLoS ONE</i> , 2020, 15, e0233942.	1.1	48
23	Revealing a multiplex brain network through the analysis of recurrences. <i>Chaos</i> , 2020, 30, 121108.	1.0	14
24	Estimating elementary cognitive functions based on EEG signals analysis. , 2020, , .		0
25	Development of the approach to collaborative BCI. , 2020, , .		0
26	Motor execution reduces EEG signals complexity: Recurrence quantification analysis study. <i>Chaos</i> , 2020, 30, 023111.	1.0	47
27	Functional Near-Infrared Spectroscopy for the Classification of Motor-Related Brain Activity on the Sensor-Level. <i>Sensors</i> , 2020, 20, 2362.	2.1	30
28	Brain-computer interface for the epileptic seizures prediction and prevention. , 2020, , .		5
29	Network Structure of Children's Brain During Schulte Table Task. , 2020, , .		0
30	Cognitive interaction via a brain-to-brain interface. , 2020, , .		0
31	EEG features during maintaining a human body balance.. , 2020, , .		0
32	Age-related slowing down in the motor initiation in elderly adults. , 2020, 15, e0233942.		0
33	Age-related slowing down in the motor initiation in elderly adults. , 2020, 15, e0233942.		0
34	Age-related slowing down in the motor initiation in elderly adults. , 2020, 15, e0233942.		0
35	Age-related slowing down in the motor initiation in elderly adults. , 2020, 15, e0233942.		0
36	Immediate effect of neurofeedback in passive BCI for alertness control. , 2019, , .		2

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37	Brain-to-brain interface increases efficiency of human-human interaction. , 2019, , .		2
38	Visual and kinesthetic modes affect motor imagery classification in untrained subjects. Scientific Reports, 2019, 9, 9838.	1.6	97
39	Machine learning approaches for classification of imaginary movement type by MEG data for neurorehabilitation. , 2019, , .		18
40	Phase-amplitude coupling between mu- and gamma-waves to carry motor commands. , 2019, , .		14
41	Spatio-temporal cortical activity during a visual task accomplishing. , 2019, , .		0
42	Features of brain activity in children during cognitive tasks of different types. , 2019, , .		0
43	Post-stroke rehabilitation with the help of brain-computer interface. , 2019, , .		0
44	Dynamics of functional connectivity in multilayer cortical brain network during sensory information processing. European Physical Journal: Special Topics, 2019, 228, 2381-2389.	1.2	31
45	Feed-forward artificial neural network provides data-driven inference of functional connectivity. Chaos, 2019, 29, 091101.	1.0	31
46	Percept-related EEG classification using machine learning approach and features of functional brain connectivity. Chaos, 2019, 29, 093110.	1.0	26
47	Neural Interactions in a Spatially-Distributed Cortical Network During Perceptual Decision-Making. Frontiers in Behavioral Neuroscience, 2019, 13, 220.	1.0	47
48	Statistical Properties and Predictability of Extreme Epileptic Events. Scientific Reports, 2019, 9, 7243.	1.6	75
49	Cognitive interaction during a collaborative attentional task. , 2019, , .		0
50	Coherent resonance in the distributed cortical network during sensory information processing. Scientific Reports, 2019, 9, 18325.	1.6	52
51	Approaches for the Improvement of Motor-Related Patterns Classification in EEG Signals. , 2019, , .		10
52	Nonlinear effect of biological feedback on brain attentional state. Nonlinear Dynamics, 2019, 95, 1923-1939.	2.7	31
53	Multiscale interaction promotes chimera states in complex networks. Communications in Nonlinear Science and Numerical Simulation, 2019, 71, 118-129.	1.7	33
54	From Novel Technology to Novel Applications: Comment on "An Integrated Brain-Machine Interface Platform With Thousands of Channels" by Elon Musk and Neuralink. Journal of Medical Internet Research, 2019, 21, e16356.	2.1	41

