

# Marko Gosak

## List of Publications by Year in descending order

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Version: 2024-02-01

67  
papers

1,890  
citations

279701

23  
h-index

289141

40  
g-index

71  
all docs

71  
docs citations

71  
times ranked

1511  
citing authors

#	ARTICLE	IF	CITATIONS
1	Networks behind the morphology and structural design of living systems. <i>Physics of Life Reviews</i> , 2022, 41, 1-21.	1.5	57
2	Interlayer Connectivity Affects the Coherence Resonance and Population Activity Patterns in Two-Layered Networks of Excitatory and Inhibitory Neurons. <i>Frontiers in Computational Neuroscience</i> , 2022, 16, 885720.	1.2	1
3	Calcium imaging in intact mouse acinar cells in acute pancreas tissue slices. <i>PLoS ONE</i> , 2022, 17, e0268644.	1.1	6
4	Computational modeling of targeted temperature management in post-cardiac arrest patients. <i>Biomechanics and Modeling in Mechanobiology</i> , 2022, 21, 1407-1424.	1.4	3
5	Thermoregulation: A journey from physiology to computational models and the intensive care unit. <i>WIREs Mechanisms of Disease</i> , 2021, 13, e1513.	1.5	7
6	Endogenous social distancing and its underappreciated impact on the epidemic curve. <i>Scientific Reports</i> , 2021, 11, 3093.	1.6	17
7	Assessing the origin and velocity of Ca <sup>2+</sup> waves in three-dimensional tissue: Insights from a mathematical model and confocal imaging in mouse pancreas tissue slices. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2021, 93, 105495.	1.7	17
8	Public goods games on random hyperbolic graphs with mixing. <i>Chaos, Solitons and Fractals</i> , 2021, 144, 110720.	2.5	24
9	Assessing Different Temporal Scales of Calcium Dynamics in Networks of Beta Cell Populations. <i>Frontiers in Physiology</i> , 2021, 12, 612233.	1.3	22
10	Community lockdowns in social networks hardly mitigate epidemic spreading. <i>New Journal of Physics</i> , 2021, 23, 043039.	1.2	45
11	Cataract Progression Associated with Modifications in Calcium Signaling in Human Lens Epithelia as Studied by Mechanical Stimulation. <i>Life</i> , 2021, 11, 369.	1.1	4
12	NMDA receptor inhibition increases, synchronizes, and stabilizes the collective pancreatic beta cell activity: Insights through multilayer network analysis. <i>PLoS Computational Biology</i> , 2021, 17, e1009002.	1.5	17
13	The Role of cAMP in Beta Cell Stimulusâ€“Secretion and Intercellular Coupling. <i>Cells</i> , 2021, 10, 1658.	1.8	22
14	Socio-demographic and health factors drive the epidemic progression and should guide vaccination strategies for best COVID-19 containment. <i>Results in Physics</i> , 2021, 26, 104433.	2.0	61
15	Glucose-dependent activation, activity, and deactivation of beta cell networks in acute mouse pancreas tissue slices. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2021, 321, E305-E323.	1.8	30
16	Mixing protocols in the public goods game. <i>Physical Review E</i> , 2020, 102, 032310.	0.8	8
17	Mechanical Cell-to-Cell Interactions as a Regulator of Topological Defects in Planar Cell Polarity Patterns in Epithelial Tissues. <i>Frontiers in Materials</i> , 2020, 7, .	1.2	2
18	The brain as a complex network: assessment of EEGâ€“based functional connectivity patterns in patients with childhood absence epilepsy. <i>Epileptic Disorders</i> , 2020, 22, 519-530.	0.7	19

