Iain G Johnston

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1705426/publications.pdf

Version: 2024-02-01

		159358	155451
68	3,670	30	55
papers	citations	h-index	g-index

92	92	92	6903
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dynamic Boolean modelling reveals the influence of energy supply on bacterial efflux pump expression. Journal of the Royal Society Interface, 2022, 19, 20210771.	1.5	7
2	Optimal strategies in the fighting fantasy gaming system: Influencing stochastic dynamics by gambling with limited resource. European Journal of Operational Research, 2022, 302, 1272-1281.	3.5	0
3	Symmetry and simplicity spontaneously emerge from the algorithmic nature of evolution. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2113883119.	3.3	50
4	Altered collective mitochondrial dynamics in the Arabidopsismsh1mutant compromising organelle DNA maintenance. Journal of Experimental Botany, 2022, 73, 5428-5439.	2.4	11
5	Reply to Ocklenburg and Mundorf: The interplay of developmental bias and natural selection. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	3
6	What is quantitative plant biology?. Quantitative Plant Biology, 2021, 2, .	0.8	43
7	Understanding learner behaviour in online courses with Bayesian modelling and time series characterisation. Scientific Reports, 2021, 11, 2823.	1.6	8
8	Avoiding organelle mutational meltdown across eukaryotes with or without a germline bottleneck. PLoS Biology, 2021, 19, e3001153.	2.6	47
9	Network analysis of Arabidopsis mitochondrial dynamics reveals a resolved tradeoff between physical distribution and social connectivity. Cell Systems, 2021, 12, 419-431.e4.	2.9	33
10	Sexually antagonistic evolution of mitochondrial and nuclear linkage. Journal of Evolutionary Biology, 2021, 34, 757-766.	0.8	3
11	2-Deoxy-D-glucose couples mitochondrial DNA replication with mitochondrial fitness and promotes the selection of wild-type over mutant mitochondrial DNA. Nature Communications, 2021, 12, 6997.	5.8	12
12	HyperTraPS: Inferring Probabilistic Patterns of Trait Acquisition in Evolutionary and Disease Progression Pathways. Cell Systems, 2020, 10, 39-51.e10.	2.9	14
13	Data-Driven Inference Reveals Distinct and Conserved Dynamic Pathways of Tool Use Emergence across Animal Taxa. IScience, 2020, 23, 101245.	1.9	5
14	Cell identity and nucleo-mitochondrial genetic context modulate OXPHOS performance and determine somatic heteroplasmy dynamics. Science Advances, 2020, 6, eaba5345.	4.7	31
15	MtDNA sequence features associated with â€˜selfish genomesâ€™ predict tissue-specific segregation and reversion. Nucleic Acids Research, 2020, 48, 8290-8301.	6.5	8
16	Efficient vasculature investment in tissues can be determined without global information. Journal of the Royal Society Interface, 2020, 17, 20200137.	1.5	12
17	S100A4 mRNA-protein relationship uncovered by measurement noise reduction. Journal of Molecular Medicine, 2020, 98, 735-749.	1.7	0
18	Energetic costs of cellular and therapeutic control of stochastic mitochondrial DNA populations. PLoS Computational Biology, 2019, 15, e1007023.	1.5	20

