

Avraham E Mayo

List of Publications by Year in descending order

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Version: 2024-02-01

76
papers

6,488
citations

94415

37
h-index

82542

72
g-index

89
all docs

89
docs citations

89
times ranked

8906
citing authors

#	ARTICLE	IF	CITATIONS
1	Controls for Phylogeny and Robust Analysis in Pareto Task Inference. <i>Molecular Biology and Evolution</i> , 2022, 39, .	8.9	7
2	Hormone seasonality in medical records suggests circannual endocrine circuits. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	55
3	Senescent cells and the incidence of age-related diseases. <i>Aging Cell</i> , 2021, 20, e13314.	6.7	44
4	Abstract LB009: Dynamic changes in the compositions of cancer associated-fibroblasts correlate with clinical outcome in breast cancer. , 2021, , .		0
5	Timescales of Human Hair Cortisol Dynamics. <i>IScience</i> , 2020, 23, 101501.	4.1	8
6	Endocrine Autoimmune Disease as a Fragility of Immune Surveillance against Hypersecreting Mutants. <i>Immunity</i> , 2020, 52, 872-884.e5.	14.3	27
7	Principles of Cell Circuits for Tissue Repair and Fibrosis. <i>IScience</i> , 2020, 23, 100841.	4.1	90
8	Cancer-associated fibroblast compositions change with breast cancer progression linking the ratio of S100A4+ and PDPN+ CAFs to clinical outcome. <i>Nature Cancer</i> , 2020, 1, 692-708.	13.2	159
9	Noise-precision tradeoff in predicting combinations of mutations and drugs. <i>PLoS Computational Biology</i> , 2019, 15, e1006956.	3.2	13
10	Central dogma rates and the trade-off between precision and economy in gene expression. <i>Nature Communications</i> , 2019, 10, 68.	12.8	140
11	Continuum of Gene-Expression Profiles Provides Spatial Division of Labor within a Differentiated Cell Type. <i>Cell Systems</i> , 2019, 8, 43-52.e5.	6.2	51
12	Evolutionary trade-offs and the structure of polymorphisms. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2018, 373, 20170105.	4.0	13
13	Circuit Design Features of a Stable Two-Cell System. <i>Cell</i> , 2018, 172, 744-757.e17.	28.9	276
14	Endocytosis as a stabilizing mechanism for tissue homeostasis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E1926-E1935.	7.1	41
15	Creative exploration as a scale-invariant search on a meaning landscape. <i>Nature Communications</i> , 2018, 9, 5411.	12.8	16
16	Dynamic zonation of liver polyploidy. <i>Cell and Tissue Research</i> , 2017, 368, 405-410.	2.9	59
17	Optimal Regulatory Circuit Topologies for Fold-Change Detection. <i>Cell Systems</i> , 2017, 4, 171-181.e8.	6.2	66
18	Dynamic Proteomics of Herpes Simplex Virus Infection. <i>MBio</i> , 2017, 8, .	4.1	25

