

Byoung-Tak Zhang

List of Publications by Year in descending order

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Version: 2024-02-01

134
papers

4,086
citations

331538

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docs citations

139
times ranked

4437
citing authors

#	ARTICLE	IF	CITATIONS
1	From Scratch to Sketch: Deep Decoupled Hierarchical Reinforcement Learning for Robotic Sketching Agent. , 2022, , .		4
2	Leveraging node neighborhoods and egograph topology for better bot detection in social graphs. Social Network Analysis and Mining, 2021, 11, 1.	1.9	4
3	Data-driven experimental design and model development using Gaussian process with active learning. Cognitive Psychology, 2021, 125, 101360.	0.9	5
4	M2FN: Multi-step modality fusion for advertisement image assessment. Applied Soft Computing Journal, 2021, 103, 107116.	4.1	1
5	Co-Attentional Transformers for Story-Based Video Understanding. , 2021, , .		3
6	Multimodal Anomaly Detection based on Deep Auto-Encoder for Object Slip Perception of Mobile Manipulation Robots. , 2021, , .		5
7	Visual Perception Framework for an Intelligent Mobile Robot. , 2020, , .		9
8	Hypergraph Attention Networks for Multimodal Learning. , 2020, , .		33
9	Introducing the Ko Corpus of Korean Motherâ€™Child Interaction. Frontiers in Psychology, 2020, 11, 602623.	1.1	5
10	Enzymatic Weight Update Algorithm for DNA-Based Molecular Learning. Molecules, 2019, 24, 1409.	1.7	7
11	Bayesian evolutionary hypernetworks for interpretable learning from high-dimensional data. Applied Soft Computing Journal, 2019, 81, 105477.	4.1	2
12	Molecular Associative Memory with Spatial Auto-logistic Model for Pattern Recall. Procedia Computer Science, 2018, 123, 373-379.	1.2	0
13	Deep ECGNet: An Optimal Deep Learning Framework for Monitoring Mental Stress Using Ultra Short-Term ECG Signals. Telemedicine Journal and E-Health, 2018, 24, 753-772.	1.6	87
14	Robust Human Following by Deep Bayesian Trajectory Prediction for Home Service Robots. , 2018, , .		19
15	Identifying DNA Methylation Modules Associated with a Cancer by Probabilistic Evolutionary Learning. IEEE Computational Intelligence Magazine, 2018, 13, 12-19.	3.4	1
16	Multimodal Dual Attention Memory for Video Story Question Answering. Lecture Notes in Computer Science, 2018, , 698-713.	1.0	44
17	Dual-memory neural networks for modeling cognitive activities of humans via wearable sensors. Neural Networks, 2017, 92, 17-28.	3.3	7
18	In vitro molecular machine learning algorithm via symmetric internal loops of DNA. BioSystems, 2017, 158, 1-9.	0.9	5

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19	DeepStory: Video Story QA by Deep Embedded Memory Networks. , 2017, , .		77
20	Whole-Body Balancing Walk Controller for Position Controlled Humanoid Robots. International Journal of Humanoid Robotics, 2016, 13, 1650011.	0.6	16
21	Survey of computational haplotype determination methods for single individual. Genes and Genomics, 2016, 38, 1-12.	0.5	29
22	Social Network Analysis of TV Drama Characters via Deep Concept Hierarchies. , 2015, , .		13
23	Characteristic molecular vibrations of adenosine receptor ligands. FEBS Letters, 2015, 589, 548-552.	1.3	12
24	Team THOR's Entry in the DARPA Robotics Challenge Trials 2013. Journal of Field Robotics, 2015, 32, 315-335.	3.2	38
25	Molecular learning with DNA kernel machines. BioSystems, 2015, 137, 73-83.	0.9	0
26	The demand for quantitative techniques in biomedical image informatics. Biomedical Engineering Letters, 2014, 4, 319-327.	2.1	5
27	Bayesian evolutionary hypergraph learning for predicting cancer clinical outcomes. Journal of Biomedical Informatics, 2014, 49, 101-111.	2.5	11
28	Movie Recommendation Using Co-Clustering by Infinite Relational Models. Journal of Korean Institute of Intelligent Systems, 2014, 24, 443-449.	0.0	0
29	Rule-based in vitro molecular classification and visualization. Biochip Journal, 2013, 7, 29-37.	2.5	2
30	Non-linear molecular pattern classification using molecular beacons with multiple targets. BioSystems, 2013, 114, 206-213.	0.9	9
31	Integrated analysis of genome-wide DNA methylation and gene expression profiles in molecular subtypes of breast cancer. Nucleic Acids Research, 2013, 41, 8464-8474.	6.5	57
32	Biomolecular computation with molecular beacons for quantitative analysis of target nucleic acids. BioSystems, 2013, 111, 11-17.	0.9	3
33	Enhancing human action recognition through spatio-temporal feature learning and semantic rules. , 2013, , .		13
34	Evolutionary concept learning from cartoon videos by multimodal hypernetworks. , 2013, , .		2
35	Biomolecular theorem proving on a chip: a novel microfluidic solution to a classical logic problem. Lab on A Chip, 2012, 12, 1841.	3.1	7
36	Evolving a population code for multimodal concept learning. , 2011, , .		0

