

Chuan Wu

List of Publications by Year in descending order

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173
papers

4,728
citations

218677

26
h-index

289244

40
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174
all docs

174
docs citations

174
times ranked

2986
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimus. , 2018, , .		230
2	A generic communication scheduler for distributed DNN training acceleration. , 2019, , .		156
3	Dynamic resource provisioning in cloud computing: A randomized auction approach. , 2014, , .		142
4	UUSee: Large-Scale Operational On-Demand Streaming with Random Network Coding. , 2010, , .		124
5	CloudMedia: When Cloud on Demand Meets Video on Demand. , 2011, , .		115
6	Moving Big Data to The Cloud: An Online Cost-Minimizing Approach. IEEE Journal on Selected Areas in Communications, 2013, 31, 2710-2721.	14.0	110
7	Online Scaling of NFV Service Chains Across Geo-Distributed Datacenters. IEEE/ACM Transactions on Networking, 2018, 26, 699-710.	3.8	95
8	Scaling Social Media Applications Into Geo-Distributed Clouds. IEEE/ACM Transactions on Networking, 2015, 23, 689-702.	3.8	86
9	Strategyproof auctions for balancing social welfare and fairness in secondary spectrum markets. , 2011, , .		80
10	Deep Learning-based Job Placement in Distributed Machine Learning Clusters. , 2019, , .		80
11	A truthful incentive mechanism for emergency demand response in colocation data centers. , 2015, , .		76
12	Proactive VNF provisioning with multi-timescale cloud resources: Fusing online learning and online optimization. , 2017, , .		75
13	An online auction framework for dynamic resource provisioning in cloud computing. , 2014, , .		72
14	Online Job Scheduling in Distributed Machine Learning Clusters. , 2018, , .		72
15	Dynamic pricing and profit maximization for the cloud with geo-distributed data centers. , 2014, , .		67
16	Orchestrating Bulk Data Transfers across Geo-Distributed Datacenters. IEEE Transactions on Cloud Computing, 2017, 5, 112-125.	4.4	67
17	An Efficient Cloud Market Mechanism for Computing Jobs With Soft Deadlines. IEEE/ACM Transactions on Networking, 2017, 25, 793-805.	3.8	62
18	Exploring large-scale peer-to-peer live streaming topologies. ACM Transactions on Multimedia Computing, Communications and Applications, 2008, 4, 1-23.	4.3	61

#	ARTICLE	IF	CITATIONS
19	DAPPLE. , 2021, , .		61
20	An Online Auction Framework for Dynamic Resource Provisioning in Cloud Computing. IEEE/ACM Transactions on Networking, 2016, 24, 2060-2073.	3.8	58
21	A Truthful Online Mechanism for Location-Aware Tasks in Mobile Crowd Sensing. IEEE Transactions on Mobile Computing, 2018, 17, 1737-1749.	5.8	58
22	rStream: Resilient and Optimal Peer-to-Peer Streaming with Rateless Codes. IEEE Transactions on Parallel and Distributed Systems, 2008, 19, 77-92.	5.6	56
23	Dynamic Bandwidth Auctions in Multioverlay P2P Streaming with Network Coding. IEEE Transactions on Parallel and Distributed Systems, 2008, 19, 806-820.	5.6	56
24	An online auction framework for dynamic resource provisioning in cloud computing. Performance Evaluation Review, 2014, 42, 71-83.	0.6	56
25	Scaling social media applications into geo-distributed clouds. , 2012, , .		55
26	An efficient auction mechanism for service chains in the NFV market. , 2016, , .		54
27	Profit-maximizing virtual machine trading in a federation of selfish clouds. , 2013, , .		53
28	Online Auctions in IaaS Clouds: Welfare and Profit Maximization With Server Costs. IEEE/ACM Transactions on Networking, 2017, 25, 1034-1047.	3.8	53
29	MultiGreen. , 2013, , .		50
30	Magellan: Charting Large-Scale Peer-to-Peer Live Streaming Topologies. , 2007, , .		49
31	Online VNF Scaling in Datacenters. , 2016, , .		48
32	Characterizing Peer-to-Peer Streaming Flows. IEEE Journal on Selected Areas in Communications, 2007, 25, 1612-1626.	14.0	46
33	Minimum-latency aggregation scheduling in wireless sensor networks under physical interference model. , 2010, , .		44
34	CloudMoV: Cloud-Based Mobile Social TV. IEEE Transactions on Multimedia, 2013, 15, 821-832.	7.2	43
35	Diagnosing Network-Wide P2P Live Streaming Inefficiencies. , 2009, , .		40
36	Optimal peer selection for minimum-delay peer-to-peer streaming with rateless codes. , 2005, , .		39

