

Charles Ofria

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8581227/publications.pdf>

Version: 2024-02-01

114
papers

5,424
citations

236925

25
h-index

106344

65
g-index

139
all docs

139
docs citations

139
times ranked

3110
citing authors

#	ARTICLE	IF	CITATIONS
1	An Exploration of Exploration: Measuring the Ability of Lexicase Selection to Find Obscure Pathways to Optimality. Genetic and Evolutionary Computation, 2022, , 83-107.	1.0	10
2	Exploring Evolved Multicellular Life Histories in a Open-Ended Digital Evolution System. Frontiers in Ecology and Evolution, 2022, 10, .	2.2	1
3	The Comparative Hybrid Approach to Investigate Cognition across Substrates. , 2021, , .		1
4	Conduit. , 2021, , .		2
5	Tag-based regulation of modules in genetic programming improves context-dependent problem solving. Genetic Programming and Evolvable Machines, 2021, 22, 325-355.	2.2	5
6	Adaptive Phenotypic Plasticity Stabilizes Evolution in Fluctuating Environments. Frontiers in Ecology and Evolution, 2021, 9, .	2.2	14
7	Digital Evolution for Ecology Research: A Review. Frontiers in Ecology and Evolution, 2021, 9, .	2.2	6
8	The Evolutionary Origin of Associative Learning. American Naturalist, 2020, 195, E1-E19.	2.1	14
9	Behavioral Strategy Chases Promote the Evolution of Prey Intelligence*. Genetic and Evolutionary Computation, 2020, , 225-246.	1.0	2
10	The Surprising Creativity of Digital Evolution: A Collection of Anecdotes from the Evolutionary Computation and Artificial Life Research Communities. Artificial Life, 2020, 26, 274-306.	1.3	88
11	Interpreting the Tape of Life: Ancestry-Based Analyses Provide Insights and Intuition about Evolutionary Dynamics. Artificial Life, 2020, 26, 58-79.	1.3	10
12	Major Transitions in Digital Evolution*. Genetic and Evolutionary Computation, 2020, , 333-347.	1.0	0
13	Characterizing the Effects of Random Subsampling on Lexicase Selection. Genetic and Evolutionary Computation, 2020, , 1-23.	1.0	11
14	Rank epistasis: A new model for analyzing epistatic interactions in the absence of quantifiable fitness interactions. , 2020, , .		0
15	Suicidal selection: Programmed cell death can evolve in unicellular organisms due solely to kin selection. Ecology and Evolution, 2019, 9, 9129-9136.	1.9	12
16	Toward Open-Ended Fraternal Transitions in Individuality. Artificial Life, 2019, 25, 117-133.	1.3	7
17	Tag-accessed memory for genetic programming. , 2019, , .		11
18	Random subsampling improves performance in lexicase selection. , 2019, , .		26

#	ARTICLE	IF	CITATIONS
19	MABE 2.0. , 2019, , .		3
20	Fluctuating environments select for short-term phenotypic variation leading to long-term exploration. PLoS Computational Biology, 2019, 15, e1006445.	3.2	20
21	Spatial Structure Can Decrease Symbiotic Cooperation. Artificial Life, 2019, 24, 229-249.	1.3	3
22	The MODES Toolbox: Measurements of Open-Ended Dynamics in Evolving Systems. Artificial Life, 2019, 25, 50-73.	1.3	8
23	On Sexual Selection in the Presence of Multiple Costly Displays. , 2019, , .		0
24	What Else Is in an Evolved Name? Exploring Evolvable Specificity with SignalGP. Genetic and Evolutionary Computation, 2019, , 103-121.	1.0	4
25	Exploring Genetic Programming Systems with MAP-Elites. Genetic and Evolutionary Computation, 2019, , 1-16.	1.0	8
26	Data Standards for Artificial Life Software. , 2019, , .		0
27	Horizontal Gene Transfer Leads to Increased Task Acquisition and Genomic Modularity in Digital Organisms. , 2019, , .		0
28	Evolving event-driven programs with SignalGP. , 2018, , .		16
29	Learning an evolvable genotype-phenotype mapping. , 2018, , .		7
30	Visualizing the tape of life. , 2018, , .		1
31	Quantifying the Tape of Life: Ancestry-based Metrics Provide Insights and Intuition about Evolutionary Dynamics. , 2018, , .		1
32	Evolving Reactive Agents with SignalGP. , 2018, , .		2
33	Applying Ecological Principles to Genetic Programming. Genetic and Evolutionary Computation, 2018, , 73-88.	1.0	5
34	The genotype-phenotype map of an evolving digital organism. PLoS Computational Biology, 2017, 13, e1005414.	3.2	24
35	Spatial resource heterogeneity creates local hotspots of evolutionary potential. , 2017, , .		2
36	Gene duplications drive the evolution of complex traits and regulation. , 2017, , .		8

