Vladimir A Maksimenko

List of Publications by Year
in descending order

Version: 2024-02-01

128	2,178	185998 28	243296 44
papers	citations	h-index	g-index

135	135	135	942
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Excitation and suppression of chimera states by multiplexing. Physical Review E, 2016, 94, 052205.	0.8	119
2	Visual and kinesthetic modes affect motor imagery classification in untrained subjects. Scientific Reports, 2019, 9, 9838.	1.6	97
3	Artificial Neural Network Classification of Motor-Related EEG: An Increase in Classification Accuracy by Reducing Signal Complexity. Complexity, 2018, 2018, 1-10.	0.9	92
4	Absence Seizure Control by a Brain Computer Interface. Scientific Reports, 2017, 7, 2487.	1.6	91
5	Physical principles of brainâ€“computer interfaces and their applications for rehabilitation, robotics and control of human brain states. Physics Reports, 2021, 918, 1-133.	10.3	88
6	Statistical Properties and Predictability of Extreme Epileptic Events. Scientific Reports, 2019, 9, 7243.	1.6	75
7	Nonlinear analysis of brain activity, associated with motor action and motor imaginary in untrained subjects. Nonlinear Dynamics, 2018, 91, 2803-2817.	2.7	74
8	Classifying the Perceptual Interpretations of a Bistable Image Using EEG and Artificial Neural Networks. Frontiers in Neuroscience, 2017, 11, 674.	1.4	72
9	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
10	Artificial neural network detects human uncertainty. Chaos, 2018, 28, 033607.	1.0	63
11	Macroscopic and microscopic spectral properties of brain networks during local and global synchronization. Physical Review E, 2017, 96, 012316.	0.8	61
12	Increasing Human Performance by Sharing Cognitive Load Using Brain-to-Brain Interface. Frontiers in Neuroscience, 2018, 12, 949.	1.4	60
13	Visual perception affected by motivation and alertness controlled by a noninvasive brain-computer interface. PLoS ONE, 2017, 12, e0188700.	1.1	59
14	Betweenness centrality in multiplex brain network during mental task evaluation. Physical Review E, 2018, 98, .	0.8	58
15	Coherent resonance in the distributed cortical network during sensory information processing. Scientific Reports, 2019, 9, 18325.	1.6	52
16	Multiscale neural connectivity during human sensory processing in the brain. Physical Review E, 2018, 97, 052405.	0.8	50
17	Subterahertz Chaos Generation by Coupling a Superlattice to a Linear Resonator. Physical Review Letters, 2014, 112, 116603.	2.9	48
18	Age-related slowing down in the motor initiation in elderly adults. PLoS ONE, 2020, 15, e0233942.	1.1	48

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19	Neural Interactions in a Spatially-Distributed Cortical Network During Perceptual Decision-Making. Frontiers in Behavioral Neuroscience, 2019, 13, 220.	1.0	47
20	Motor execution reduces EEG signals complexity: Recurrence quantification analysis study. Chaos, 2020, 30, 023111.	1.0	47
21	From Novel Technology to Novel Applications: Comment on â€œAn Integrated Brain-Machine Interface Platform With Thousands of Channelsâ€•by Elon Musk and Neuralink. Journal of Medical Internet Research, 2019, 21, e16356.	2.1	41
22	Human personality reflects spatio-temporal and time-frequency EEG structure. PLoS ONE, 2018, 13, e0197642.	1.1	38
23	Multiscale interaction promotes chimera states in complex networks. Communications in Nonlinear Science and Numerical Simulation, 2019, 71, 118-129.	1.7	33
24	Emergence of a multilayer structure in adaptive networks of phase oscillators. Chaos, Solitons and Fractals, 2016, 84, 23-30.	2.5	32
25	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
26	Feed-forward artificial neural network provides data-driven inference of functional connectivity. Chaos, 2019, 29, 091101.	1.0	31
27	Nonlinear effect of biological feedback on brain attentional state. Nonlinear Dynamics, 2019, 95, 1923-1939.	2.7	31
28	Extreme events in epileptic EEG of rodents after ischemic stroke. European Physical Journal: Special Topics, 2018, 227, 921-932.	1.2	30
29	Functional Near-Infrared Spectroscopy for the Classification of Motor-Related Brain Activity on the Sensor-Level. Sensors, 2020, 20, 2362.	2.1	30
30	Dissociating Cognitive Processes During Ambiguous Information Processing in Perceptual Decision-Making. Frontiers in Behavioral Neuroscience, 2020, 14, 95.	1.0	29
31	Chimera-like behavior in a heterogeneous Kuramoto model: The interplay between attractive and repulsive coupling. Chaos, 2020, 30, 081102.	1.0	29
32	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
33	Synchronization of interacted spiking neuronal networks with inhibitory coupling. Chaos, Solitons and Fractals, 2021, 146, 110812.	2.5	28
34	Effect of repetition on the behavioral and neuronal responses to ambiguous Necker cube images. Scientific Reports, 2021, 11, 3454.	1.6	27
35	Percept-related EEG classification using machine learning approach and features of functional brain connectivity. Chaos, 2019, 29, 093110.	1.0	26
36	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

