Michael C Reed

List of Publications by Year
in descending order

71	2,583	27	49
papers	citations	h-index	g-index
		201674	197818

72	72	72	3044
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Spiracular fluttering decouples oxygen uptake and water loss: a stochastic PDE model of respiratory water loss in insects. Journal of Mathematical Biology, 2022, 84, 40.	1.9	0
2	Voltammetric Approach for Characterizing the Biophysical and Chemical Functionality of Human Induced Pluripotent Stem Cell-Derived Serotonin Neurons. Analytical Chemistry, 2022, 94, 8847-8856.	6.5	3
3	A mathematical model of circadian rhythms and dopamine. Theoretical Biology and Medical Modelling, 2021, 18, 8.	2.1	15
4	Inflammation-Induced Histamine Impairs the Capacity of Escitalopram to Increase Hippocampal Extracellular Serotonin. Journal of Neuroscience, 2021, 41, 6564-6577.	3.6	26
5	One-carbon metabolism during the menstrual cycle and pregnancy. PLoS Computational Biology, 2021, 17, e1009708.	3.2	2
6	Fast serotonin voltammetry as a versatile tool for mapping dynamic tissue architecture: I. Responses at carbon fibers describe local tissue physiology. Journal of Neurochemistry, 2020, 153, 33-50.	3.9	28
7	Autoreceptor control of serotonin dynamics. BMC Neuroscience, 2020, 21, 40.	1.9	5
8	Spiracular fluttering increases oxygen uptake. PLoS ONE, 2020, 15, e0232450.	2.5	3
9	Voltammetric evidence for discrete serotonin circuits, linked to specific reuptake domains, in the mouse medial prefrontal cortex. Neurochemistry International, 2019, 123, 50-58.	3.8	27
10	In vivo Hippocampal Serotonin Dynamics in Male and Female Mice: Determining Effects of Acute Escitalopram Using Fast Scan Cyclic Voltammetry. Frontiers in Neuroscience, 2019, 13, 362.	2.8	46
11	Systems biology of robustness and homeostatic mechanisms. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2019, 11, e1440.	6.6	31
12	Sex differences in hepatic one-carbon metabolism. BMC Systems Biology, 2018, 12, 89.	3.0	43
13	Analysis of Homeostatic Mechanisms in Biochemical Networks. Bulletin of Mathematical Biology, 2017, 79, 2534-2557.	1.9	29
14	Systems Biology of Phenotypic Robustness and Plasticity. Integrative and Comparative Biology, 2017, 57, 171-184.	2.0	61
15	A mathematical model for histamine synthesis, release, and control in varicosities. Theoretical Biology and Medical Modelling, 2017, 14, 24.	2.1	16
16	Mathematical Models of Neuromodulation and Implications for Neurology and Psychiatry. Springer Series in Bio-/neuroinformatics, 2017, , 191-225.	0.1	1
17	A voltammetric and mathematical analysis of histaminergic modulation of serotonin in the mouse hypothalamus. Journal of Neurochemistry, 2016, 138, 374-383.	3.9	24
18	Mathematical modeling of perifusion cell culture experiments on GnRH signaling. Mathematical Biosciences, 2016, 276, 121-132.	1.9	1