#	ARTICLE	IF	CITATIONS
37	SmartDPSS: Cost-Minimizing Multi-source Power Supply for Datacenters with Arbitrary Demand. , 2013, , .		39
38	Joint online transcoding and geo-distributed delivery for dynamic adaptive streaming. , 2014, , .		39
39	Cost-Minimizing Dynamic Migration of Content Distribution Services into Hybrid Clouds. IEEE Transactions on Parallel and Distributed Systems, 2015, 26, 3330-3345.	5.6	39
40	Learning Resource Allocation and Pricing for Cloud Profit Maximization. Proceedings of the AAAI Conference on Artificial Intelligence, 2019, 33, 7570-7577.	4.9	39
41	Latency-minimizing data aggregation in wireless sensor networks under physical interference model. Ad Hoc Networks, 2014, 12, 52-68.	5.5	38
42	Preemptive All-reduce Scheduling for Expediting Distributed DNN Training. , 2020, , .		38
43	Distilling Superior Peers in Large-Scale P2P Streaming Systems. , 2009, , .		37
44	Strategies of Conflict in Coexisting Streaming Overlays. , 2007, , .		36
45	Online Auctions in IaaS Clouds. , 2015, , .		36
46	An online procurement auction for power demand response in storage-assisted smart grids. , 2015, , .		36
47	Scaling Geo-Distributed Network Function Chains: A Prediction and Learning Framework. IEEE Journal on Selected Areas in Communications, 2019, 37, 1838-1850.	14.0	35
48	DL2: A Deep Learning-Driven Scheduler for Deep Learning Clusters. IEEE Transactions on Parallel and Distributed Systems, 2021, 32, 1947-1960.	5.6	35
49	Demand Response in Smart Grids: A Randomized Auction Approach. IEEE Journal on Selected Areas in Communications, 2015, 33, 2540-2553.	14.0	33
50	Online Stochastic Buy-Sell Mechanism for VNF Chains in the NFV Market. IEEE Journal on Selected Areas in Communications, 2017, 35, 392-406.	14.0	31
51	rStream. , 2005, , .		30
52	A Joint Online Transcoding and Delivery Approach for Dynamic Adaptive Streaming. IEEE Transactions on Multimedia, 2015, 17, 867-879.	7.2	30
53	Scheduling Frameworks for Cloud Container Services. IEEE/ACM Transactions on Networking, 2018, 26, 436-450.	3.8	30
54	Cost-minimizing dynamic migration of content distribution services into hybrid clouds. , 2012, , .		29

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55	Aggregation Latency-Energy Tradeoff in Wireless Sensor Networks with Successive Interference Cancellation. IEEE Transactions on Parallel and Distributed Systems, 2013, 24, 2160-2170.	5.6	29
56	vSkyConf. , 2013, , .		29
57	Responsive multipath TCP in SDN-based datacenters. , 2015, , .		28
58	On Dynamic Server Provisioning in Multichannel P2P Live Streaming. IEEE/ACM Transactions on Networking, 2011, 19, 1317-1330.	3.8	27
59	Dynamic Scaling of Virtualized, Distributed Service Chains: A Case Study of IMS. IEEE Journal on Selected Areas in Communications, 2017, 35, 2501-2511.	14.0	27
60	InstantLeap. , 2009, , .		27
61	Diagnosing network-wide P2P live streaming inefficiencies. ACM Transactions on Multimedia Computing, Communications and Applications, 2012, 8, 1-19.	4.3	26
62	An online incentive mechanism for emergency demand response in geo-distributed colocation data centers. , 2016, , .		26
63	Virtual Machine Trading in a Federation of Clouds: Individual Profit and Social Welfare Maximization. IEEE/ACM Transactions on Networking, 2016, 24, 1827-1840.	3.8	25
64	GPUNFV. , 2017, , .		25
65	RSMOA: A revenue and social welfare maximizing online auction for dynamic cloud resource provisioning. , 2014, , .		24
66	Space information flow: Multiple unicast. , 2012, , .		23
67	Core-Selecting Auctions for Dynamically Allocating Heterogeneous VMs in Cloud Computing. , 2014, , .		23
68	Online Learning-Assisted VNF Service Chain Scaling with Network Uncertainties. , 2017, , .		23
69	Online Auctions in IaaS Clouds. Performance Evaluation Review, 2015, 43, 3-15.	0.6	22
70	A Truthful $(1-\epsilon)$ -Optimal Mechanism for On-demand Cloud Resource Provisioning. IEEE Transactions on Cloud Computing, 2019, , 1-1.	4.4	22
71	An Online Algorithm for VNF Service Chain Scaling in Datacenters. IEEE/ACM Transactions on Networking, 2020, 28, 1061-1073.	3.8	22
72	A Resource Auction Based Allocation Mechanism in the Cloud Computing Environment. , 2012, , .		21

