Liang Zhao

List of Publications by Year
in descending order

193 papers	2,759 citations	279798 23 h-index	223800 46 g-index
205 all docs	205 docs citations	205 times ranked	1824 citing authors

#	ARTICLE	IF	CITATIONS
1	Link Prediction Based on Stochastic Information Diffusion. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 3522-3532.	11.3	6
2	Stock market trend detection and automatic decision-making through a network-based classification model. Natural Computing, 2021, 20, 791-804.	3.0	4
3	A review and comparative analysis of coarsening algorithms on bipartite networks. European Physical Journal: Special Topics, 2021, 230, 2801-2811.	2.6	8
4	Network community detection via iterative edge removal in a flocking-like system. European Physical Journal: Special Topics, 2021, 230, 2843-2855.	2.6	1
5	A New Particle Competition Model for Community Detection with Application in Functional Brain Networks. , 2021, , .		0
6	Echo State Network Performance Analysis Using Non-random Topologies. Communications in Computer and Information Science, 2021, , 133-146.	0.5	1
7	Anomaly Detection in Brazilian Federal Government Purchase Cards Through Unsupervised Learning Techniques. Lecture Notes in Computer Science, 2021, , 19-32.	1.3	0
8	Global fire season severity analysis and forecasting. Computers and Geosciences, 2020, 134, 104339.	4.2	23
9	A tourist walk approach for internal and external outlier detection. Neurocomputing, 2020, 393, 203-213.	5.9	4
10	Spatiotemporal data analysis with chronological networks. Nature Communications, 2020, 11, 4036.	12.8	17
11	An Optimized Modularity-Based High Level Classification Model. , 2020, , .		0
12	Diversity-induced resonance for optimally suprathreshold signals. Chaos, 2020, 30, 103101.	2.5	14
13	Classifying El NiÃ±o-Southern Oscillation Combining Network Science and Machine Learning. IEEE Access, 2020, 8, 55711-55723.	4.2	10
14	Temporal Network Pattern Identification by Community Modelling. Scientific Reports, 2020, 10, 240.	3.3	6
15	Particle Competition for Unbalanced Community Detection in Complex Networks. Lecture Notes in Computer Science, 2020, , 322-336.	1.3	0
16	Predicting the Evolution of COVID-19 Cases and Deaths Through a Correlations-Based Temporal Network. Lecture Notes in Computer Science, 2020, , 397-411.	1.3	0
17	A new network-base high-level data classification methodology (Quipus) by modeling attribute-attribute interactions. , 2020, , .		0
18	Evaluating link prediction by diffusion processes in dynamic networks. Scientific Reports, 2019, 9, 10833.	3.3	9

#	Article	IF	Citations
19	Particle Competition for Multilayer Network Community Detection. , 2019, , .		7
20	Time series trend detection and forecasting using complex network topology analysis. Neural Networks, 2019, 117, 295-306.	5.9	26
21	Analyzing the Bills-Voting Dynamics and Predicting Corruption-Convictions Among Brazilian Congressmen Through Temporal Networks. Scientific Reports, 2019, 9, 16754.	3.3	11
22	A Network-Based Model for Optimizing Returns in the Stock Market. , 2019, , .		2
23	Particle swarm optimization for network-based data classification. Neural Networks, 2019, 110, 243-255.	5.9	36
24	From spatio-temporal data to chronological networks. , 2019, , .		8
25	NK Hybrid Genetic Algorithm for Clustering. IEEE Transactions on Evolutionary Computation, 2018, 22, 748-761.	10.0	38
26	Organizational Data Classification Based on the Importance Concept of Complex Networks. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 3361-3373.	11.3	20
27	Network Unfolding Map by Vertex-Edge Dynamics Modeling. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 405-418.	11.3	11
28	A scheme for high level data classification using random walk and network measures. Expert Systems With Applications, 2018, 92, 289-303.	7.6	17
29	A Network-Based High Level Data Classification Technique. , 2018, , .		11
30	Analysis of Graph Construction Methods in Supervised Data Classification. , 2018, , .		6
31	Feature Learning in Feature-Sample Networks Using Multi-Objective Optimization. , 2018, , .		0
32	Computing Burrows-Wheeler Similarity Distributions for String Collections. Lecture Notes in Computer Science, 2018, , 285-296.	1.3	2
33	Time Series Trend Detection and Forecasting Using Complex Network Topology Analysis. , 2018, , .		3
34	Advantages of Edge-Centric Collective Dynamics in Machine Learning Tasks. Journal of Applied Nonlinear Dynamics, 2018, 7, 269-285.	0.3	1
35	Attribute-based Decision Graphs: A framework for multiclass data classification. Neural Networks, 2017, 85, 69-84.	5.9	12
36	Structural outlier detection: A tourist walk approach. , 2017, , .		2