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37	Lyapunov stability of charge transport in miniband semiconductor superlattices. Physical Review B, 2013, 88, .	1.1	25
38	Macroscopic chimeralike behavior in a multiplex network. Physical Review E, 2018, 98, 022320.	0.8	25
39	Noise amplification precedes extreme epileptic events on human EEG. Physical Review E, 2021, 103, 022310.	0.8	20
40	Machine learning approaches for classification of imaginary movement type by MEG data for neurorehabilitation. , 2019, , .		18
41	Interplay between geo-population factors and hierarchy of cities in multilayer urban networks. Scientific Reports, 2017, 7, 17246.	1.6	14
42	Phase-amplitude coupling between mu- and gamma-waves to carry motor commands. , 2019, , .		14
43	Revealing a multiplex brain network through the analysis of recurrences. Chaos, 2020, 30, 121108.	1.0	14
44	Sub-terahertz amplification in a semiconductor superlattice with moving charge domains. Applied Physics Letters, 2015, 106, 043503.	1.5	13
45	Interaction of chimera states in a multilayered network of nonlocally coupled oscillators. Technical Physics Letters, 2017, 43, 712-715.	0.2	12
46	Microwave Generation in Synchronized Semiconductor Superlattices. Physical Review Applied, 2017, 7, .	1.5	12
47	Monitoring the Cortical Activity of Children and Adults during Cognitive Task Completion. Sensors, 2021, 21, 6021.	2.1	11
48	Combining Statistical Analysis and Machine Learning for EEG Scalp Topograms Classification. Frontiers in Systems Neuroscience, 2021, 15, 716897.	1.2	11
49	Approaches for the Improvement of Motor-Related Patterns Classification in EEG Signals. , 2019, , .		10
50	Machine learning evaluates changes in functional connectivity under a prolonged cognitive load. Chaos, 2021, 31, 101106.	1.0	10
51	Brain-computer interface on the basis of EEG system Encephalan. , 2018, , .		8
52	Transition to microwave generation in semiconductor superlattice. Physics of Wave Phenomena, 2013, 21, 48-51.	0.3	7
53	The effect of collector doping on the high-frequency generation in strongly coupled semiconductor superlattice. Europhysics Letters, 2015, 109, 47007.	0.7	7
54	Assortative mixing in spatially-extended networks. Scientific Reports, 2018, 8, 13825.	1.6	7

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55	Appearance of generalized synchronization in mutually coupled beam-plasma systems. Technical Physics Letters, 2011, 37, 610-613.	0.2	6
56	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
57	Sensor-Level Wavelet Analysis Reveals EEG Biomarkers of Perceptual Decision-Making. Sensors, 2021, 21, 2461.	2.1	6
58	Monitoring Brain State and Behavioral Performance during Repetitive Visual Stimulation. Applied Sciences (Switzerland), 2021, 11, 11544.	1.3	6
59	Electric-field distribution in a quantum superlattice with an injecting contact: Exact solution. JETP Letters, 2016, 103, 465-470.	0.4	5
60	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
61	Brain-computer interface for the epileptic seizures prediction and prevention. , 2020, , .		5
62	Neuronal pathway and signal modulation for motor communication. Cybernetics and Physics, 2019, , 106-113.	0.2	5
63	A MEG Study of Different Motor Imagery Modes in Untrained Subjects for BCI Applications. , 2019, , .		5
64	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
65	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
66	Synchronization of elements with different dimensions of their ensembles in a complex network. Technical Physics Letters, 2015, 41, 69-71.	0.2	2
67	Analysis of structural patterns in the brain with the complex network approach. Proceedings of SPIE, 2015, , .	0.8	2
68	Numerical and analytical investigation of the chimera state excitation conditions in the Kuramoto-Sakaguchi oscillator network. Proceedings of SPIE, 2017, , .	0.8	2
69	The evolution of spatiotemporal chaos in a discrete-continuous active medium. Technical Physics Letters, 2017, 43, 587-589.	0.2	2
70	Immediate effect of neurofeedback in passive BCI for alertness control. , 2019, , .		2
71	Brain-to-brain interface increases efficiency of human-human interaction. , 2019, , .		2
72	Use of parallel computing for analyzing big data in EEG studies of ambiguous perception. , 2018, , .		2

