Petr Sosik

List of Publications by Year
in descending order

67 papers	789 citations	623188 14 h-index	552369 26 g-index
75 all docs	75 docs citations	75 times ranked	262 citing authors

#	Article	IF	Citations
1	Computationally universal P systems without priorities: two catalysts are sufficient. Theoretical Computer Science, 2005, 330, 251-266.	0.5	97
2	Membrane computing and complexity theory: A characterization of PSPACE. Journal of Computer and System Sciences, 2007, 73, 137-152.	0.9	71
3	Normal forms for spiking neural P systems. Theoretical Computer Science, 2007, 372, 196-217.	0.5	69
4	The computational power of cell division in P systems: Beating down parallel computers?. Natural Computing, 2003, 2, 287-298.	1.8	67
5	P systems attacking hard problems beyond NP: a survey. Journal of Membrane Computing, 2019, 1, 198-208.	1.0	37
6	An Optimal Frontier of the Efficiency of Tissue P Systems with Cell Separation. Fundamenta Informaticae, 2015, 138, 45-60.	0.3	32
7	On properties of bond-free DNA languages. Theoretical Computer Science, 2005, 334, 131-159.	0.5	23
8	Aspects of shuffle and deletion on trajectories. Theoretical Computer Science, 2005, 332, 47-61.	0.5	19
9	The Undecidability of the Infinite Ribbon Problem: Implications for Computing by Self-Assembly. SIAM Journal on Computing, 2009, 38, 2356-2381.	0.8	19
10	On Hairpin-Free Words and Languages. Lecture Notes in Computer Science, 2005, , 296-307.	1.0	17
11	P systems with proteins on membranes characterize PSPACE. Theoretical Computer Science, 2013, 488, 78-95.	0.5	17
12	Natural selection in bats with historical exposure to white-nose syndrome. BMC Zoology, 2018, 3, .	0.3	17
13	Hairpin Structures in DNA Words. Lecture Notes in Computer Science, 2006, , 158-170.	1.0	17
14	On the weight of universal insertion grammars. Theoretical Computer Science, 2008, 396, 264-270.	0.5	15
15	PÂcolonies. Journal of Membrane Computing, 2019, 1, 178-197.	1.0	15
16	The Power of Catalysts and Priorities in Membrane Systems. Grammars, 2003, 6, 13-24.	0.4	14
17	DNA Computing â€" Foundations and Implications. , 2012, , 1073-1127.		13
18	BOND-FREE LANGUAGES: FORMALIZATIONS, MAXIMALITY AND CONSTRUCTION METHODS. International Journal of Foundations of Computer Science, 2005, 16, 1039-1070.	0.8	12

#	Article	IF	Citations
19	Watsonâ€“Crick D0L systems: the power of one transition. Theoretical Computer Science, 2003, 301, 187-200.	0.5	11
20	A P system and a constructive membrane-inspired DNA algorithm for solving the Maximum Clique Problem. BioSystems, 2007, 90, 687-697.	0.9	9
21	Small (purely) catalytic P systems simulating register machines. Theoretical Computer Science, 2016, 623, 65-74.	0.5	9
22	Membrane Computing: When Communication Is Enough. Lecture Notes in Computer Science, 2002, , 264-275.	1.0	9
23	A limitation of cell division in tissue P systems by PSPACE. Journal of Computer and System Sciences, 2015, 81, 473-484.	0.9	8
24	Bond-Free Languages: Formalizations, Maximality and Construction Methods. Lecture Notes in Computer Science, 2005, , 169-181.	1.0	8
25	D0L System + Watson-Crick Complementarity = Universal Computation. Lecture Notes in Computer Science, 2001, , 308-319.	1.0	8
26	Computational power of cell separation in tissue P systems. Information Sciences, 2014, 279, 805-815.	4.0	7
27	Watsonâ€“Crick D0L systems: generative power and undecidable problems. Theoretical Computer Science, 2003, 306, 101-112.	0.5	6
28	Universal computation with Watson-Crick D0L systems. Theoretical Computer Science, 2002, 289, 485-501.	0.5	5
29	From P systems to morphogenetic systems: an overview and open problems. Journal of Membrane Computing, 2020, 2, 380-391.	1.0	5
30	On the Robust Power of Morphogenetic Systems for Time Bounded Computation. Lecture Notes in Computer Science, 2018, , 270-292.	1.0	5
31	OPERATIONS ON TRAJECTORIES WITH APPLICATIONS TO CODING AND BIOINFORMATICS. International Journal of Foundations of Computer Science, 2005, 16, 531-546.	0.8	4
32	DNA strand displacement system running logic programs. BioSystems, 2014, 115, 5-12.	0.9	4
33	An Autonomous In Vivo Dual Selection Protocol for Boolean Genetic Circuits. Artificial Life, 2015, 21, 247-260.	1.0	4
34	Directed evolution of biocircuits using conjugative plasmids and CRISPR-Cas9: design and in silico experiments. Natural Computing, 2017, 16, 497-505.	1.8	4
35	Morphogenetic systems: Models and experiments. BioSystems, 2020, 198, 104270.	0.9	4
36	Morphogenetic systems for resource bounded computation and modeling. Information Sciences, 2021, 547, 814-827.	4.0	4