#	ARTICLE	IF	CITATIONS
37	Improving semantic role labeling using high-level classification in complex networks. , 2017, , .		0
38	Nature-Inspired Graph Optimization for Dimensionality Reduction. , 2017, , .		3
39	Random Walk in Feature-Sample Networks for Semi-supervised Classification. , 2016, , .		2
40	An embedded imputation method via Attribute-based Decision Graphs. Expert Systems With Applications, 2016, 57, 159-177.	7.6	15
41	A New Evaluation Function for Clustering. , 2016, , .		6
42	Network structural optimization based on swarm intelligence for highlevel classification. , 2016, , .		6
43	Semi-Supervised Classification by Particle Competition in Complex Networkâ€™s Edges. International Journal of Pattern Recognition and Artificial Intelligence, 2016, 30, 1660006.	1.2	0
44	Data heterogeneity consideration in semi-supervised learning. Expert Systems With Applications, 2016, 45, 234-247.	7.6	7
45	An object-based visual selection framework. Neurocomputing, 2016, 180, 35-54.	5.9	2
46	Musical rhythmic pattern extraction using relevance of communities in networks. Information Sciences, 2016, 329, 819-848.	6.9	11
47	A Network of Neural Oscillators for Fractal Pattern Recognition. Neural Processing Letters, 2016, 44, 149-159.	3.2	3
48	Case Study of Network-Based Unsupervised Learning: Stochastic Competitive Learning in Networks. , 2016, , 241-290.		0
49	Case Study of Network-Based Semi-Supervised Learning: Stochastic Competitive-Cooperative Learning in Networks. , 2016, , 291-321.		1
50	Network-Based Semi-Supervised Learning. , 2016, , 181-205.		0
51	Network-Based Unsupervised Learning. , 2016, , 143-180.		1
52	Machine Learning in Complex Networks. , 2016, , .		62
53	Complex Networks. , 2016, , 15-70.		1
54	Network Construction Techniques. , 2016, , 93-132.		2

#	ARTICLE	IF	CITATIONS
55	Time series clustering via community detection in networks. Information Sciences, 2016, 326, 227-242.	6.9	120
56	Network-Based Supervised Learning. , 2016, , 133-141.		0
57	Case Study of Network-Based Supervised Learning: High-Level Data Classification. , 2016, , 207-240.		0
58	Semi-supervised learning by edge domination in complex networks. , 2015, , .		0
59	Interactive image segmentation using particle competition and cooperation. , 2015, , .		6
60	Particle competition and cooperation for semi-supervised learning with label noise. Neurocomputing, 2015, 160, 63-72.	5.9	18
61	A Time Series Clustering Technique based on Community Detection in Networks. Procedia Computer Science, 2015, 53, 183-190.	2.0	12
62	High-level pattern-based classification via tourist walks in networks. Information Sciences, 2015, 294, 109-126.	6.9	32
63	Network-based supervised data classification by using an heuristic of ease of access. Neurocomputing, 2015, 149, 86-92.	5.9	13
64	Interactive Image Segmentation of Non-contiguous Classes Using Particle Competition and Cooperation. Lecture Notes in Computer Science, 2015, , 203-216.	1.3	2
65	An Object-Based Visual Selection Model Combining Physical Features and Memory. , 2014, , .		1
66	Regular graph construction for semi-supervised learning. Journal of Physics: Conference Series, 2014, 490, 012022.	0.4	8
67	Recognizing Fractal Patterns Using a Ring of Phase Oscillators. , 2014, , .		1
68	Detecting Time Series Periodicity Using Complex Networks. , 2014, , .		9
69	Rhythmic Pattern Extraction by Community Detection in Complex Networks. , 2014, , .		0
70	Evaluating and Comparing the IGraph Community Detection Algorithms. , 2014, , .		7
71	Network-based data classification: combining K-associated optimal graphs and high-level prediction. Journal of the Brazilian Computer Society, 2014, 20, .	1.3	11
72	A flocking-like technique to perform semi-supervised learning. , 2014, , .		1

