

Thomas E Gorochowski

List of Publications by Year in descending order

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Version: 2024-02-01

47
papers

1,804
citations

279798

23
h-index

315739

38
g-index

60
all docs

60
docs citations

60
times ranked

1780
citing authors

#	ARTICLE	IF	CITATIONS
1	Burden-driven feedback control of gene expression. <i>Nature Methods</i> , 2018, 15, 387-393.	19.0	281
2	BSim: An Agent-Based Tool for Modeling Bacterial Populations in Systems and Synthetic Biology. <i>PLoS ONE</i> , 2012, 7, e42790.	2.5	116
3	Trade-offs between tRNA abundance and mRNA secondary structure support smoothing of translation elongation rate. <i>Nucleic Acids Research</i> , 2015, 43, 3022-3032.	14.5	111
4	A Minimal Model of Ribosome Allocation Dynamics Captures Trade-offs in Expression between Endogenous and Synthetic Genes. <i>ACS Synthetic Biology</i> , 2016, 5, 710-720.	3.8	106
5	Pathways to cellular supremacy in biocomputing. <i>Nature Communications</i> , 2019, 10, 5250.	12.8	88
6	Genetic circuit characterization and debugging using scRNA-seq . <i>Molecular Systems Biology</i> , 2017, 13, 952.	7.2	80
7	Agent-based modelling in synthetic biology. <i>Essays in Biochemistry</i> , 2016, 60, 325-336.	4.7	70
8	Absolute quantification of translational regulation and burden using combined sequencing approaches. <i>Molecular Systems Biology</i> , 2019, 15, e8719.	7.2	61
9	Evolving enhanced topologies for the synchronization of dynamical complex networks. <i>Physical Review E</i> , 2010, 81, 056212.	2.1	56
10	DNAplotlib: Programmable Visualization of Genetic Designs and Associated Data. <i>ACS Synthetic Biology</i> , 2017, 6, 1115-1119.	3.8	50
11	P recision design of stable genetic circuits carried in highly insulated <i>E. coli</i> genomic landing pads. <i>Molecular Systems Biology</i> , 2020, 16, e9584.	7.2	45
12	Memory and Combinatorial Logic Based on DNA Inversions: Dynamics and Evolutionary Stability. <i>ACS Synthetic Biology</i> , 2015, 4, 1361-1372.	3.8	42
13	Organization of feed-forward loop motifs reveals architectural principles in natural and engineered networks. <i>Science Advances</i> , 2018, 4, eaap9751.	10.3	40
14	The Synthetic Biology Open Language (SBOL) Version 3: Simplified Data Exchange for Bioengineering. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 1009.	4.1	40
15	Beyond contact-based transmission networks: the role of spatial coincidence. <i>Journal of the Royal Society Interface</i> , 2015, 12, 20150705.	3.4	38
16	A standard-enabled workflow for synthetic biology. <i>Biochemical Society Transactions</i> , 2017, 45, 793-803.	3.4	38
17	Registry in a tube: multiplexed pools of retrievable parts for genetic design space exploration. <i>Nucleic Acids Research</i> , 2017, 45, gkw1226.	14.5	37
18	Translational sensitivity of the Escherichia coli genome to fluctuating tRNA availability. <i>Nucleic Acids Research</i> , 2013, 41, 8021-8033.	14.5	36

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19	Using Synthetic Biological Parts and Microbioreactors to Explore the Protein Expression Characteristics of <i>Escherichia coli</i> . ACS Synthetic Biology, 2014, 3, 129-139.	3.8	36
20	Evolving dynamical networks: A formalism for describing complex systems. Complexity, 2012, 17, 18-25.	1.6	34
21	Towards an engineering theory of evolution. Nature Communications, 2021, 12, 3326.	12.8	33
22	Communicating Structure and Function in Synthetic Biology Diagrams. ACS Synthetic Biology, 2019, 8, 1818-1825.	3.8	30
23	Using Aging to Visually Uncover Evolutionary Processes on Networks. IEEE Transactions on Visualization and Computer Graphics, 2012, 18, 1343-1352.	4.4	29
24	Tunable genetic devices through simultaneous control of transcription and translation. Nature Communications, 2020, 11, 2095.	12.8	29
25	Harnessing the central dogma for stringent multi-level control of gene expression. Nature Communications, 2021, 12, 1738.	12.8	26
26	Efficient multiplexed gene regulation in <i>Saccharomyces cerevisiae</i> using dCas12a. Nucleic Acids Research, 2021, 49, 7775-7790.	14.5	24
27	Cheetah: A Computational Toolkit for Cybergenetic Control. ACS Synthetic Biology, 2021, 10, 979-989.	3.8	23
28	Toward Engineering Biosystems With Emergent Collective Functions. Frontiers in Bioengineering and Biotechnology, 2020, 8, 705.	4.1	22
29	Sequencing enabling design and learning in synthetic biology. Current Opinion in Chemical Biology, 2020, 58, 54-62.	6.1	18
30	Self-adaptive biosystems through tunable genetic parts and circuits. Current Opinion in Systems Biology, 2020, 24, 78-85.	2.6	17
31	Automated Visualization of Genetic Designs Using DNAplotlib. Methods in Molecular Biology, 2018, 1772, 399-409.	0.9	13
32	Living computers powered by biochemistry. Biochemist, 2019, 41, 14-18.	0.5	13
33	Synthetic biology open language (SBOL) version 3.0.0. Journal of Integrative Bioinformatics, 2020, 17, .	1.5	13
34	Designing efficient translation. Nature Biotechnology, 2018, 36, 934-935.	17.5	12
35	Massively parallel characterization of engineered transcript isoforms using direct RNA sequencing. Nature Communications, 2022, 13, 434.	12.8	11
36	CRISPR/Cas12a Multiplex Genome Editing of <i>Saccharomyces cerevisiae</i> and the Creation of Yeast Pixel Art. Journal of Visualized Experiments, 2019, , .	0.3	10

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37	Specifications of standards in systems and synthetic biology: status and developments in 2020. Journal of Integrative Bioinformatics, 2020, 17, .	1.5	10
38	Advances in engineering CRISPR-Cas9 as a molecular Swiss Army knife. Synthetic Biology, 2020, 5, ysaa021.	2.2	9
39	Improving the Robustness of Engineered Bacteria to Nutrient Stress Using Programmed Proteolysis. ACS Synthetic Biology, 2022, 11, 1049-1059.	3.8	9
40	Computational modeling and analysis of hippocampal-prefrontal information coding during a spatial decision-making task. Frontiers in Behavioral Neuroscience, 2014, 8, 62.	2.0	6
41	Augmented reality for the engineering of collective behaviours in microsystems. , 2019, , .		6
42	How Behaviour and the Environment Influence Transmission in Mobile Groups. Theoretical Biology, 2017, , 17-42.	0.1	4
43	An Open Platform for High-Resolution Light-Based Control of Microscopic Collectives. Advanced Intelligent Systems, 2022, 4, .	6.1	4
44	SBOL Visual 2 Ontology. ACS Synthetic Biology, 2020, 9, 972-977.	3.8	3
45	Specifications of standards in systems and synthetic biology: status and developments in 2021. Journal of Integrative Bioinformatics, 2021, 18, .	1.5	2
46	paraSBOLv: a foundation for standard-compliant genetic design visualization tools. Synthetic Biology, 2021, 6, ysab022.	2.2	1
47	Characterizing Genetic Parts and Devices Using RNA Sequencing. Methods in Molecular Biology, 2021, 2229, 175-187.	0.9	0