#	Article	IF	Citations
19	Mitochondrial Network State Scales mtDNA Genetic Dynamics. Genetics, 2019, 212, 1429-1443.	1.2	46
20	Precision identification of high-risk phenotypes and progression pathways in severe malaria without requiring longitudinal data. Npj Digital Medicine, 2019, 2, 63.	5.7	7
21	Model selection and parameter estimation for root architecture models using likelihood-free inference. Journal of the Royal Society Interface, 2019, 16, 20190293.	1.5	7
22	Regulation of Mother-to-Offspring Transmission of mtDNA Heteroplasmy. Cell Metabolism, 2019, 30, 1120-1130.e5.	7.2	66
23	Tension and Resolution: Dynamic, Evolving Populations of Organelle Genomes within Plant Cells. Molecular Plant, 2019, 12, 764-783.	3.9	65
24	Global Topological Order Emerges through Local Mechanical Control of Cell Divisions in the Arabidopsis Shoot Apical Meristem. Cell Systems, 2019, 8, 53-65.e3.	2.9	74
25	Intracellular Energy Variability Modulates Cellular Decision-Making Capacity. Scientific Reports, 2019, 9, 20196.	1.6	8
26	Varied Mechanisms and Models for the Varying Mitochondrial Bottleneck. Frontiers in Cell and Developmental Biology, 2019, 7, 294.	1.8	19
27	Evolving mtDNA populations within cells. Biochemical Society Transactions, 2019, 47, 1367-1382.	1.6	24
28	The Essential Genome of Escherichia coli K-12. MBio, 2018, 9, .	1.8	242
29	Identification of a bet-hedging network motif generating noise in hormone concentrations and germination propensity in Arabidopsis. Journal of the Royal Society Interface, 2018, 15, 20180042.	1.5	22
30	Large-scale genetic analysis reveals mammalian mtDNA heteroplasmy dynamics and variance increase through lifetimes and generations. Nature Communications, 2018, 9, 2488.	5.8	51
31	Mitochondrial Heterogeneity. Frontiers in Genetics, 2018, 9, 718.	1.1	89
32	Variability in seeds: biological, ecological, and agricultural implications. Journal of Experimental Botany, 2017, 68, erw397.	2.4	33
33	Mitochondrial heterogeneity, metabolic scaling and cell death. BioEssays, 2017, 39, 1700001.	1.2	18
34	Stochastic Models for Evolving Cellular Populations of Mitochondria: Disease, Development, and Ageing. , 2017, , 287-314.		7
35	Mitochondrial DNA density homeostasis accounts for a threshold effect in a cybrid model of a human mitochondrial disease. Biochemical Journal, 2017, 474, 4019-4034.	1.7	13
36	Temperature variability is integrated by a spatially embedded decision-making center to break dormancy in Arabidopsis seeds. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 6629-6634.	3.3	81

#	Article	IF	Citations
37	Toward Precision Healthcare: Context and Mathematical Challenges. Frontiers in Physiology, 2017, 8, 136.	1.3	28
38	Forecasted trends in vaccination coverage and correlations with socioeconomic factors: a global time-series analysis over 30 years. The Lancet Global Health, 2016, 4, e726-e735.	2.9	69
39	Modulating mitochondrial quality in disease transmission: towards enabling mitochondrial DNA disease carriers to have healthy children. Biochemical Society Transactions, 2016, 44, 1091-1100.	1.6	19
40	mtDNA diversity in human populations highlights the merit of haplotype matching in gene therapies. Molecular Human Reproduction, 2016, 22, 809-817.	1.3	24
41	The State of Vaccine Confidence 2016: Global Insights Through a 67-Country Survey. EBioMedicine, 2016, 12, 295-301.	2.7	785
42	Evolution of Cell-to-Cell Variability in Stochastic, Controlled, Heteroplasmic mtDNA Populations. American Journal of Human Genetics, 2016, 99, 1150-1162.	2.6	37
43	Multiple hypothesis correction is vital and undermines reported mtDNA links to diseases including AIDS, cancer, and Huntingdonâ€™s. Mitochondrial DNA Part A: DNA Mapping, Sequencing, and Analysis, 2016, 27, 3423-3427.	0.7	3
44	Monitoring Intracellular Oxygen Concentration: Implications for Hypoxia Studies and Real-Time Oxygen Monitoring. Advances in Experimental Medicine and Biology, 2016, 876, 257-263.	0.8	8
45	Evolutionary Inference across Eukaryotes Identifies Specific Pressures Favoring Mitochondrial Gene Retention. Cell Systems, 2016, 2, 101-111.	2.9	131
46	Endless Love: On the Termination of a Playground Number Game. Recreational Mathematics Magazine, 2016, 3, 61-78.	0.2	1
47	Changing socioeconomic determinants of childhood vaccines: a global analysis over three decades. The Lancet Global Health, 2015, 3, S20.	2.9	4
48	A novel quantitative assay of mitophagy: Combining high content fluorescence microscopy and mitochondrial DNA load to quantify mitophagy and identify novel pharmacological tools against pathogenic heteroplasmic mtDNA. Pharmacological Research, 2015, 100, 24-35.	3.1	47
49	What is the function of mitochondrial networks? A theoretical assessment of hypotheses and proposal for future research. BioEssays, 2015, 37, 687-700.	1.2	122
50	Closed-form stochastic solutions for non-equilibrium dynamics and inheritance of cellular components over many cell divisions. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20150050.	1.0	39
51	Mitochondrial DNA disease and developmental implications for reproductive strategies. Molecular Human Reproduction, 2015, 21, 11-22.	1.3	59
52	Stochastic modelling, Bayesian inference, and new in vivo measurements elucidate the debated mtDNA bottleneck mechanism. ELife, 2015, 4, e07464.	2.8	83
53	A tractable genotypeâ€“phenotype map modelling the self-assembly of protein quaternary structure. Journal of the Royal Society Interface, 2014, 11, 20140249.	1.5	62
54	Explicit Tracking of Uncertainty Increases the Power of Quantitative Rule-of-Thumb Reasoning in Cell Biology. Biophysical Journal, 2014, 107, 2612-2617.	0.2	19