#	Article	IF	Citations
73	K-associated optimal network for graph embedding dimensionality reduction. , 2014, , .		6
74	Imputation of missing data supported by Complete p-Partite attribute-based Decision Graphs. , 2014, , .		1
75	A semi-supervised classification technique based on interacting forces. Neurocomputing, 2014, 127, 43-51.	5.9	3
76	Effect of nonidentical signal phases on signal amplification of two coupled excitable neurons. Neurocomputing, 2014, 127, 21-29.	5.9	2
77	Phase-Noise-Induced Resonance in Arrays of Coupled Excitable Neural Models. IEEE Transactions on Neural Networks and Learning Systems, 2013, 24, 1339-1345.	11.3	0
78	An incremental learning algorithm based on the K-associated graph for non-stationary data classification. Information Sciences, 2013, 246, 52-68.	6.9	26
79	Gating-signal propagation by a feed-forward neural motif. Physical Review E, 2013, 88, 012910.	2.1	8
80	Fuzzy community structure detection by particle competition and cooperation. Soft Computing, 2013, 17, 659-673.	3.6	24
81	Classification of multiple observation sets via network modularity. Neural Computing and Applications, 2013, 23, 1923-1929.	5.6	5
82	Data clustering using controlled consensus in complex networks. Neurocomputing, 2013, 118, 132-140.	5.9	21
83	Detecting and preventing error propagation via competitive learning. Neural Networks, 2013, 41, 70-84.	5.9	10
84	Attribute-based Decision Graphs for multiclass data classification. , 2013, , .		5
85	Ensemble of complete P-partite graph classifiers for non-stationary environments. , 2013, , .		5
86	High Level Classification Totally Based on Complex Networks. , 2013, , .		4
87	A Comparison of Two Purity-Based Algorithms When Applied to Semi-supervised Streaming Data Classification. , 2013, , .		1
88	Computer-aided music composition with LSTM neural network and chaotic inspiration. , 2013, , .		14
89	Dimensionality reduction with the k-associated optimal graph applied to image classification. , 2013, , .		5
90	Pattern-Based Classification via a High Level Approach Using Tourist Walks in Networks. , 2013, , .		1

