Marko Gosak

List of Publications by Year
in descending order

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		279701	289141
67	1,890	23	40
papers	citations	h-index	g-index

71	71	71	1511
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Network science of biological systems at different scales: A review. Physics of Life Reviews, 2018, 24, 118-135.	1.5	305
2	Functional Connectivity in Islets of Langerhans from Mouse Pancreas Tissue Slices. PLoS Computational Biology, 2013, 9, e1002923.	1.5	152
3	Periodic calcium waves in coupled cells induced by internal noise. Chemical Physics Letters, 2007, 437, 143-147.	1.2	84
4	Pacemaker-driven stochastic resonance on diffusive and complex networks of bistable oscillators. New Journal of Physics, 2008, 10, 053008.	1.2	83
5	Progressive glucose stimulation of islet beta cells reveals a transition from segregated to integrated modular functional connectivity patterns. Scientific Reports, 2015, 5, 7845.	1.6	73
6	Socio-demographic and health factors drive the epidemic progression and should guide vaccination strategies for best COVID-19 containment. Results in Physics, 2021, 26, 104433.	2.0	61
7	Networks behind the morphology and structural design of living systems. Physics of Life Reviews, 2022, 41, 1-21.	1.5	57
8	Pacemaker-guided noise-induced spatial periodicity in excitable media. Physica D: Nonlinear Phenomena, 2009, 238, 506-515.	1.3	56
9	Spatial coherence resonance in excitable biochemical media induced by internal noise. Biophysical Chemistry, 2007, 128, 210-214.	1.5	47
10	Stochastic resonance in soft matter systems: combined effects of static and dynamic disorder. Soft Matter, 2008, 4, 1861.	1.2	45
11	Prevalence of stochasticity in experimentally observed responses of pancreatic acinar cells to acetylcholine. Chaos, 2009, 19, 037113.	1.0	45
12	Community lockdowns in social networks hardly mitigate epidemic spreading. New Journal of Physics, 2021, 23, 043039.	1.2	45
13	Modeling the Seasonal Adaptation of Circadian Clocks by Changes in the Network Structure of the Suprachiasmatic Nucleus. PLoS Computational Biology, 2012, 8, e1002697.	1.5	42
14	Critical and Supercritical Spatiotemporal Calcium Dynamics in Beta Cells. Frontiers in Physiology, 2017, 8, 1106.	1.3	41
15	Stochastic resonance in a locally excited system of bistable oscillators. European Physical Journal B, 2011, 80, 519-528.	0.6	39
16	From stochasticity to determinism in the collective dynamics of diffusively coupled cells. Chemical Physics Letters, 2006, 421, 106-110.	1.2	34
17	Heterogeneity and Delayed Activation as Hallmarks of Self-Organization and Criticality in Excitable Tissue. Frontiers in Physiology, 2019, 10, 869.	1.3	33
18	SNAP-25b-deficiency increases insulin secretion and changes spatiotemporal profile of Ca2+oscillations in I² cell networks. Scientific Reports, 2017, 7, 7744.	1.6	31

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19	Glucose-dependent activation, activity, and deactivation of beta cell networks in acute mouse pancreas tissue slices. American Journal of Physiology - Endocrinology and Metabolism, 2021, 321, E305-E323.	1.8	30
20	The relationship between node degree and dissipation rate in networks of diffusively coupled oscillators and its significance for pancreatic beta cells. Chaos, 2015, 25, 073115.	1.0	29
21	Optimal network configuration for maximal coherence resonance in excitable systems. Physical Review E, 2010, 81, 056104.	0.8	26
22	Multilayer network representation of membrane potential and cytosolic calcium concentration dynamics in beta cells. Chaos, Solitons and Fractals, 2015, 80, 76-82.	2.5	26
23	Cellular diversity promotes intercellular Ca2+ wave propagation. Biophysical Chemistry, 2009, 139, 53-56.	1.5	24
24	Public goods games on random hyperbolic graphs with mixing. Chaos, Solitons and Fractals, 2021, 144, 110720.	2.5	24
25	Membrane Potential and Calcium Dynamics in Beta Cells from Mouse Pancreas Tissue Slices: Theory, Experimentation, and Analysis. Sensors, 2015, 15, 27393-27419.	2.1	23
26	Assessing Different Temporal Scales of Calcium Dynamics in Networks of Beta Cell Populations. Frontiers in Physiology, 2021, 12, 612233.	1.3	22
27	The Role of cAMP in Beta Cell Stimulusâ€“Secretion and Intercellular Coupling. Cells, 2021, 10, 1658.	1.8	22
28	Modelling of dysregulated glucagon secretion in type 2 diabetes by considering mitochondrial alterations in pancreatic Î±-cells. Royal Society Open Science, 2020, 7, 191171.	1.1	21
29	The role of neural architecture and the speed of signal propagation in the process of synchronization of bursting neurons. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 2764-2770.	1.2	19
30	The brain as a complex network: assessment of EEGâ€based functional connectivity patterns in patients with childhood absence epilepsy. Epileptic Disorders, 2020, 22, 519-530.	0.7	19
31	Assortativity provides a narrow margin for enhanced cooperation on multilayer networks. New Journal of Physics, 2019, 21, 123016.	1.2	18
32	Endogenous social distancing and its underappreciated impact on the epidemic curve. Scientific Reports, 2021, 11, 3093.	1.6	17
33	Assessing the origin and velocity of Ca2+ waves in three-dimensional tissue: Insights from a mathematical model and confocal imaging in mouse pancreas tissue slices. Communications in Nonlinear Science and Numerical Simulation, 2021, 93, 105495.	1.7	17
34	NMDA receptor inhibition increases, synchronizes, and stabilizes the collective pancreatic beta cell activity: Insights through multilayer network analysis. PLoS Computational Biology, 2021, 17, e1009002.	1.5	17
35	Spatio-temporal modelling explains the effect of reduced plasma membrane Ca2+ efflux on intracellular Ca2+ oscillations in hepatocytes. Journal of Theoretical Biology, 2008, 252, 419-426.	0.8	16
36	The Impact of Static Disorder on Vibrational Resonance in a Ferroelectric Liquid Crystal. Molecular Crystals and Liquid Crystals, 2012, 553, 13-20.	0.4	16