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73	Colocation Demand Response: Joint Online Mechanisms for Individual Utility and Social Welfare Maximization. IEEE Journal on Selected Areas in Communications, 2016, 34, 3978-3992.	14.0	21
74	An Online Auction Mechanism for Dynamic Virtual Cluster Provisioning in Geo-Distributed Clouds. IEEE Transactions on Parallel and Distributed Systems, 2017, 28, 677-688.	5.6	21
75	An Efficient Online Placement Scheme for Cloud Container Clusters. IEEE Journal on Selected Areas in Communications, 2019, 37, 1046-1058.	14.0	21
76	Diverse: application-layer service differentiation in peer-to-peer communications. IEEE Journal on Selected Areas in Communications, 2007, 25, 222-234.	14.0	20
77	Randomized auction design for electricity markets between grids and microgrids. , 2014, , .		20
78	Characterizing Deep Learning Training Workloads on Alibaba-PAI. , 2019, , .		20
79	A Smart Robotic Walker With Intelligent Close-Proximity Interaction Capabilities for Elderly Mobility Safety. Frontiers in Neurorobotics, 2020, 14, 575889.	2.8	20
80	Distributed Machine Learning through Heterogeneous Edge Systems. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 7179-7186.	4.9	20
81	Anonymous communication with network coding against traffic analysis attack. , 2011, , .		19
82	Cost-Effective Low-Delay Design for Multiparty Cloud Video Conferencing. IEEE Transactions on Multimedia, 2017, 19, 2760-2774.	7.2	19
83	A Scalable and Distributed Approach for NFV Service Chain Cost Minimization. , 2017, , .		19
84	A Shapley-Value Mechanism for Bandwidth On Demand between Datacenters. IEEE Transactions on Cloud Computing, 2018, 6, 19-32.	4.4	19
85	Signal Alignment: Enabling Physical Layer Network Coding for MIMO Networking. IEEE Transactions on Wireless Communications, 2013, 12, 3012-3023.	9.2	18
86	Optimal Rate Allocation in Overlay Content Distribution. Lecture Notes in Computer Science, 2007, , 678-690.	1.3	18
87	<title>On meeting P2P streaming bandwidth demand with limited supplies</title>. , 2008, , .		17
88	The streaming capacity of sparsely-connected P2P systems with distributed control. , 2011, , .		17
89	Auction-based P2P VoD streaming. ACM Transactions on Multimedia Computing, Communications and Applications, 2012, 8, 1-22.	4.3	17
90	Epidemic forwarding in mobile social networks. , 2012, , .		17

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91	Online algorithms for uploading deferrable big data to the cloud. , 2014, , .		17
92	Elastic parameter server load distribution in deep learning clusters. , 2020, , .		16
93	Fair rewarding in colocation data centers: Truthful mechanism for emergency demand response. , 2015, , .		15
94	Socially-optimal online spectrum auctions for secondary wireless communication. , 2015, , .		15
95	Enhancing Internet-Scale Video Service Deployment Using Microblog-Based Prediction. IEEE Transactions on Parallel and Distributed Systems, 2015, 26, 775-785.	5.6	15
96	Locality-aware streaming in hybrid P2P-cloud CDN systems. Peer-to-Peer Networking and Applications, 2015, 8, 320-335.	3.9	15
97	Optimizing distributed training deployment in heterogeneous GPU clusters. , 2020, , .		15
98	Guiding internet-scale video service deployment using microblog-based prediction. , 2012, , .		14
99	A Geometric Perspective to Multiple-Unicast Network Coding. IEEE Transactions on Information Theory, 2014, 60, 2884-2895.	2.4	14
100	A truthful (1- ϵ)-optimal mechanism for on-demand cloud resource provisioning. , 2015, , .		14
101	Fast Training of Deep Learning Models over Multiple GPUs. , 2020, , .		14
102	Utility-Maximizing Data Dissemination in Socially Selfish Cognitive Radio Networks. , 2011, , .		13
103	Peer-Assisted Social Media Streaming with Social Reciprocity. IEEE Transactions on Network and Service Management, 2013, 10, 84-94.	4.9	13
104	A Nonintrusive Elderly Home Monitoring System. IEEE Internet of Things Journal, 2021, 8, 2603-2614.	8.7	13
105	A spatial publish subscribe overlay for massively multiuser virtual environments. , 2010, , .		12
106	Stochastic optimal multirate multicast in socially selfish wireless networks. , 2012, , .		12
107	Online influence maximization in non-stationary Social Networks. , 2016, , .		12
108	Capacity of P2P On-Demand Streaming With Simple, Robust, and Decentralized Control. IEEE/ACM Transactions on Networking, 2016, 24, 2607-2620.	3.8	12