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73	Study of the interactions in neural ensemble of the brain using wavelet analysis. , 2018, , .		2
74	Method of the calculation of spectrum of Lyapunov exponents for the analysis of dynamics of beam-plasma systems. , 2014, , .		1
75	THz-generation in semiconductor superlattice in the external tilted magnetic field. , 2015, , .		1
76	Application of continuous wavelet transform to the analysis of structural variations in complex networks. Technical Physics, 2015, 60, 785-788.	0.2	1
77	Controlling of the electric field profile in the miniband semiconductors in the presence of THz Bloch oscillations. , 2016, , .		1
78	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
79	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
80	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
81	Route to Coherence in a Frequency-Heterogeneous Kuramoto Network. , 2020, , .		1
82	Multifractal analysis of real and imaginary movements: EEG study. , 2018, , .		1
83	Use of artificial intelligence for study of the visual perception. , 2019, , .		1
84	EEG activity during balance platform test in humans. Cybernetics and Physics, 2019, , 132-136.	0.2	1
85	Spectrum analysis of Lyapunov exponents for models of electron systems. , 2010, , .		0
86	Onset of regime of generalized synchronization in mutually coupled beam-plasma systems. , 2010, , .		0
87	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
88	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
89	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
90	The effect of emitter and collector parameters on the collective electron transport properties in a semiconductor superlattice. , 2014, , .		0

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91	Transition to chaos in semiconductor superlattice coupled to external resonator. , 2014, , .		0
92	Sub-THz/THz amplification in a semiconductor superlattice. , 2015, , .		0
93	High-frequency impedance of semiconductor superlattice elements in external resonance system. Technical Physics Letters, 2015, 41, 1181-1184.	0.2	0
94	Study of correlation between macroscopic and microscopic characteristics of adaptive networks with application to analysis of neural ensembles. , 2015, , .		0
95	Increase of the power and frequency in the semiconductor sandwich heterostructures. , 2016, , .		0
96	Multilayer structure formation via homophily and homeostasis. Proceedings of SPIE, 2016, , .	0.8	0
97	THz-range generation frequency growth in semiconductor superlattice coupled to external high-quality resonator. , 2016, , .		0
98	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
99	Numerical analysis of the chimera states in the multilayered network model. Proceedings of SPIE, 2017, , .	0.8	0
100	Control of Human Psychophysiological Condition by the Neurointerface With Biological Feedback. , 2018, , .		0
101	Influence of Stimulus Complexity on the Properties of Neural Activity During Perceptual Process. , 2018, , .		0
102	Real-Time Big EEG Data Processing With CUDA Parallel Computing Technology. , 2018, , .		0
103	Spatio-temporal cortical activity during a visual task accomplishing. , 2019, , .		0
104	Features of brain activity in children during cognitive tasks of different types. , 2019, , .		0
105	Post-stroke rehabilitation with the help of brain-computer interface. , 2019, , .		0
106	Cognitive interaction during a collaborative attentional task. , 2019, , .		0
107	The activity of the brain cortical network during solving tasks. , 2020, , .		0
108	Estimating elementary cognitive functions based on EEG signals analysis. , 2020, , .		0

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109	Development of the approach to collaborative BCI. , 2020, , .		0
110	Analysis and Real-Time Classification of Motor-Related EEG and MEG Patterns. Springer Series in Synergetics, 2021, , 351-382.	0.2	0
111	Wavelet Approach to the Study of Rhythmic Neuronal Activity. Springer Series in Synergetics, 2021, , 211-242.	0.2	0
112	Analysis of bistable perception based on MEG data. , 2018, , .		0
113	Detection of EEG-patterns associated with real and imaginary movements using detrended fluctuation analysis. , 2018, , .		0
114	Brain-computer interface for alertness estimation and improving. , 2018, , .		0
115	Analysis of the features of untrained human movements based on the multichannel EEG for controlling anthropomorphic robotic arm. , 2018, , .		0
116	The Approach to the Detection of the Movement Precursor by Electromyographic Signals. , 2019, , .		0
117	Network Structure of Childrenâ€™s Brain During Schulte Table Task. , 2020, , .		0
118	Cognitive interaction via a brain-to-brain interface. , 2020, , .		0
119	EEG features during maintaining a human body balance.. , 2020, , .		0
120	Studying the interaction between top-down and bottom-up processes during ambiguous perception. , 2021, , .		0
121	Synchronization in four interacting networks of Hodgkin-Huxley neurons. , 2021, , .		0
122	Brain activity during complex cognitive task completion: comparative study of children and adults. , 2021, , .		0
123	Using Convolutional Neural Network to Classify 2D EEG Scalp Topograms during Visual Task. , 2021, , .		0
124	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
125	Age-related slowing down in the motor initiation in elderly adults. , 2020, 15, e0233942.		0
126	Age-related slowing down in the motor initiation in elderly adults. , 2020, 15, e0233942.		0

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127	Age-related slowing down in the motor initiation in elderly adults. , 2020, 15, e0233942.		0
128	Age-related slowing down in the motor initiation in elderly adults. , 2020, 15, e0233942.		0