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19	Placebo can enhance creativity. <i>PLoS ONE</i> , 2017, 12, e0182466.	2.5	16
20	Prediction of drug cocktail effects when the number of measurements is limited. <i>PLoS Biology</i> , 2017, 15, e2002518.	5.6	32
21	Creative foraging: An experimental paradigm for studying exploration and discovery. <i>PLoS ONE</i> , 2017, 12, e0182133.	2.5	30
22	Automated Video Analysis of Non-verbal Communication in a Medical Setting. <i>Frontiers in Psychology</i> , 2016, 7, 1130.	2.1	27
23	Exit from Synchrony in Joint Improvised Motion. <i>PLoS ONE</i> , 2016, 11, e0160747.	2.5	27
24	Prediction of multidimensional drug dose responses based on measurements of drug pairs. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 10442-10447.	7.1	139
25	Would you like to play together? Adults's attachment and the mirror game. <i>Attachment and Human Development</i> , 2016, 18, 33-45.	2.1	32
26	The Mass-Longevity Triangle: Pareto Optimality and the Geometry of Life-History Trait Space. <i>PLoS Computational Biology</i> , 2015, 11, e1004524.	3.2	35
27	Geometry of the Gene Expression Space of Individual Cells. <i>PLoS Computational Biology</i> , 2015, 11, e1004224.	3.2	65
28	A cellular and regulatory map of the cholinergic nervous system of <i>C. elegans</i> . <i>ELife</i> , 2015, 4, .	6.0	279
29	Inferring biological tasks using Pareto analysis of high-dimensional data. <i>Nature Methods</i> , 2015, 12, 233-235.	19.0	145
30	Evolution of Bow-Tie Architectures in Biology. <i>PLoS Computational Biology</i> , 2015, 11, e1004055.	3.2	101
31	Evolutionary tradeoffs, Pareto optimality and the morphology of ammonite shells. <i>BMC Systems Biology</i> , 2015, 9, 12.	3.0	86
32	Individuality and Togetherness in Joint Improvised Motion. <i>PLoS ONE</i> , 2014, 9, e87213.	2.5	70
33	Logarithmic and Power Law Input-Output Relations in Sensory Systems with Fold-Change Detection. <i>PLoS Computational Biology</i> , 2014, 10, e1003781.	3.2	49
34	Paradoxical Signaling by a Secreted Molecule Leads to Homeostasis of Cell Levels. <i>Cell</i> , 2014, 158, 1022-1032.	28.9	86
35	Mapping Differentiation under Mixed Culture Conditions Reveals a Tunable Continuum of T Cell Fates. <i>PLoS Biology</i> , 2013, 11, e1001616.	5.6	86
36	Evolutionary Tradeoffs between Economy and Effectiveness in Biological Homeostasis Systems. <i>PLoS Computational Biology</i> , 2013, 9, e1003163.	3.2	60

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37	Response to Comment on "Evolutionary Trade-Offs, Pareto Optimality, and the Geometry of Phenotype Space". <i>Science</i> , 2013, 339, 757-757.	12.6	8
38	The geometry of the Pareto front in biological phenotype space. <i>Ecology and Evolution</i> , 2013, 3, 1471-1483.	1.9	66
39	Mutation Rules and the Evolution of Sparseness and Modularity in Biological Systems. <i>PLoS ONE</i> , 2013, 8, e70444.	2.5	29
40	Comparing Apples and Oranges: Fold-Change Detection of Multiple Simultaneous Inputs. <i>PLoS ONE</i> , 2013, 8, e57455.	2.5	16
41	Cell Lineage Analysis of the Mammalian Female Germline. <i>PLoS Genetics</i> , 2012, 8, e1002477.	3.5	60
42	Design principles of cell circuits with paradoxical components. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 8346-8351.	7.1	74
43	Surface Growth of a Motile Bacterial Population Resembles Growth in a Chemostat. <i>Journal of Molecular Biology</i> , 2012, 424, 180-191.	4.2	41
44	Using bleach-chase to measure protein half-lives in living cells. <i>Nature Protocols</i> , 2012, 7, 801-811.	12.0	14
45	Evolutionary Trade-Offs, Pareto Optimality, and the Geometry of Phenotype Space. <i>Science</i> , 2012, 336, 1157-1160.	12.6	516
46	Constraints on Reciprocal Flux Sensitivities in Biochemical Reaction Networks. <i>Biophysical Journal</i> , 2011, 100, 1383-1391.	0.5	6
47	Cell-to-cell spread of HIV permits ongoing replication despite antiretroviral therapy. <i>Nature</i> , 2011, 477, 95-98.	27.8	502
48	Fibroblast polarization is a matrix-rigidity-dependent process controlled by focal adhesion mechanosensing. <i>Nature Cell Biology</i> , 2011, 13, 1457-1465.	10.3	473
49	Proteome Half-Life Dynamics in Living Human Cells. <i>Science</i> , 2011, 331, 764-768.	12.6	286
50	Robust Control of Nitrogen Assimilation by a Bifunctional Enzyme in <i>E. coli</i> . <i>Molecular Cell</i> , 2011, 41, 117-127.	9.7	56
51	Robust Control of PEP Formation Rate in the Carbon Fixation Pathway of C4 Plants by a Bi-functional Enzyme. <i>BMC Systems Biology</i> , 2011, 5, 171.	3.0	10
52	Fold-change detection and scalar symmetry of sensory input fields. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 15995-16000.	7.1	203
53	Protein Dynamics in Individual Human Cells: Experiment and Theory. <i>PLoS ONE</i> , 2009, 4, e4901.	2.5	54
54	Invariant Distribution of Promoter Activities in <i>Escherichia coli</i> . <i>PLoS Computational Biology</i> , 2009, 5, e1000545.	3.2	87