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55	Neuronal pathway and signal modulation for motor communication. <i>Cybernetics and Physics</i> , 2019, , 106-113.	0.2	5
56	A MEG Study of Different Motor Imagery Modes in Untrained Subjects for BCI Applications. , 2019, , .		5
57	The Approach to the Detection of the Movement Precursor by Electromyographic Signals. , 2019, , .		0
58	Use of artificial intelligence for study of the visual perception. , 2019, , .		1
59	EEG activity during balance platform test in humans. <i>Cybernetics and Physics</i> , 2019, , 132-136.	0.2	1
60	Artificial neural network detects human uncertainty. <i>Chaos</i> , 2018, 28, 033607.	1.0	63
61	Nonlinear analysis of brain activity, associated with motor action and motor imaginary in untrained subjects. <i>Nonlinear Dynamics</i> , 2018, 91, 2803-2817.	2.7	74
62	Control of Human Psychophysiological Condition by the Neurointerface With Biological Feedback. , 2018, , .		0
63	Influence of Stimulus Complexity on the Properties of Neural Activity During Perceptual Process. , 2018, , .		0
64	Betweenness centrality in multiplex brain network during mental task evaluation. <i>Physical Review E</i> , 2018, 98, .	0.8	58
65	Real-Time Big EEG Data Processing With CUDA Parallel Computing Technology. , 2018, , .		0
66	Increasing Human Performance by Sharing Cognitive Load Using Brain-to-Brain Interface. <i>Frontiers in Neuroscience</i> , 2018, 12, 949.	1.4	60
67	Extreme events in epileptic EEG of rodents after ischemic stroke. <i>European Physical Journal: Special Topics</i> , 2018, 227, 921-932.	1.2	30
68	Assortative mixing in spatially-extended networks. <i>Scientific Reports</i> , 2018, 8, 13825.	1.6	7
69	Human personality reflects spatio-temporal and time-frequency EEG structure. <i>PLoS ONE</i> , 2018, 13, e0197642.	1.1	38
70	Macroscopic chimeralike behavior in a multiplex network. <i>Physical Review E</i> , 2018, 98, 022320.	0.8	25
71	Multiscale neural connectivity during human sensory processing in the brain. <i>Physical Review E</i> , 2018, 97, 052405.	0.8	50
72	Artificial Neural Network Classification of Motor-Related EEG: An Increase in Classification Accuracy by Reducing Signal Complexity. <i>Complexity</i> , 2018, 2018, 1-10.	0.9	92

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73	Use of parallel computing for analyzing big data in EEG studies of ambiguous perception. , 2018, , .		2
74	Analysis of bistable perception based on MEG data. , 2018, , .		0
75	Detection of EEG-patterns associated with real and imaginary movements using detrended fluctuation analysis. , 2018, , .		0
76	Study of the interactions in neural ensemble of the brain using wavelet analysis. , 2018, , .		2
77	Brain-computer interface for alertness estimation and improving. , 2018, , .		0
78	Brain-computer interface on the basis of EEG system Encephalan. , 2018, , .		8
79	Multifractal analysis of real and imaginary movements: EEG study. , 2018, , .		1
80	Analysis of the features of untrained human movements based on the multichannel EEG for controlling anthropomorphic robotic arm. , 2018, , .		0
81	Excitation and suppression of chimeric states in the multilayer network of oscillators with nonlocal coupling. Bulletin of the Russian Academy of Sciences: Physics, 2017, 81, 110-113.	0.1	5
82	Numerical and analytical investigation of the chimera state excitation conditions in the Kuramoto-Sakaguchi oscillator network. Proceedings of SPIE, 2017, , .	0.8	2
83	The control of the frequency of the sub-terahertz source on the semiconductor superlattices for biophysical applications with use the change of the doping density. Proceedings of SPIE, 2017, , .	0.8	0
84	Numerical analysis of the chimera states in the multilayered network model. Proceedings of SPIE, 2017, , .	0.8	0
85	Model and software package for studying and optimizing generation characteristics of semiconductor superlattices. Mathematical Models and Computer Simulations, 2017, 9, 359-368.	0.1	1
86	Absence Seizure Control by a Brain Computer Interface. Scientific Reports, 2017, 7, 2487.	1.6	91
87	Interaction of chimera states in a multilayered network of nonlocally coupled oscillators. Technical Physics Letters, 2017, 43, 712-715.	0.2	12
88	Macroscopic and microscopic spectral properties of brain networks during local and global synchronization. Physical Review E, 2017, 96, 012316.	0.8	61
89	The evolution of spatiotemporal chaos in a discrete-continuous active medium. Technical Physics Letters, 2017, 43, 587-589.	0.2	2
90	Microwave Generation in Synchronized Semiconductor Superlattices. Physical Review Applied, 2017, 7, .	1.5	12