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19	Mitochondrial Dysfunction in Pancreatic Alpha and Beta Cells Associated with Type 2 Diabetes Mellitus. <i>Life</i> , 2020, 10, 348.	1.1	14
20	Modelling of energy-driven switch for glucagon and insulin secretion. <i>Journal of Theoretical Biology</i> , 2020, 493, 110213.	0.8	10
21	Modelling of dysregulated glucagon secretion in type 2 diabetes by considering mitochondrial alterations in pancreatic $\beta$ -cells. <i>Royal Society Open Science</i> , 2020, 7, 191171.	1.1	21
22	Applying network theory to fables: complexity in Slovene belles-lettres for different age groups. <i>Journal of Complex Networks</i> , 2019, 7, 114-127.	1.1	12
23	Heterogeneity and Delayed Activation as Hallmarks of Self-Organization and Criticality in Excitable Tissue. <i>Frontiers in Physiology</i> , 2019, 10, 869.	1.3	33
24	Tracking the Evolution of Functional Connectivity Patterns Between Pancreatic Beta Cells with Multilayer Network Formalism. <i>Lecture Notes in Electrical Engineering</i> , 2019, , 16-21.	0.3	0
25	Data-driven classification of residential energy consumption patterns by means of functional connectivity networks. <i>Applied Energy</i> , 2019, 242, 506-515.	5.1	16
26	Assortativity provides a narrow margin for enhanced cooperation on multilayer networks. <i>New Journal of Physics</i> , 2019, 21, 123016.	1.2	18
27	Proper spatial heterogeneities expand the regime of scale-free behavior in a lattice of excitable elements. <i>Physical Review E</i> , 2019, 100, 062203.	0.8	2
28	Loosening the shackles of scientific disciplines with network science. <i>Physics of Life Reviews</i> , 2018, 24, 162-167.	1.5	8
29	Network science of biological systems at different scales: A review. <i>Physics of Life Reviews</i> , 2018, 24, 118-135.	1.5	305
30	SNAP-25b-deficiency increases insulin secretion and changes spatiotemporal profile of $Ca^{2+}$ oscillations in $I^2$ cell networks. <i>Scientific Reports</i> , 2017, 7, 7744.	1.6	31
31	Critical and Supercritical Spatiotemporal Calcium Dynamics in Beta Cells. <i>Frontiers in Physiology</i> , 2017, 8, 1106.	1.3	41
32	Planar cell polarity genes <i>frizzled4</i> and <i>frizzled6</i> exert patterning influence on arterial vessel morphogenesis. <i>PLoS ONE</i> , 2017, 12, e0171033.	1.1	7
33	Fizikalni sistemi "peskovnik" razvoja funkcionalne pismenosti pri otrocih. , 2017, , .		0
34	Primerjava statističnih lastnosti leposlovnih besedil, namenjenih različnim starostnim skupinam. , 2017, , .		0
35	The relationship between node degree and dissipation rate in networks of diffusively coupled oscillators and its significance for pancreatic beta cells. <i>Chaos</i> , 2015, 25, 073115.	1.0	29
36	Progressive glucose stimulation of islet beta cells reveals a transition from segregated to integrated modular functional connectivity patterns. <i>Scientific Reports</i> , 2015, 5, 7845.	1.6	73