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37	Feature Relevance Network-Based Transfer Learning for Indoor Location Estimation. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2011, 41, 711-719.	3.3	9
38	A DNA assembly model of sentence generation. BioSystems, 2011, 106, 51-56.	0.9	5
39	Mutual information-based evolution of hypernetworks for brain data analysis. , 2011, , .		4
40	A molecular evolutionary algorithm for learning hypernetworks on simulated DNA computers. , 2011, , .		1
41	In vitro molecular pattern classification via DNA-based weighted-sum operation. BioSystems, 2010, 100, 1-7.	0.9	18
42	Evolutionary layered hypernetworks for identifying microRNA-mRNA regulatory modules. , 2010, , .		6
43	Social Influence Models Based on Starbucks Networks. , 2009, , .		0
44	Ensemble Learning Based on Active Example Selection for Solving Imbalanced Data Problem in Biomedical Data. , 2009, , .		1
45	Evolutionary hypernetwork classifiers for protein-protein interaction sentence filtering. , 2009, , .		4
46	Ensembled support vector machines for human papillomavirus risk type prediction from protein secondary structures. Computers in Biology and Medicine, 2009, 39, 187-193.	3.9	15
47	Evolving hypernetwork models of binary time series for forecasting price movements on stock markets. , 2009, , .		8
48	Effective mixing in a microfluidic chip using magnetic particles. Lab on A Chip, 2009, 9, 479-482.	3.1	95
49	AESNB: Active Example Selection with Naïve Bayes Classifier for Learning from Imbalanced Biomedical Data. , 2009, , .		10
50	Gender classification with cortical thickness measurement from magnetic resonance imaging by using a feature selection method based on evolutionary hypernetworks. , 2009, , .		1
51	Dynamic and Static Influence Models on Starbucks Networks. , 2009, , .		0
52	Evolutionary hypernetworks for learning to generate music from examples. , 2009, , .		0
53	An evolutionary Monte Carlo algorithm for predicting DNA hybridization. BioSystems, 2008, 91, 69-75.	0.9	5
54	Hypernetworks: A Molecular Evolutionary Architecture for Cognitive Learning and Memory. IEEE Computational Intelligence Magazine, 2008, 3, 49-63.	3.4	73

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55	The use of gold nanoparticle aggregation for DNA computing and logic-based biomolecular detection. <i>Nanotechnology</i> , 2008, 19, 395103.	1.3	16
56	Cognitive learning and the multimodal memory game: Toward human-level machine learning. , 2008, , .		0
57	Discovery of microRNA mRNA modules via population-based probabilistic learning. <i>Bioinformatics</i> , 2007, 23, 1141-1147.	1.8	164
58	Evolving Hypernetworks for Pattern Classification. , 2007, , .		10
59	Finding Cancer-Related Gene Combinations Using a Molecular Evolutionary Algorithm. , 2007, , .		2
60	Evolving hypernetwork classifiers for microRNA expression profile analysis. , 2007, , .		10
61	Random Hypergraph Models of Learning and Memory in Biomolecular Networks: Shorter-Term Adaptability vs. Longer-Term Persistency. , 2007, , .		6
62	Multiplex PCR Assay Design by Hybrid Multiobjective Evolutionary Algorithm. , 2007, , 376-385.		1
63	A Global Minimization Algorithm Based on a Geodesic of a Lagrangian Formulation of Newtonian Dynamics. <i>Neural Processing Letters</i> , 2007, 26, 121-131.	2.0	1
64	Dinucleotide Step Parameterization of Pre-miRNAs Using Multi-objective Evolutionary Algorithms. , 2007, , 176-186.		0
65	Identification of biochemical networks by S-tree based genetic programming. <i>Bioinformatics</i> , 2006, 22, 1631-1640.	1.8	87
66	Molecular Basis for the Recognition of Primary microRNAs by the Drosha-DGCR8 Complex. <i>Cell</i> , 2006, 125, 887-901.	13.5	1,336
67	Simulation and real-time monitoring of polymerase chain reaction for its higher efficiency. <i>Biochemical Engineering Journal</i> , 2006, 29, 109-118.	1.8	18
68	Protein sequence-based risk classification for human papillomaviruses. <i>Computers in Biology and Medicine</i> , 2006, 36, 656-667.	3.9	15
69	miTarget: microRNA target gene prediction using a support vector machine. <i>BMC Bioinformatics</i> , 2006, 7, 411.	1.2	195
70	ProMiR II: a web server for the probabilistic prediction of clustered, nonclustered, conserved and nonconserved microRNAs. <i>Nucleic Acids Research</i> , 2006, 34, W455-W458.	6.5	68
71	Human Papillomavirus Risk Type Classification from Protein Sequences Using Support Vector Machines. <i>Lecture Notes in Computer Science</i> , 2006, , 57-66.	1.0	4
72	Microarray Probe Design Using $\hat{\mu}$ -Multi-Objective Evolutionary Algorithms with Thermodynamic Criteria. <i>Lecture Notes in Computer Science</i> , 2006, , 184-195.	1.0	7