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91	Interplay between geo-population factors and hierarchy of cities in multilayer urban networks. Scientific Reports, 2017, 7, 17246.	1.6	14
92	Classifying the Perceptual Interpretations of a Bistable Image Using EEG and Artificial Neural Networks. Frontiers in Neuroscience, 2017, 11, 674.	1.4	72
93	Visual perception affected by motivation and alertness controlled by a noninvasive brain-computer interface. PLoS ONE, 2017, 12, e0188700.	1.1	59
94	Increase of the power and frequency in the semiconductor sandwich heterostructures. , 2016, , .		0
95	Controlling of the electric field profile in the miniband semiconductors in the presence of THz Bloch oscillations. , 2016, , .		1
96	Modulation and detection of the THz range signals using the highest harmonics of the fundamental frequency of the superlattice-based generator for biomedical applications. Proceedings of SPIE, 2016, , .	0.8	1
97	Analysis of the stability of states of semiconductor superlattice in the presence of tilted magnetic field. Technical Physics, 2016, 61, 317-323.	0.2	1
98	Excitation and suppression of chimera states by multiplexing. Physical Review E, 2016, 94, 052205.	0.8	119
99	Electric-field distribution in a quantum superlattice with an injecting contact: Exact solution. JETP Letters, 2016, 103, 465-470.	0.4	5
100	Multilayer structure formation via homophily and homeostasis. Proceedings of SPIE, 2016, , .	0.8	0
101	THz-range generation frequency growth in semiconductor superlattice coupled to external high-quality resonator. , 2016, , .		0
102	Emergence of a multilayer structure in adaptive networks of phase oscillators. Chaos, Solitons and Fractals, 2016, 84, 23-30.	2.5	32
103	Methods of automated absence seizure detection, interference by stimulation, and possibilities for prediction in genetic absence models. Journal of Neuroscience Methods, 2016, 260, 144-158.	1.3	63
104	Intermittency route to chaos and broadband high-frequency generation in semiconductor superlattice coupled to external resonator. Physical Review E, 2015, 92, 022911.	0.8	6
105	Sub-terahertz amplification in a semiconductor superlattice with moving charge domains. Applied Physics Letters, 2015, 106, 043503.	1.5	13
106	THz-generation in semiconductor superlattice in the external tilted magnetic field. , 2015, , .		1
107	Application of continuous wavelet transform to the analysis of structural variations in complex networks. Technical Physics, 2015, 60, 785-788.	0.2	1
108	Sub-THz/THz amplification in a semiconductor superlattice. , 2015, , .		0

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109	High-frequency impedance of semiconductor superlattice elements in external resonance system. Technical Physics Letters, 2015, 41, 1181-1184.	0.2	0
110	Synchronization of elements with different dimensions of their ensembles in a complex network. Technical Physics Letters, 2015, 41, 69-71.	0.2	2
111	Study of correlation between macroscopic and microscopic characteristics of adaptive networks with application to analysis of neural ensembles. , 2015, , .		0
112	Analysis of structural patterns in the brain with the complex network approach. Proceedings of SPIE, 2015, , .	0.8	2
113	The effect of collector doping on the high-frequency generation in strongly coupled semiconductor superlattice. Europhysics Letters, 2015, 109, 47007.	0.7	7
114	Method of the calculation of spectrum of Lyapunov exponents for the analysis of dynamics of beam-plasma systems. , 2014, , .		1
115	Transition to chaos and chaotic generation in a semiconductor superlattice coupled to an external resonator. Bulletin of the Russian Academy of Sciences: Physics, 2014, 78, 1277-1280.	0.1	0
116	Model for studying collective charge transport at the ohmic contacts of a tightly coupled semiconductor nanostructure. Bulletin of the Russian Academy of Sciences: Physics, 2014, 78, 1285-1289.	0.1	0
117	The effect of emitter and collector parameters on the collective electron transport properties in a semiconductor superlattice. , 2014, , .		0
118	Subterahertz Chaos Generation by Coupling a Superlattice to a Linear Resonator. Physical Review Letters, 2014, 112, 116603.	2.9	48
119	Analyzing the structure of a complex network on the basis of its macroscopic characteristics. Bulletin of the Russian Academy of Sciences: Physics, 2014, 78, 1281-1284.	0.1	2
120	Using the spectrum of Lyapunov exponents to analyze the dynamics of beam-plasma systems simulated by the large particle method. Bulletin of the Russian Academy of Sciences: Physics, 2014, 78, 156-159.	0.1	2
121	Transition to chaos in semiconductor superlattice coupled to external resonator. , 2014, , .		0
122	Transition to microwave generation in semiconductor superlattice. Physics of Wave Phenomena, 2013, 21, 48-51.	0.3	7
123	Lyapunov stability of charge transport in miniband semiconductor superlattices. Physical Review B, 2013, 88, .	1.1	25
124	Computation of the spectrum of spatial Lyapunov exponents for the spatially extended beam-plasma systems and electron-wave devices. Physics of Plasmas, 2012, 19, .	0.7	28
125	Appearance of generalized synchronization in mutually coupled beam-plasma systems. Technical Physics Letters, 2011, 37, 610-613.	0.2	6
126	Choosing the state of a spatially distributed system in calculating a spectrum of Lyapunov exponents. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 1585-1588.	0.1	0



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127	Spectrum analysis of Lyapunov exponents for models of electron systems. , 2010, , .		0
128	Onset of regime of generalized synchronization in mutually coupled beam-plasma systems. , 2010, , .		0