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37	Data-driven classification of residential energy consumption patterns by means of functional connectivity networks. Applied Energy, 2019, 242, 506-515.	5.1	16
38	The Analysis of Intracellular and Intercellular Calcium Signaling in Human Anterior Lens Capsule Epithelial Cells with Regard to Different Types and Stages of the Cataract. PLoS ONE, 2015, 10, e0143781.	1.1	16
39	Proximity to periodic windows in bifurcation diagrams as a gateway to coherence resonance in chaotic systems. Physical Review E, 2007, 76, 037201.	0.8	15
40	From Isles of KÃ¶nigsberg to Islets of Langerhans: Examining the Function of the Endocrine Pancreas Through Network Science. Frontiers in Endocrinology, 0, 13, .	1.5	15
41	Mitochondrial Dysfunction in Pancreatic Alpha and Beta Cells Associated with Type 2 Diabetes Mellitus. Life, 2020, 10, 348.	1.1	14
42	Chaos out of internal noise in the collective dynamics of diffusively coupled cells. European Physical Journal B, 2008, 62, 171-177.	0.6	13
43	Importance of cell variability for calcium signaling in rat airway myocytes. Biophysical Chemistry, 2010, 148, 42-50.	1.5	12
44	Applying network theory to fables: complexity in Slovene belles-lettres for different age groups. Journal of Complex Networks, 2019, 7, 114-127.	1.1	12
45	CHAOS BETWEEN STOCHASTICITY AND PERIODICITY IN THE PRISONER'S DILEMMA GAME. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 869-875.	0.7	11
46	Topologically determined optimal stochastic resonance responses of spatially embedded networks. New Journal of Physics, 2011, 13, 013012.	1.2	11
47	Modelling of energy-driven switch for glucagon and insulin secretion. Journal of Theoretical Biology, 2020, 493, 110213.	0.8	10
48	Loosening the shackles of scientific disciplines with network science. Physics of Life Reviews, 2018, 24, 162-167.	1.5	8
49	Mixing protocols in the public goods game. Physical Review E, 2020, 102, 032310.	0.8	8
50	The influence of gap junction network complexity on pulmonary artery smooth muscle reactivity in normoxic and chronically hypoxic conditions. Experimental Physiology, 2014, 99, 272-285.	0.9	7
51	Broad-scale small-world network topology induces optimal synchronization of flexible oscillators. Chaos, Solitons and Fractals, 2014, 69, 14-21.	2.5	7
52	Stochastic simulation of the circadian rhythmicity in the SCN neuronal network. Physica A: Statistical Mechanics and Its Applications, 2015, 424, 1-10.	1.2	7
53	Thermoregulation: A journey from physiology to computational models and the intensive care unit. WIREs Mechanisms of Disease, 2021, 13, e1513.	1.5	7
54	Planar cell polarity genes frizzled4 and frizzled6 exert patterning influence on arterial vessel morphogenesis. PLoS ONE, 2017, 12, e0171033.	1.1	7

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55	Calcium imaging in intact mouse acinar cells in acute pancreas tissue slices. PLoS ONE, 2022, 17, e0268644.	1.1	6
56	Spatiotemporal patterns provoked by environmental variability in a predatorâ€“prey model. BioSystems, 2013, 114, 172-177.	0.9	5
57	Cataract Progression Associated with Modifications in Calcium Signaling in Human Lens Epithelia as Studied by Mechanical Stimulation. Life, 2021, 11, 369.	1.1	4
58	pH-Dependence of Glucose-Dependent Activity of Beta Cell Networks in Acute Mouse Pancreatic Tissue Slice. Frontiers in Endocrinology, 0, 13, .	1.5	3
59	Computational modeling of targeted temperature management in post-cardiac arrest patients. Biomechanics and Modeling in Mechanobiology, 2022, 21, 1407-1424.	1.4	3
60	Defects in Planar Cell Polarity of Epithelium. Behavior Research Methods, 2014, 20, 197-217.	2.3	2
61	Proper spatial heterogeneities expand the regime of scale-free behavior in a lattice of excitable elements. Physical Review E, 2019, 100, 062203.	0.8	2
62	Mechanical Cell-to-Cell Interactions as a Regulator of Topological Defects in Planar Cell Polarity Patterns in Epithelial Tissues. Frontiers in Materials, 2020, 7, .	1.2	2
63	Correlations between beta-cells' calcium dynamics reveal differences in functional connectivity patterns in islets of Langerhans from pancreas tissue slices under low and high levels of glucose. , 2012, , .		1
64	Interlayer Connectivity Affects the Coherence Resonance and Population Activity Patterns in Two-Layered Networks of Excitatory and Inhibitory Neurons. Frontiers in Computational Neuroscience, 2022, 16, 885720.	1.2	1
65	Tracking the Evolution of Functional Connectivity Patterns Between Pancreatic Beta Cells with Multilayer Network Formalism. Lecture Notes in Electrical Engineering, 2019, , 16-21.	0.3	0
66	Fizikalni sistemi â€“ Â»peskovnikÂ« razvoja funkcionalne pismenosti pri otrocih. , 2017, , .		0
67	Primerjava statistiÄnih lastnosti leposlovnih besedil, namenjenih razliÄnim starostnim skupinam. , 2017, , .		0