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73	DNA Hypernetworks for Information Storage and Retrieval. Lecture Notes in Computer Science, 2006, , 298-307.	1.0	18
74	Molecular programming. , 2005, , .		14
75	Human microRNA prediction through a probabilistic co-learning model of sequence and structure. Nucleic Acids Research, 2005, 33, 3570-3581.	6.5	200
76	Bayesian Model Averaging of Bayesian Network Classifiers Over Multiple Node-Orders: Application to Sparse Datasets. IEEE Transactions on Systems, Man, and Cybernetics, 2005, 35, 1302-1310.	5.5	17
77	Multiobjective Evolutionary Optimization of DNA Sequences for Reliable DNA Computing. IEEE Transactions on Evolutionary Computation, 2005, 9, 143-158.	7.5	153
78	A Kernel Method for MicroRNA Target Prediction Using Sensible Data and Position-Based Features. , 2005, , .		7
79	Co-trained support vector machines for large scale unstructured document classification using unlabeled data and syntactic information. Information Processing and Management, 2004, 40, 421-439.	5.4	31
80	Development, evaluation and benchmarking of simulation software for biomolecule-based computing. Natural Computing, 2004, 3, 427-442.	1.8	10
81	Solving traveling salesman problems with DNA molecules encoding numerical values. BioSystems, 2004, 78, 39-47.	0.9	120
82	Prediction of the Risk Types of Human Papillomaviruses by Support Vector Machines. Lecture Notes in Computer Science, 2004, , 723-731.	1.0	4
83	Two-Step Genetic Programming for Optimization of RNA Common-Structure. Lecture Notes in Computer Science, 2004, , 73-83.	1.0	5
84	A Lab-on-a-Chip Module for Bead Separation in DNA-Based Concept Learning. Lecture Notes in Computer Science, 2004, , 1-9.	1.0	3
85	RCA-Based Detection Methods for Resolution Refutation. Lecture Notes in Computer Science, 2004, , 32-36.	1.0	1
86	Computational Methods for Identification of Human microRNA Precursors. Lecture Notes in Computer Science, 2004, , 732-741.	1.0	2
87	Genetic Mining of HTML Structures for Effective Web-Document Retrieval. Applied Intelligence, 2003, 18, 243-256.	3.3	37
88	Word Sense Disambiguation by Learning Decision Trees from Unlabeled Data. Applied Intelligence, 2003, 19, 27-38.	3.3	7
89	Self-Organizing Latent Lattice Models for Temporal Gene Expression Profiling. Machine Learning, 2003, 52, 67-89.	3.4	21
90	An Empirical Study on Dimensionality Optimization in Text Mining for Linguistic Knowledge Acquisition. Lecture Notes in Computer Science, 2003, , 111-116.	1.0	4