#	Article	IF	Citations
91	Handwritten digits recognition using a high level network-based approach. , 2013, , .		0
92	Selecting Nodes with Inhomogeneous Profile for Labeling for Network-Based Semi-supervised Learning. , 2013, , .		1
93	Handwritten Data Clustering Using Agents Competition in Networks. Journal of Mathematical Imaging and Vision, 2013, 45, 264-276.	1.3	9
94	A Network-Based Semi-supervised Outlier Detection Technique Using Particle Competition and Cooperation. , 2013, , .		2
95	Uncovering overlapping cluster structures via stochastic competitive learning. Information Sciences, 2013, 247, 40-61.	6.9	19
96	Investigation of complex dynamics in a recurrent neural network with network community structure and asymmetric weight matrix. , 2013, , .		0
97	High level data classification based on network entropy. , 2013, , .		1
98	Semi-supervised Learning with Concept Drift Using Particle Dynamics Applied to Network Intrusion Detection Data. , 2013, , .		7
99	Structural Relationships between Spiking Neural Networks and Functional Samples. , 2013, , .		0
100	Detecting and labeling representative nodes for network-based semi-supervised learning. , 2013, , .		3
101	Top-Down Biasing and Modulation for Object-Based Visual Attention. Lecture Notes in Computer Science, 2013, , 325-332.	1.3	4
102	Bias-Guided Random Walk for Network-Based Data Classification. Lecture Notes in Computer Science, 2013, , 375-384.	1.3	0
103	A Purity Measure Based Transductive Learning Algorithm. Lecture Notes in Computer Science, 2013, , 405-412.	1.3	1
104	Particle Competition and Cooperation in Networks for Semi-Supervised Learning. IEEE Transactions on Knowledge and Data Engineering, 2012, 24, 1686-1698.	5.7	56
105	Optimal signal amplification in weighted scale-free networks. Chaos, 2012, 22, 023128.	2.5	7
106	Particle Competition and Cooperation to Prevent Error Propagation from Mislabeled Data in Semi-supervised Learning. , 2012, , .		4
107	Firing Activity Induced by Nonidentical Signal Phases in Two Coupled Excitable Neurons. , 2012, , .		1
108	Preventing Error Propagation in Semi-supervised Learning. Lecture Notes in Computer Science, 2012, , 565-572.	1.3	1

#	Article	IF	Citations
109	Network-Based High Level Data Classification. IEEE Transactions on Neural Networks and Learning Systems, 2012, 23, 954-970.	11.3	73
110	Phase-disorder-induced firing activity in excitable neuronal networks with attractive and repulsive coupling. Neural Networks, 2012, 35, 40-45.	5.9	4
111	Detecting and Preventing Error Propagation via Competitive Learning. Procedia Computer Science, 2012, 13, 192-197.	2.0	1
112	An Energy Exchanging Mechanism for Data Clustering. , 2012, , .		0
113	Robustness Analysis of Network-Based Semi-supervised Learning Algorithms. , 2012, , .		0
114	An Object-Based Visual Selection Model with Bottom-Up and Top-Down Modulations. , 2012, , .		4
115	Using Interacting Forces to Perform Semi-supervised Learning. , 2012, , .		3
116	Using Katz Centrality to Classify Multiple Pattern Transformations. , 2012, , .		5
117	Particle competition and cooperation in networks for semi-supervised learning with concept drift. , 2012, , .		12
118	Detecting overlapping structures via network-based competitive learning. , 2012, , .		1
119	Model of top-down / bottom-up visual attention for location of salient objects in specific domains. , 2012, , .		6
120	Enhancing Weak Signal Transmission Through a Feedforward Network. IEEE Transactions on Neural Networks and Learning Systems, 2012, 23, 1506-1512.	11.3	6
121	QK-Means: A clustering technique based on community detection and K-Means for deployment of cluster head nodes. , 2012, , .		9
122	Partially labeled data stream classification with the semi-supervised K-associated graph. Journal of the Brazilian Computer Society, 2012, 18, 299-310.	1.3	15
123	Semi-supervised learning guided by the modularity measure in complex networks. Neurocomputing, 2012, 78, 30-37.	5.9	24
124	Network-Based Stochastic Semisupervised Learning. IEEE Transactions on Neural Networks and Learning Systems, 2012, 23, 451-466.	11.3	47
125	Stochastic Competitive Learning in Complex Networks. IEEE Transactions on Neural Networks and Learning Systems, 2012, 23, 385-398.	11.3	54
126	Signal amplification of active rotators with phase-shifted coupling. European Physical Journal B, 2012, 85, 1.	1.5	96