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37	Membrane Potential and Calcium Dynamics in Beta Cells from Mouse Pancreas Tissue Slices: Theory, Experimentation, and Analysis. <i>Sensors</i> , 2015, 15, 27393-27419.	2.1	23
38	Stochastic simulation of the circadian rhythmicity in the SCN neuronal network. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2015, 424, 1-10.	1.2	7
39	Multilayer network representation of membrane potential and cytosolic calcium concentration dynamics in beta cells. <i>Chaos, Solitons and Fractals</i> , 2015, 80, 76-82.	2.5	26
40	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. <i>PLoS ONE</i> , 2015, 10, e0143781.	1.1	16
41	Defects in Planar Cell Polarity of Epithelium. <i>Behavior Research Methods</i> , 2014, 20, 197-217.	2.3	2
42	The influence of gap junction network complexity on pulmonary artery smooth muscle reactivity in normoxic and chronically hypoxic conditions. <i>Experimental Physiology</i> , 2014, 99, 272-285.	0.9	7
43	Broad-scale small-world network topology induces optimal synchronization of flexible oscillators. <i>Chaos, Solitons and Fractals</i> , 2014, 69, 14-21.	2.5	7
44	Spatiotemporal patterns provoked by environmental variability in a predator-prey model. <i>BioSystems</i> , 2013, 114, 172-177.	0.9	5
45	Functional Connectivity in Islets of Langerhans from Mouse Pancreas Tissue Slices. <i>PLoS Computational Biology</i> , 2013, 9, e1002923.	1.5	152
46	Modeling the Seasonal Adaptation of Circadian Clocks by Changes in the Network Structure of the Suprachiasmatic Nucleus. <i>PLoS Computational Biology</i> , 2012, 8, e1002697.	1.5	42
47	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
48	The Impact of Static Disorder on Vibrational Resonance in a Ferroelectric Liquid Crystal. <i>Molecular Crystals and Liquid Crystals</i> , 2012, 553, 13-20.	0.4	16
49	The role of neural architecture and the speed of signal propagation in the process of synchronization of bursting neurons. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2012, 391, 2764-2770.	1.2	19
50	Stochastic resonance in a locally excited system of bistable oscillators. <i>European Physical Journal B</i> , 2011, 80, 519-528.	0.6	39
51	Topologically determined optimal stochastic resonance responses of spatially embedded networks. <i>New Journal of Physics</i> , 2011, 13, 013012.	1.2	11
52	Importance of cell variability for calcium signaling in rat airway myocytes. <i>Biophysical Chemistry</i> , 2010, 148, 42-50.	1.5	12
53	Optimal network configuration for maximal coherence resonance in excitable systems. <i>Physical Review E</i> , 2010, 81, 056104.	0.8	26
54	Prevalence of stochasticity in experimentally observed responses of pancreatic acinar cells to acetylcholine. <i>Chaos</i> , 2009, 19, 037113.	1.0	45

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55	Pacemaker-guided noise-induced spatial periodicity in excitable media. <i>Physica D: Nonlinear Phenomena</i> , 2009, 238, 506-515.	1.3	56
56	Cellular diversity promotes intercellular Ca <sup>2+</sup> wave propagation. <i>Biophysical Chemistry</i> , 2009, 139, 53-56.	1.5	24
57	Spatio-temporal modelling explains the effect of reduced plasma membrane Ca <sup>2+</sup> efflux on intracellular Ca <sup>2+</sup> oscillations in hepatocytes. <i>Journal of Theoretical Biology</i> , 2008, 252, 419-426.	0.8	16
58	Chaos out of internal noise in the collective dynamics of diffusively coupled cells. <i>European Physical Journal B</i> , 2008, 62, 171-177.	0.6	13
59	Stochastic resonance in soft matter systems: combined effects of static and dynamic disorder. <i>Soft Matter</i> , 2008, 4, 1861.	1.2	45
60	CHAOS BETWEEN STOCHASTICITY AND PERIODICITY IN THE PRISONER'S DILEMMA GAME. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2008, 18, 869-875.	0.7	11
61	Pacemaker-driven stochastic resonance on diffusive and complex networks of bistable oscillators. <i>New Journal of Physics</i> , 2008, 10, 053008.	1.2	83
62	Proximity to periodic windows in bifurcation diagrams as a gateway to coherence resonance in chaotic systems. <i>Physical Review E</i> , 2007, 76, 037201.	0.8	15
63	Periodic calcium waves in coupled cells induced by internal noise. <i>Chemical Physics Letters</i> , 2007, 437, 143-147.	1.2	84
64	Spatial coherence resonance in excitable biochemical media induced by internal noise. <i>Biophysical Chemistry</i> , 2007, 128, 210-214.	1.5	47
65	From stochasticity to determinism in the collective dynamics of diffusively coupled cells. <i>Chemical Physics Letters</i> , 2006, 421, 106-110.	1.2	34
66	From Isles of Langerhans to Islets of Langerhans: Examining the Function of the Endocrine Pancreas Through Network Science. <i>Frontiers in Endocrinology</i> , 0, 13, .	1.5	15
67	pH-Dependence of Glucose-Dependent Activity of Beta Cell Networks in Acute Mouse Pancreatic Tissue Slice. <i>Frontiers in Endocrinology</i> , 0, 13, .	1.5	3