#	ARTICLE	IF	CITATIONS
37	Improved adaptation in exogenously and endogenously changing environments. , 2017, , .		5
38	What Factors Drive the Evolution of Mutualism?. , 2016, , .		1
39	Open-Ended Evolution: Perspectives from the OEE Workshop in York. Artificial Life, 2016, 22, 408-423.	1.3	73
40	WebAL Comes of Age: A Review of the First 21 Years of Artificial Life on the Web. Artificial Life, 2016, 22, 364-407.	1.3	7
41	The Evolution of Evolvability: Changing Environments Promote Rapid Adaptation in Digital Organisms. , 2016, , .		7
42	The Evolutionary Origins of Phenotypic Plasticity. , 2016, , .		8
43	The Effects of Evolution and Spatial Structure on Diversity in Biological Reserves. , 2016, , .		1
44	Genetically integrated traits and rugged adaptive landscapes in digital organisms. BMC Evolutionary Biology, 2015, 15, 83.	3.2	3
45	Coevolution Drives the Emergence of Complex Traits and Promotes Evolvability. PLoS Biology, 2014, 12, e1002023.	5.6	92
46	The Evolutionary Origin of Somatic Cells under the Dirty Work Hypothesis. PLoS Biology, 2014, 12, e1001858.	5.6	56
47	There and back again. , 2014, , .		1
48	The evolution of kin inclusivity levels. , 2014, , .		4
49	The Effect of Conflicting Pressures on the Evolution of Division of Labor. PLoS ONE, 2014, 9, e102713.	2.5	8
50	Distributed Cooperative Caching in Social Wireless Networks. IEEE Transactions on Mobile Computing, 2013, 12, 1037-1053.	5.8	89
51	RUNAWAY SEXUAL SELECTION LEADS TO GOOD GENES. Evolution; International Journal of Organic Evolution, 2013, 67, 110-119.	2.3	30
52	Natural selection fails to optimize mutation rates for long-term adaptation on rugged fitness landscapes. , 2013, , .		21
53	Experiments on the role of deleterious mutations as stepping stones in adaptive evolution. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E3171-8.	7.1	76
54	Evolving Digital Ecological Networks. PLoS Computational Biology, 2013, 9, e1002928.	3.2	30

#	ARTICLE	IF	CITATIONS
55	A Case Study of the De Novo Evolution of a Complex Odometric Behavior in Digital Organisms. PLoS ONE, 2013, 8, e60466.	2.5	8
56	Understanding Evolutionary Potential in Virtual CPU Instruction Set Architectures. PLoS ONE, 2013, 8, e83242.	2.5	9
57	Task-switching costs promote the evolution of division of labor and shifts in individuality. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 13686-13691.	7.1	91
58	Ontogeny Tends to Recapitulate Phylogeny in Digital Organisms. American Naturalist, 2012, 180, E54-E63.	2.1	22
59	A Comparison of the Effects of Random and Selective Mass Extinctions on Erosion of Evolutionary History in Communities of Digital Organisms. PLoS ONE, 2012, 7, e37233.	2.5	17
60	On the Performance of Indirect Encoding Across the Continuum of Regularity. IEEE Transactions on Evolutionary Computation, 2011, 15, 346-367.	10.0	106
61	Modeling the evolutionary dynamics of plasmids in spatial populations. , 2011, , .		3
62	Rapid host-parasite coevolution drives the production and maintenance of diversity in digital organisms. , 2011, , .		13
63	Selective pressures for accurate altruism targeting: evidence from digital evolution for difficult-to-test aspects of inclusive fitness theory. Proceedings of the Royal Society B: Biological Sciences, 2011, 278, 666-674.	2.6	27
64	Hybrid: A Hybridization of Indirect and Direct Encodings for Evolutionary Computation. Lecture Notes in Computer Science, 2011, , 134-141.	1.3	8
65	The Evolution of Division of Labor. Lecture Notes in Computer Science, 2011, , 10-18.	1.3	3
66	Evolutionary dynamics, epistatic interactions, and biological information. Journal of Theoretical Biology, 2010, 266, 584-594.	1.7	9
67	Experiments with Digital Organisms on the Origin and Maintenance of Sex in Changing Environments. Journal of Heredity, 2010, 101, S46-S54.	2.4	20
68	Investigating whether hyperNEAT produces modular neural networks. , 2010, , .		31
69	Evolution of division of labor in genetically homogenous groups. , 2010, , .		4
70	Digital evolution with avida. , 2010, , .		1
71	Problem decomposition using indirect reciprocity in evolved populations. , 2009, , .		0
72	The sensitivity of HyperNEAT to different geometric representations of a problem. , 2009, , .		36