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91	Version Space Learning with DNA Molecules. Lecture Notes in Computer Science, 2003, , 143-155.	1.0	5
92	DNA Implementation of Theorem Proving with Resolution Refutation in Propositional Logic. Lecture Notes in Computer Science, 2003, , 156-167.	1.0	8
93	A Unified Bayesian Framework for Evolutionary Learning and Optimization. Natural Computing Series, 2003, , 393-412.	2.2	4
94	Analysis of Gene Expression Profiles and Drug Activity Patterns by Clustering and Bayesian Network Learning. , 2002, , 169-184.		9
95	A Bayesian evolutionary approach to the design and learning of heterogeneous neural trees. Integrated Computer-Aided Engineering, 2002, 9, 73-86.	2.5	8
96	Applying Machine Learning Techniques to Analysis of Gene Expression Data: Cancer Diagnosis. , 2002, , 167-182.		27
97	System identification using evolutionary Markov chain Monte Carlo. Journal of Systems Architecture, 2001, 47, 587-599.	2.5	18
98	Learning-based Intrasentence Segmentation for Efficient Translation of Long Sentences. Machine Translation, 2001, 16, 151-174.	1.3	5
99	Collocation Dictionary Optimization Using WordNet and k-Nearest Neighbor Learning. Machine Translation, 2001, 16, 89-108.	1.3	5
100	Personalized web-document filtering using reinforcement learning. Applied Artificial Intelligence, 2001, 15, 665-685.	2.0	40
101	Evolving complex group behaviors using genetic programming with fitness switching. Artificial Life and Robotics, 2000, 4, 103-108.	0.7	3
102	Text filtering by boosting naive Bayes classifiers. , 2000, , .		43
103	Building Optimal Committees of Genetic Programs. , 2000, , 231-240.		6
104	Genetic Programming with Active Data Selection. Lecture Notes in Computer Science, 1999, , 146-153.	1.0	17
105	Code Optimization for DNA Computing of Maximal Cliques. , 1999, , 588-599.		7
106	Evolutionary Design of Neural Trees for Heart Rate Prediction. , 1998, , 93-101.		0
107	Evolutionary Induction of Sparse Neural Trees. Evolutionary Computation, 1997, 5, 213-236.	2.3	83
108	Evolutionary neural trees for modeling and predicting complex systems. Engineering Applications of Artificial Intelligence, 1997, 10, 473-483.	4.3	4

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109	Balancing Accuracy and Parsimony in Genetic Programming. <i>Evolutionary Computation</i> , 1995, 3, 17-38.	2.3	200
110	ACCELERATED LEARNING BY ACTIVE EXAMPLE SELECTION. <i>International Journal of Neural Systems</i> , 1994, 05, 67-75.	3.2	41
111	Using a genetic algorithm for communication link partitioning. , 0, , .		1
112	An evolutionary method for active learning of mobile robot path planning. , 0, , .		9
113	Effects of selection schemes in genetic programming for time series prediction. , 0, , .		0
114	Temporal pattern recognition using a spiking neural network with delays. , 0, , .		7
115	Solving traveling salesman problems using molecular programming. , 0, , .		19
116	A Bayesian framework for evolutionary computation. , 0, , .		26
117	Convergence properties of incremental Bayesian evolutionary algorithms with single Markov chains. , 0, , .		2
118	Learning robot behaviors by evolving genetic programs. , 0, , .		12
119	Evolving neural trees for time series prediction using Bayesian evolutionary algorithms. , 0, , .		6
120	Genetic programming of process decomposition strategies for evolvable hardware. , 0, , .		4
121	Bayesian evolutionary algorithms for evolving neural tree models of time series data. , 0, , .		1
122	Behavior evolution of autonomous mobile robot using genetic programming based on evolvable hardware. , 0, , .		2
123	Bayesian evolutionary algorithms for continuous function optimization. , 0, , .		4
124	Evolutionary calibration of sensors using genetic programming on evolvable hardware. , 0, , .		1
125	Continuous estimation of distribution algorithms with probabilistic principal component analysis. , 0, , .		7
126	Actively searching for committees of RBF networks using Bayesian evolutionary computation. , 0, , .		0

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127	Convergence properties of Bayesian evolutionary algorithms with population size greater than 1. , 0, , .		0
128	Document filtering boosted by unlabeled data. , 0, , .		0
129	Evolutionary optimization by distribution estimation with mixtures of factor analyzers. , 0, , .		1
130	Evolutionary sequence generation for reliable DNA computing. , 0, , .		18
131	DNA sequence optimization using constrained multi-objective evolutionary algorithm. , 0, , .		1
132	Molecular immunocomputing with application to alphabetical pattern recognition mimics the characterization of ABO blood type. , 0, , .		1
133	Text Classifiers Evolved on a Simulated DNA Computer. , 0, , .		7
134	Time series prediction using committee machines of evolutionary neural trees. , 0, , .		9