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19	Using mathematical models to understand metabolism, genes, and disease. BMC Biology, 2015, 13, 79.	3.8	28
20	Mathematical analysis of the regulation of competing methyltransferases. BMC Systems Biology, 2015, 9, 69.	3.0	21
21	Stochastic Switching in Infinite Dimensions with Applications to Random Parabolic PDE. SIAM Journal on Mathematical Analysis, 2015, 47, 3035-3063.	1.9	41
22	Voltammetric and mathematical evidence for dual transport mediation of serotonin clearance <i>in vivo</i>. Journal of Neurochemistry, 2014, 130, 351-359.	3.9	53
23	Homeostasis and Dynamic Stability of the Phenotype Link Robustness and Plasticity. Integrative and Comparative Biology, 2014, 54, 264-275.	2.0	29
24	Escape from homeostasis. Mathematical Biosciences, 2014, 257, 104-110.	1.9	34
25	Mathematical modeling of the effects of glutathione on arsenic methylation. Theoretical Biology and Medical Modelling, 2014, 11, 20.	2.1	15
26	Targeted metabolomics and mathematical modeling demonstrate that vitamin B-6 restriction alters one-carbon metabolism in cultured HepG2 cells. American Journal of Physiology - Endocrinology and Metabolism, 2014, 307, E93-E101.	3.5	13
27	Sensitivity to switching rates in stochastically switched odes. Communications in Mathematical Sciences, 2014, 12, 1343-1352.	1.0	26
28	A Mathematical Model of Tryptophan Metabolism via the Kynurenine Pathway Provides Insights into the Effects of Vitamin B-6 Deficiency, Tryptophan Loading, and Induction of Tryptophan 2,3-Dioxygenase on Tryptophan Metabolites. Journal of Nutrition, 2013, 143, 1509-1519.	2.9	35
29	The relationship between intracellular and plasma levels of folate and metabolites in the methionine cycle: A model. Molecular Nutrition and Food Research, 2013, 57, 628-636.	3.3	33
30	Computational studies of the role of serotonin in the basal ganglia. Frontiers in Integrative Neuroscience, 2013, 7, 41.	2.1	21
31	A Population Model of Folate-Mediated One-Carbon Metabolism. Nutrients, 2013, 5, 2457-2474.	4.1	31
32	Blood biomarkers of methylation in Down syndrome and metabolic simulations using a mathematical model. Molecular Nutrition and Food Research, 2012, 56, 1582-1589.	3.3	28
33	The biochemistry of acetaminophen hepatotoxicity and rescue: a mathematical model. Theoretical Biology and Medical Modelling, 2012, 9, 55.	2.1	70
34	Mathematical Insights into the Effects of Levodopa. Frontiers in Integrative Neuroscience, 2012, 6, 21.	2.1	29
35	A mathematical modelling approach to assessing the reliability of biomarkers of glutathione metabolism. European Journal of Pharmaceutical Sciences, 2012, 46, 233-243.	4.0	23
36	Mathematical model gives insights into vitamin B6 and kynurenine metabolism. FASEB Journal, 2012, 26, 1020.5.	0.5	0

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37	Mathematical model insights into arsenic detoxification. Theoretical Biology and Medical Modelling, 2011, 8, 31.	2.1	18
38	The biological significance of substrate inhibition: A mechanism with diverse functions. BioEssays, 2010, 32, 422-429.	2.5	272
39	Serotonin synthesis, release and reuptake in terminals: a mathematical model. Theoretical Biology and Medical Modelling, 2010, 7, 34.	2.1	110
40	A Mathematical Model Gives Insights into the Effects of Vitamin B-6 Deficiency on 1-Carbon and Glutathione Metabolism. Journal of Nutrition, 2009, 139, 784-791.	2.9	39
41	Homeostatic mechanisms in dopamine synthesis and release: a mathematical model. Theoretical Biology and Medical Modelling, 2009, 6, 21.	2.1	102
42	Passive and active stabilization of dopamine in the striatum. Bioscience Hypotheses, 2009, 2, 240-244.	0.2	20
43	Use of pathway information in molecular epidemiology. Human Genomics, 2009, 4, 21.	2.9	42
44	A mathematical model of glutathione metabolism. Theoretical Biology and Medical Modelling, 2008, 5, 8.	2.1	131
45	Neural Timing in Highly Convergent Systems. SIAM Journal on Applied Mathematics, 2008, 68, 720-737.	1.8	1
46	A Day in the Life of Cell Metabolism. Biological Theory, 2007, 2, 124-127.	1.5	4
47	Propagation of Fluctuations in Biochemical Systems, I: Linear SSC Networks. Bulletin of Mathematical Biology, 2007, 69, 1791-1813.	1.9	14
48	A Mathematical Model Gives Insights into Nutritional and Genetic Aspects of Folate-Mediated One-Carbon Metabolism. Journal of Nutrition, 2006, 136, 2653-2661.	2.9	126
49	In silico experimentation with a model of hepatic mitochondrial folate metabolism. Theoretical Biology and Medical Modelling, 2006, 3, 40.	2.1	51
50	Neural Tube Defects and Folate Pathway Genes: Family-Based Association Tests of Geneâ€"Gene and Geneâ€"Environment Interactions. Environmental Health Perspectives, 2006, 114, 1547-1552.	6.0	105
51	Mathematical Modeling: Epidemiology Meets Systems Biology. Cancer Epidemiology Biomarkers and Prevention, 2006, 15, 827-829.	2.5	26
52	Long-Range Allosteric Interactions between the Folate and Methionine Cycles Stabilize DNA Methylation Reaction Rate. Epigenetics, 2006, 1, 81-87.	2.7	84
53	A Mathematical Model of the Folate Cycle. Journal of Biological Chemistry, 2004, 279, 55008-55016.	3.4	181
54	A mathematical model of the methionine cycle. Journal of Theoretical Biology, 2004, 226, 33-43.	1.7	86