#	Article	IF	Citations
127	Stochastic Resonance in Excitable Neuronal System with Phase-Noise. Lecture Notes in Computer Science, 2012, , 304-310.	1.3	0
128	Controlled consensus time for community detection in complex networks. , 2011, , .		1
129	High Level Classification for Pattern Recognition. , 2011, , .		0
130	Network-based learning through particle competition for data clustering. , 2011, , .		0
131	Traffic Congestion on Clustered Random Complex Networks. Communications in Computer and Information Science, 2011, , 13-21.	0.5	1
132	A nonparametric classification method based on K-associated graphs. Information Sciences, 2011, 181, 5435-5456.	6.9	45
133	Selecting salient objects in real scenes: An oscillatory correlation model. Neural Networks, 2011, 24, 54-64.	5.9	25
134	Particle Competition and Cooperation for Uncovering Network Overlap Community Structure. Lecture Notes in Computer Science, 2011, , 426-433.	1.3	3
135	Phase-noise-induced resonance in a single neuronal system. Physical Review E, 2011, 84, 031916.	2.1	40
136	Generation of composed musical structures through recurrent neural networks based on chaotic inspiration. , 2011, , .		10
137	Stochastic Competitive Learning Applied to Handwritten Digit and Letter Clustering. , 2011, , .		1
138	Label propagation through neuronal synchrony. , 2010, , .		12
139	Characterizing chaotic melodies in automatic music composition. Chaos, 2010, 20, 033125.	2.5	9
140	Identifying abnormal nodes in complex networks by using random walk measure. , 2010, , .		2
141	Semi-supervised learning from imperfect data through particle cooperation and competition. , 2010, , .		19
142	Phase-disorder-induced double resonance of neuronal activity. Physical Review E, 2010, 82, 010902.	2.1	35
143	Identifying Abnormal Nodes in Protein-Protein Interaction Networks. , 2010, , .		0
144	Chaotic phase synchronization for visual selection. , 2009, , .		3

#	ARTICLE	IF	CITATIONS
145	Design of associative memories using cellular neural networks. Neurocomputing, 2009, 72, 2180-2188.	5.9	19
146	A network of integrate and fire neurons for visual selection. Neurocomputing, 2009, 72, 2198-2208.	5.9	6
147	Chaotic phase synchronization and desynchronization in an oscillator network for object selection. Neural Networks, 2009, 22, 728-737.	5.9	49
148	An oscillatory correlation model of object-based attention. , 2009, , .		7
149	Comparison of MTR Escape Design in Different Regions. , 2009, , .		0
150	Classification Based on the Optimal K-Associated Network. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2009, , 1167-1177.	0.3	7
151	Chaotic synchronization in 2D lattice for scene segmentation. Neurocomputing, 2008, 71, 2761-2771.	5.9	11
152	Chaotic synchronization in general network topology for scene segmentation. Neurocomputing, 2008, 71, 3360-3366.	5.9	21
153	Complex Network Community Detection Based on Swarm Aggregation. , 2008, , .		5
154	Data clustering based on complex network community detection. , 2008, , .		9
155	Particle competition for complex network community detection. Chaos, 2008, 18, 033107.	2.5	45
156	Visual Selection with Feature Contrast-Based Inhibition in a Network of Integrate and Fire Neurons. , 2008, , .		4
157	Pixel Clustering by Using Complex Network Community Detection Technique. , 2007, , .		3
158	A Visual Selection Mechanism Based on a Pulse-Coupled Neural Network. Neural Networks (IJCNN), International Joint Conference on, 2007, , .	0.0	5
159	Optimal structure of complex networks for minimizing traffic congestion. Chaos, 2007, 17, 043103.	2.5	25
160	A Visual Selection Mechanism Based on Network of Chaotic Wilson-Cowan Oscillators. , 2007, , .		2
161	A Network of Dynamically Coupled Elements for Pixel Clustering. Neural Networks (IJCNN), International Joint Conference on, 2007, , .	0.0	0
162	Visual Selection and Shifting Mechanisms Based on a Network of Chaotic Wilson-Cowan Oscillators. , 2007, , .		5