#	ARTICLE	IF	CITATIONS
73	Cockroaches, drunkards, and climbers: Modeling the evolution of simple movement strategies using digital organisms. , 2009, , .		5
74	Evolving coordinated quadruped gaits with the HyperNEAT generative encoding. , 2009, , .		87
75	Ecological approaches to diversity maintenance in evolutionary algorithms. , 2009, , .		12
76	Applying digital evolution to the design of self-adaptive software. , 2009, , .		1
77	Selective Press Extinctions, but Not Random Pulse Extinctions, Cause Delayed Ecological Recovery in Communities of Digital Organisms. American Naturalist, 2009, 173, E139-E154.	2.1	31
78	Avida. , 2009, , 3-35.		30
79	Historical and contingent factors affect reêvolution of a complex feature lost during mass extinction in communities of digital organisms. Journal of Evolutionary Biology, 2008, 21, 1335-1357.	1.7	24
80	Harnessing Digital Evolution. Computer, 2008, 41, 54-63.	1.1	37
81	On the Gradual Evolution of Complexity and the Sudden Emergence of Complex Features. Artificial Life, 2008, 14, 255-263.	1.3	15
82	Selection for group-level efficiency leads to self-regulation of population size. , 2008, , .		2
83	Natural Selection Fails to Optimize Mutation Rates for Long-Term Adaptation on Rugged Fitness Landscapes. PLoS Computational Biology, 2008, 4, e1000187.	3.2	80
84	Cooperative network construction using digital germlines. , 2008, , .		14
85	Autonomic Software Development Methodology Based on Darwinian Evolution. , 2008, , .		7
86	On the evolution of motility and intelligent tactic response. , 2008, , .		5
87	How a Generative Encoding Fares as Problem-Regularity Decreases. Lecture Notes in Computer Science, 2008, , 358-367.	1.3	17
88	Evolution of Cooperative Information Gathering in Self-Replicating Digital Organisms. , 2007, , .		8
89	Ecological Specialization and Adaptive Decay in Digital Organisms. American Naturalist, 2007, 169, E1-E20.	2.1	43
90	EFFECTS OF POPULATION SIZE AND MUTATION RATE ON THE EVOLUTION OF MUTATIONAL ROBUSTNESS. Evolution; International Journal of Organic Evolution, 2007, 61, 666-674.	2.3	58

#	ARTICLE	IF	CITATIONS
91	The effect of natural selection on the performance of maximum parsimony. BMC Evolutionary Biology, 2007, 7, 94.	3.2	8
92	Evolution of an Adaptive Sleep Response in Digital Organisms. , 2007, , 233-242.		12
93	Directed Evolution of Communication and Cooperation in Digital Organisms. , 2007, , 384-394.		10
94	Investigating the Emergence of Phenotypic Plasticity in Evolving Digital Organisms. , 2007, , 74-83.		10
95	Balancing Robustness and Evolvability. PLoS Biology, 2006, 4, e428.	5.6	171
96	Sexual reproduction reshapes the genetic architecture of digital organisms. Proceedings of the Royal Society B: Biological Sciences, 2006, 273, 457-464.	2.6	97
97	Avida: Evolution Experiments with Self-Replicating Computer Programs. , 2005, , 3-35.		3
98	Using Avida to Test the Effects of Natural Selection on Phylogenetic Reconstruction Methods. Artificial Life, 2004, 10, 157-166.	1.3	14
99	Adaptive Radiation from Resource Competition in Digital Organisms. Science, 2004, 305, 84-86.	12.6	110
100	Avida: A Software Platform for Research in Computational Evolutionary Biology. Artificial Life, 2004, 10, 191-229.	1.3	280
101	The evolutionary origin of complex features. Nature, 2003, 423, 139-144.	27.8	643
102	Selective pressures on genomes in molecular evolution. Journal of Theoretical Biology, 2003, 222, 477-483.	1.7	51
103	PERSPECTIVE: EVOLUTION AND DETECTION OF GENETIC ROBUSTNESS. Evolution; International Journal of Organic Evolution, 2003, 57, 1959-1972.	2.3	504
104	The Effect of Natural Selection on Phylogeny Reconstruction Algorithms. Lecture Notes in Computer Science, 2003, , 13-24.	1.3	3
105	PERSPECTIVE:EVOLUTION AND DETECTION OF GENETIC ROBUSTNESS. Evolution; International Journal of Organic Evolution, 2003, 57, 1959.	2.3	467
106	Design of evolvable computer languages. IEEE Transactions on Evolutionary Computation, 2002, 6, 420-424.	10.0	27
107	Evolution of Genetic Organization in Digital Organisms. Natural Computing Series, 2002, , 296-313.	2.2	5
108	Evolution of digital organisms at high mutation rates leads to survival of the flattest. Nature, 2001, 412, 331-333.	27.8	548

#	ARTICLE	IF	CITATIONS
109	Evolution of biological complexity. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 4463-4468.	7.1	435
110	Genome complexity, robustness and genetic interactions in digital organisms. Nature, 1999, 400, 661-664.	27.8	255
111	Evolution of Differentiated Expression Patterns in Digital Organisms. Lecture Notes in Computer Science, 1999, , 129-138.	1.3	4
112	Digital Evolution Exhibits Surprising Robustness to Poor Design Decisions. , 0, , .		1
113	Evolutionary Potential is Maximized at Intermediate Diversity Levels. , 0, , .		8
114	The Evolution of Temporal Polyethism. , 0, , .		4