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55	Precision of neural timing: effects of convergence and time-windowing. Journal of Computational Neuroscience, 2002, 13, 35-47.	1.0	13
56	Robustness of a neural network model for differencing. Journal of Computational Neuroscience, 2001, 11, 165-173.	1.0	2
57	A mathematical model quantifying GnRH-induced LH secretion from gonadotropes. American Journal of Physiology - Endocrinology and Metabolism, 2000, 278, E263-E272.	3.5	30
58	Model calculations of time dependent responses to binaural stimuli in the dorsal nucleus of the lateral lemniscus. Hearing Research, 2000, 149, 77-90.	2.0	1
59	Model calculations of steady state responses to binaural stimuli in the dorsal nucleus of the lateral lemniscus. Hearing Research, 1999, 136, 13-28.	2.0	7
60	Effects of wide band inhibitors in the dorsal cochlear nucleus. II. Model calculations of the responses to complex sounds. Journal of the Acoustical Society of America, 1998, 103, 2000-2009.	1.1	13
61	Model calculations of the effects of wide-band inhibitors in the dorsal cochlear nucleus. Journal of the Acoustical Society of America, 1997, 102, 2238-2244.	1.1	5
62	A computational model for signal processing by the dorsal cochlear nucleus. I. Responses to pure tones. Journal of the Acoustical Society of America, 1995, 97, 425-438.	1.1	16
63	A computational model for signal processing by the dorsal cochlear nucleus. II. Responses to broadband and notch noise. Journal of the Acoustical Society of America, 1995, 98, 181-191.	1.1	14
64	Further studies of a model for azimuthal encoding: Lateral superior olive neuron response curves and developmental processes. Journal of the Acoustical Society of America, 1991, 90, 1968-1978.	1.1	12
65	A model for the computation and encoding of azimuthal information by the lateral superior olive. Journal of the Acoustical Society of America, 1990, 88, 1442-1453.	1.1	59
66	Classical conormal solution of semilinear systems. Communications in Partial Differential Equations, 1988, 13, 1297-1335.	2.2	8
67	Discontinuous progressing waves for semilinear systems. Communications in Partial Differential Equations, 1985, 10, 1033-1075.	2.2	18
68	Singularities produced by the nonlinear interaction of three progressing waves;,examples. Communications in Partial Differential Equations, 1982, 7, 1117-1133.	2.2	37
69	Propagation of singularities for non-linear wave equations in one dimension. Communications in Partial Differential Equations, 1978, 3, 153-199.	2.2	21
70	The scattering of classical waves from inhomogeneous media. Mathematische Zeitschrift, 1977, 155, 163-180.	0.9	23
71	Mathematical Models of Serotonin, Histamine, and Depression. , 0, , .		0