#	ARTICLE	IF	CITATIONS
163	Associative Memories Using Cellular Neural Networks. , 2007, , .		1
164	Attack induced cascading breakdown in complex networks. Journal of the Brazilian Computer Society, 2007, 13, 67-76.	1.3	8
165	Associative Memories Using Cellular Neural Networks. , 2007, , .		0
166	A Visual Selection Mechanism Based on Network of Chaotic Wilson-Cowan Oscillators. , 2007, , .		0
167	Pixel Clustering by Using Complex Network Community Detection Technique. , 2007, , .		0
168	A Pulse-Coupled Neural Network as A Simplified Bottom-Up Visual Attention Model. , 2006, , .		1
169	Lattice Synchronization of Neural Oscillators for Scene Segmentation. , 2006, , .		0
170	Chaotic dynamics for multi-value content addressable memory. Neurocomputing, 2006, 69, 1628-1636.	5.9	13
171	Complex networks: Dynamics and security. Pramana - Journal of Physics, 2005, 64, 483-502.	1.8	28
172	Transition to intermittent chaotic synchronization. Physical Review E, 2005, 72, 036212.	2.1	14
173	Tolerance of scale-free networks against attack-induced cascades. Physical Review E, 2005, 72, 025104.	2.1	107
174	Jamming in complex gradient networks. Physical Review E, 2005, 71, 065105.	2.1	55
175	Onset of traffic congestion in complex networks. Physical Review E, 2005, 71, 026125.	2.1	412
176	A Self-organized Network for Data Clustering. Lecture Notes in Computer Science, 2005, , 1189-1198.	1.3	0
177	Attack vulnerability of scale-free networks due to cascading breakdown. Physical Review E, 2004, 70, 035101.	2.1	263
178	Limits to chaotic phase synchronization. Europhysics Letters, 2004, 66, 324-330.	2.0	9
179	A dynamical model with adaptive pixel moving for microarray images segmentation. Real Time Imaging, 2004, 10, 189-195.	1.6	12
180	Pixel Clustering by Adaptive Pixel Moving and Chaotic Synchronization. IEEE Transactions on Neural Networks, 2004, 15, 1176-1185.	4.2	7

#	ARTICLE	IF	CITATIONS
181	Chaotic Synchronization for Scene Segmentation. International Journal of Modern Physics B, 2003, 17, 4387-4394.	2.0	9
182	A Network of Coupled Chaotic Maps for Adaptive Multi-Scale Image Segmentation. International Journal of Neural Systems, 2003, 13, 129-137.	5.2	11
183	A network of dynamically coupled chaotic maps for scene segmentation. IEEE Transactions on Neural Networks, 2001, 12, 1375-1385.	4.2	25
184	SCENE SEGMENTATION OF THE CHAOTIC OSCILLATOR NETWORK. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2000, 10, 1697-1708.	1.7	22
185	Scene Segmentation by Chaotic Synchronization and Desynchronization. Lecture Notes in Computer Science, 2000, , 473-481.	1.3	0
186	A biologically motivated paradigm for scene segmentation. , 0, , .		0
187	A network of globally coupled chaotic maps for adaptive multi-resolution image segmentation. , 0, , .		3
188	A dynamical model for multi-scale pixel clustering. , 0, , .		0
189	Chaotic associative recalls for fixed point attractor patterns. , 0, , .		0
190	Time series pattern identification by hierarchical community detection. European Physical Journal: Special Topics, 0, , 1.	2.6	4
191	Features of edge-centric collective dynamics in machine learning tasks. , 0, , .		0
192	A dynamically coupled chaotic oscillatory correlation network. , 0, , .		1
193	Clustered and deep echo state networks for signal noise reduction. Machine Learning, 0, , 1.	5.4	4