#	Article	IF	Citations
55	Efficient parametric inference for stochastic biological systems with measured variability. Statistical Applications in Genetics and Molecular Biology, 2014, 13, 379-90.	0.2	12
56	The â€˜mitoflashâ€™ probe cpYFP does not respond to superoxide. Nature, 2014, 514, E12-E14.	13.7	109
57	mtDNA Segregation in Heteroplasmic Tissues Is Common InÂVivo and Modulated by Haplotype Differences and Developmental Stage. Cell Reports, 2014, 7, 2031-2041.	2.9	99
58	FRIENDLY Regulates Mitochondrial Distribution, Fusion, and Quality Control in Arabidopsis. Plant Physiology, 2014, 166, 808-828.	2.3	93
59	Phenotypic landscape inference reveals multiple evolutionary paths to C4 photosynthesis. ELife, 2013, 2, e00961.	2.8	112
60	Mitochondrial Variability as a Source of Extrinsic Cellular Noise. PLoS Computational Biology, 2012, 8, e1002416.	1.5	104
61	Epistasis can lead to fragmented neutral spaces and contingency in evolution. Proceedings of the Royal Society B: Biological Sciences, 2012, 279, 1777-1783.	1.2	36
62	The Chaos Within. Significance, 2012, 9, 17-21.	0.3	20
63	Pulsing of Membrane Potential in Individual Mitochondria: A Stress-Induced Mechanism to Regulate Respiratory Bioenergetics in Arabidopsis. Plant Cell, 2012, 24, 1188-1201.	3.1	107
64	Evolutionary dynamics in a simple model of self-assembly. Physical Review E, 2011, 83, 066105.	0.8	42
65	The effect of scale-free topology on the robustness and evolvability of genetic regulatory networks. Journal of Theoretical Biology, 2010, 267, 48-61.	0.8	32
66	Modelling the self-assembly of virus capsids. Journal of Physics Condensed Matter, 2010, 22, 104101.	0.7	71
67	Self-assembly, modularity, and physical complexity. Physical Review E, 2010, 82, 026117.	0.8	46
68	The self-assembly of DNA Holliday junctions studied with a minimal model. Journal of Chemical Physics, 2009, 130, 065101.	1.2	36