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109	Online scheduling of heterogeneous distributed machine learning jobs. , 2020, , .		12
110	Events recognition by semantic inference for sports video. , 0, , .		11
111	Strategies of Collaboration in Multi-Channel P2P VoD Streaming. , 2010, , .		11
112	A geometric framework for investigating the multiple unicast network coding conjecture. , 2012, , .		11
113	Randomized auction design for electricity markets between grids and microgrids. Performance Evaluation Review, 2014, 42, 99-110.	0.6	11
114	Optimal Posted Prices for Online Cloud Resource Allocation. Proceedings of the ACM on Measurement and Analysis of Computing Systems, 2017, 1, 1-26.	1.8	11
115	Improving Inter-domain Routing through Multi-agent Reinforcement Learning. , 2020, , .		11
116	Moving big data to the cloud. , 2013, , .		10
117	Cost-Minimizing Online VM Purchasing for Application Service Providers with Arbitrary Demands. , 2015, , .		10
118	An online mechanism for dynamic virtual cluster provisioning in geo-distributed clouds. , 2016, , .		10
119	Occupation-Oblivious Pricing of Cloud Jobs via Online Learning. , 2018, , .		10
120	Federated Private Clouds via Broker's Marketplace: A Stackelberg-Game Perspective. , 2014, , .		9
121	Online cost minimization for operating geo-distributed cloud CDNs. , 2015, , .		9
122	Cost-Effective Low-Delay Cloud Video Conferencing. , 2015, , .		9
123	Online Electricity Cost Saving Algorithms for Co-Location Data Centers. IEEE Journal on Selected Areas in Communications, 2015, 33, 2906-2919.	14.0	9
124	<i>NFVactor</i> : A Resilient NFV System Using the Distributed Actor Model. IEEE Journal on Selected Areas in Communications, 2019, 37, 586-599.	14.0	9
125	Echelon: Peer-to-Peer Network Diagnosis with Network Coding. IEEE International Workshop on Quality of Service, 2006, , .	0.0	8
126	Dynamic scaling of VoD services into hybrid clouds with cost minimization and QoS guarantee. , 2012, , .		8

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127	Hierarchical Virtual Machine Placement in Modular Data Centers. , 2015, , .		8
128	Dynamic VM Scaling: Provisioning and Pricing through an Online Auction. IEEE Transactions on Cloud Computing, 2021, 9, 131-144.	4.4	8
129	GADGET: Online Resource Optimization for Scheduling Ring-All-Reduce Learning Jobs. , 2022, , .		8
130	Differentially private recommender system with variational autoencoders. Knowledge-Based Systems, 2022, 250, 109044.	7.1	7
131	Efficient Pipeline Planning for Expedited Distributed DNN Training. , 2022, , .		7
132	Capacity of P2P on-demand streaming with simple, robust and decentralized control. , 2013, , .		6
133	<i>NetStar</i>: A Future/Promise Framework for Asynchronous Network Functions. IEEE Journal on Selected Areas in Communications, 2019, 37, 600-612.	14.0	6
134	FlowShader: a Generalized Framework for GPU-accelerated VNF Flow Processing. , 2019, , .		6
135	Online Placement and Scaling of Geo-Distributed Machine Learning Jobs via Volume-Discounting Brokerage. IEEE Transactions on Parallel and Distributed Systems, 2020, 31, 948-966.	5.6	6
136	A Truthful Incentive Mechanism for Emergency Demand Response in Geo-Distributed Colocation Data Centers. ACM Transactions on Modeling and Performance Evaluation of Computing Systems, 2016, 1, 1-23.	0.9	6
137	Joint Model and Data Adaptation for Cloud Inference Serving. , 2021, , .		6
138	Strategies of collaboration in multi-swarm peer-to-peer content distribution. Tsinghua Science and Technology, 2012, 17, 29-39.	6.1	5
139	Information multicast in (pseudo-)planar networks: Efficient network coding over small finite fields. , 2013, , .		5
140	Virtualized resource sharing in cloud radio access networks: An auction approach. Computer Communications, 2017, 114, 22-35.	5.1	5
141	Virtualized Network Coding Functions on the Internet. , 2017, , .		5
142	Online Scheduling Algorithm for Heterogeneous Distributed Machine Learning Jobs. IEEE Transactions on Cloud Computing, 2023, 11, 1514-1529.	4.4	5
143	Socially-optimal multi-hop secondary communication under arbitrary primary user mechanisms. , 2013, , .		4
144	The Streaming Capacity of Sparsely Connected P2P Systems With Distributed Control. IEEE/ACM Transactions on Networking, 2016, 24, 58-71.	3.8	4