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55	An Analytically Solvable Model for Rapid Evolution of Modular Structure. PLoS Computational Biology, 2009, 5, e1000355.	3.2	36
56	EXTINCTIONS IN HETEROGENEOUS ENVIRONMENTS AND THE EVOLUTION OF MODULARITY. Evolution; International Journal of Organic Evolution, 2009, 63, 1964-1975.	2.3	34
57	A Synthetic Biology Approach to Understanding Biological Oscillations: Developing a Genetic Oscillator for Escherichia coli. , 2009, , 301-329.		1
58	On Using Divide and Conquer in Modeling Natural Systems. Natural Computing Series, 2009, , 661-674.	2.2	1
59	Rate constants rather than biochemical mechanism determine behaviour of genetic clocks. Journal of the Royal Society Interface, 2008, 5, S9-15.	3.4	28
60	Using Two-Component Systems and Other Bacterial Regulatory Factors for the Fabrication of Synthetic Genetic Devices. Methods in Enzymology, 2007, 422, 488-512.	1.0	16
61	Escherichia coli Glutamine Synthetase Adenylyltransferase (ATase, EC 2.7.7.49): Kinetic Characterization of Regulation by PII, PII-UMP, Glutamine, and \pm -Ketoglutarate. Biochemistry, 2007, 46, 4133-4146.	2.5	51
62	Plasticity of the cis-Regulatory Input Function of a Gene. PLoS Biology, 2006, 4, e45.	5.6	169
63	Optimal gene partition into operons correlates with gene functional order. Physical Biology, 2006, 3, 183-189.	1.8	47
64	Hysteresis vs. Graded Responses: The Connections Make All the Difference. Science Signaling, 2004, 2004, pe20-pe20.	3.6	38
65	Just-in-time transcription program in metabolic pathways. Nature Genetics, 2004, 36, 486-491.	21.4	420
66	Detailed map of a cis-regulatory input function. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 7702-7707.	7.1	283
67	Remarks on Bousso's covariant entropy bound. Classical and Quantum Gravity, 2002, 19, 2607-2615.	4.0	0
68	Black Holes Are One-Dimensional. General Relativity and Gravitation, 2001, 33, 2095-2099.	2.0	28
69	Causal entropy bound for nonsingular cosmologies. Physical Review D, 2001, 65, .	4.7	11
70	Why is the black hole entropy (almost) linear in the horizon area?. Physical Review D, 2001, 63, .	4.7	12
71	Optimal entropy bound and the self-energy of test objects in the vicinity of a black hole. Physical Review D, 1999, 60, .	4.7	11
72	Black hole polarization and new entropy bounds. Physical Review D, 1999, 61, .	4.7	46

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73	Evidence for the adiabatic invariance of the black hole horizon area. Physical Review D, 1998, 58, .	4.7	20
74	No hair for spherical black holes: Charged and nonminimally coupled scalar field with self-interaction. Physical Review D, 1996, 54, 5059-5069.	4.7	178
75	Hormone seasonality in medical records suggests circannual endocrine circuits. Yearbook of Paediatric Endocrinology, 0, , .	0.0	3
76	Endocrine Autoimmune Disease as a Fragility of Immune-Surveillance Against Hypersecreting Mutants. SSRN Electronic Journal, 0, , .	0.4	1