#	Article	IF	Citations
37	On the Power of Computing with Proteins on Membranes. Lecture Notes in Computer Science, 2010, , 448-460.	1.0	4
38	Autonomous Resolution Based on DNA Strand Displacement. Lecture Notes in Computer Science, 2011, , 190-203.	1.0	4
39	On the scalability of biocomputing algorithms: The case of the maximum clique problem. Theoretical Computer Science, 2011, 412, 7075-7086.	0.5	3
40	ON THE POWER OF FAMILIES OF RECOGNIZER SPIKING NEURAL P SYSTEMS. International Journal of Foundations of Computer Science, 2011, 22, 75-88.	0.8	3
41	P Colonies with Evolving Environment. Lecture Notes in Computer Science, 2017, , 151-164.	1.0	3
42	Limits of the Power of Tissue P Systems with Cell Division. Lecture Notes in Computer Science, 2013, , 390-403.	1.0	3
43	Substitutions, Trajectories and Noisy Channels. Lecture Notes in Computer Science, 2005, , 202-212.	1.0	3
44	Tissue P Systems with Cell Separation: Upper Bound by PSPACE. Lecture Notes in Computer Science, 2012, , 201-215.	1.0	3
45	On the Hierarchy of Extended Conditional Tabled Eco-Grammar Systems. Grammars, 1999, 1, 225-238.	0.4	2
46	ON THE POWER OF DETERMINISTIC AND SEQUENTIAL COMMUNICATING P SYSTEMS. International Journal of Foundations of Computer Science, 2007, 18, 415-431.	0.8	2
47	On the power of elementary features in spiking neural P systems. Natural Computing, 2008, 7, 471-483.	1.8	2
48	The Laws of Natural Deduction in Inference by DNA Computer. Scientific World Journal, The, 2014, 2014, 1-10.	0.8	2
49	Self-healing turing-universal computation in morphogenetic systems. Natural Computing, 0, , 1.	1.8	2
50	Polynomial Complexity Classes in Spiking Neural P Systems. Lecture Notes in Computer Science, 2010, , 348-360.	1.0	2
51	DNA Computing and Errors. Advances in Web Services Research Series, 0, , 56-77.	0.0	2
52	A Self-Controlled and Self-Healing Model of Bacterial Cells. Membranes, 2022, 12, 678.	1.4	2
53	Conditional Tabled Eco-Grammar Systems: the Scattered Contexts. Grammars, 1999, 2, 235-245.	0.4	1
54	ORTHOGONAL SHUFFLE ON TRAJECTORIES. International Journal of Foundations of Computer Science, 2011, 22, 213-222.	0.8	1

#	Article	IF	Citations
55	Three Universal Homogeneous Spiking Neural P Systems Using Max Spike. Fundamenta Informaticae, 2014, 134, 167-182.	0.3	1
56	Modeling Plant Development with M Systems. Lecture Notes in Computer Science, 2019, , 246-257.	1.0	1
57	A Logical Representation of P Colonies: An Introduction. Lecture Notes in Computer Science, 2018, , 66-76.	1.0	1
58	POLYNOMIAL TIME-BOUNDED COMPUTATIONS IN SPIKING NEURAL P SYSTEMS. Neural Network World, 2013, 23, 31-48.	0.5	1
59	String Rewriting Sequential P-Systems and Regulated Rewriting. Lecture Notes in Computer Science, 2002, , 379-388.	1.0	1
60	Substitution on Trajectories. Lecture Notes in Computer Science, 2004, , 145-158.	1.0	1
61	P colonies with agent division. Information Sciences, 2022, 589, 162-169.	4.0	1
62	Morphogenetic computing: computability and complexity results. Natural Computing, 0, , .	1.8	1
63	Algebraic properties of substitution on trajectories. Theoretical Computer Science, 2006, 369, 183-196.	0.5	0
64	Brain clock driven by neuropeptides and second messengers. Physical Review E, 2014, 90, 032705.	0.8	0
65	Generalized P colonies with passive environment. Theoretical Computer Science, 2018, 724, 61-68.	0.5	0
66	Active Membranes, Proteins on Membranes, Tissue P Systems: Complexity-Related Issues and Challenges. Lecture Notes in Computer Science, 2014, , 40-55.	1.0	0
67	Towards a Robust Biocomputing Solution of Intractable Problems. , 2008, , 221-230.		0