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145	Control and Motion Scaling of A Compact Cable-driven Dental Robotic Manipulator. , 2019, , .		4
146	Outburst: Efficient Overlay Content Distribution with Rateless Codes. Lecture Notes in Computer Science, 2007, , 1208-1216.	1.3	4
147	Caching in Dynamic Environments: A Near-Optimal Online Learning Approach. IEEE Transactions on Multimedia, 2023, 25, 792-804.	7.2	4
148	Large-Scale Machine Learning Cluster Scheduling via Multi-Agent Graph Reinforcement Learning. IEEE Transactions on Network and Service Management, 2022, 19, 4962-4974.	4.9	4
149	Optimizing Task Placement and Online Scheduling for Distributed GNN Training Acceleration. , 2022, , .		4
150	Federated Graph Learning with Periodic Neighbour Sampling. , 2022, , .		4
151	InstantLeap: an architecture for fast neighbor discovery in large-scale P2P VoD streaming. Multimedia Systems, 2010, 16, 183-198.	4.7	3
152	Cost-minimizing preemptive scheduling of mapreduce workloads on hybrid clouds. , 2013, , .		3
153	More is Better? Measurement of MPTCP Based Cellular Bandwidth Aggregation in the Wild. , 2016, , .		3
154	An Online Emergency Demand Response Mechanism for Cloud Computing. ACM Transactions on Modeling and Performance Evaluation of Computing Systems, 2018, 3, 1-25.	0.9	3
155	Near-Optimal Topology-adaptive Parameter Synchronization in Distributed DNN Training. , 2021, , .		3
156	Adversarial Deep Learning for Online Resource Allocation. ACM Transactions on Modeling and Performance Evaluation of Computing Systems, 2021, 6, 1-25.	0.9	3
157	Peer-assisted online games with social reciprocity. , 2011, , .		2
158	Exploring the Sustainability of Credit-incentivized Peer-to-Peer Content Distribution. , 2012, , .		2
159	An Emergency Demand Response Mechanism for Cloud Computing. Performance Evaluation Review, 2016, 44, 58-63.	0.6	2
160	A Provably-Efficient Online Algorithm for Re-Utilizing Unused VM Resources for Edge Providers. , 2019, , .		2
161	Fair Online Power Capping for Emergency Handling in Multi-Tenant Cloud Data Centers. IEEE Transactions on Cloud Computing, 2020, 8, 152-166.	4.4	2
162	Toward Efficient Online Scheduling for Distributed Machine Learning Systems. IEEE Transactions on Network Science and Engineering, 2022, 9, 1951-1969.	6.4	2

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163	Double Auction for Resource Allocation in Cloud Computing. , 2017, , .		2
164	Deep Learning-driven Front-Following within Close Proximity: a Hands-Free Control Model on a Smart Walker. , 2022, , .		2
165	Physical Layer Network Coding with Signal Alignment for MIMO Wireless Networks. , 2011, , .		1
166	Buddy Routing: A Routing Paradigm for NanoNets Based on Physical Layer Network Coding. , 2012, , .		1
167	On uniform matroidal networks. , 2013, , .		1
168	Software Defined Mobile Multicast. , 2015, , .		1
169	Online Cloud Resource Allocation and Pricing with Server Speed Scaling. , 2018, , .		1
170	Enhancing the Anonymity in Information Diffusion Based on Obfuscated Coded Data. IEEE Transactions on Network Science and Engineering, 2019, 6, 968-982.	6.4	1
171	A Sum-of-Ratios Multi-Dimensional-Knapsack Decomposition for DNN Resource Scheduling. , 2021, , .		1
172	Characterizing cascade dynamics in a microblogging system. , 2014, , .		0
173	Socially-Optimal ISP-Aware P2P Content Distribution via a Primal-Dual Approach. , 2014, , .		0