Mung Chiang

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

132 papers	8,130 citations	41 h-index	89 g-index
151 ext. papers	9,712 ext. citations	5.8 avg, IF	6.64 L-index

#	Paper	IF	Citations
132	A Novel Framework for Cost Constrained Network Sharing. *IEEE Transactions on Mobile Computing*, **2022**, 1-1	4.6	
131	Device Sampling for Heterogeneous Federated Learning: Theory, Algorithms, and Implementation **2021**,		6
130	Minimizing Age-of-Information in Heterogeneous Multi-Channel Systems **2021**,		2
129	Fast-Convergent Federated Learning. *IEEE Journal on Selected Areas in Communications*, **2021**, 39, 201-218	14.2	41
128	Pricing Tradeoffs for Data Analytics in Fog□Cloud Scenarios **2020**, 83-106		1
127	Characterizing task completion latencies in multi-point multi-quality fog computing systems. *Computer Networks*, **2020**, 181, 107526	5.4	5
126	Personalized augmented reality via fog-based imitation learning **2019**,		2
125	Personalized Thread Recommendation for MOOC Discussion Forums. *Lecture Notes in Computer Science*, **2019**, 725-740	0.9	5
124	Early Detection Prediction of Learning Outcomes in Online Short-Courses via Learning Behaviors. *IEEE Transactions on Learning Technologies*, **2019**, 12, 44-58	4	24
123	ProCMotive **2018**, 2, 1-31		2
122	Adaptive Fog-Based Output Security for Augmented Reality **2018**,		13
121	On the Efficiency of Online Social Learning Networks. *IEEE/ACM Transactions on Networking*, **2018**, 26, 2076-2089	3.8	7
120	Virtualized Control Over Fog: Interplay Between Reliability and Latency. *IEEE Internet of Things Journal*, **2018**, 5, 5030-5045	10.7	14
119	Model Predictive Compression for Drone Video Analytics **2018**,		5
118	Optimal sleeping: models and experiments for energy-delay tradeoff. *International Journal of Systems Science: Operations and Logistics*, **2017**, 4, 356-371	2.6	2
117	Customized Data Plans for Mobile Users: Feasibility and Benefits of Data Trading. *IEEE Journal on Selected Areas in Communications*, **2017**, 35, 949-963	14.2	15
116	Behavior-Based Grade Prediction for MOOCs Via Time Series Neural Networks. *IEEE Journal on Selected Topics in Signal Processing*, **2017**, 1-1	7.5	38

115	A Survey of Client-Controlled HetNets for 5G. *IEEE Access*, **2017**, 5, 2842-2854	3.5	15
114	. *IEEE/ACM Transactions on Networking*, **2017**, 25, 406-419	3.8	33
113	Decomposing Data Analytics in Fog Networks **2017**,		5
112	On the Efficiency of Social Recommender Networks. *IEEE/ACM Transactions on Networking*, **2016**, 24, 2512-2524	3.8	16
111	Making 802.11 DCF Near-Optimal: Design, Implementation, and Evaluation. *IEEE/ACM Transactions on Networking*, **2016**, 24, 1745-1758	3.8	17
110	Social learning networks: Efficiency optimization for MOOC forums **2016**,		16
109	Fog and IoT: An Overview of Research Opportunities. *IEEE Internet of Things Journal*, **2016**, 3, 854-864	10.7	1270
108	Internet of Things Session Management Over LTE: Balancing Signal Load, Power, and Delay. *IEEE Internet of Things Journal*, **2016**, 3, 339-353	10.7	21
107	Mining MOOC Clickstreams: Video-Watching Behavior vs. In-Video Quiz Performance. *IEEE Transactions on Signal Processing*, **2016**, 64, 3677-3692	4.8	42
106	Quantifying Political Leaning from Tweets, Retweets, and Retweeters. *IEEE Transactions on Knowledge and Data Engineering*, **2016**, 28, 2158-2172	4.2	44
105	Individualization for Education at Scale: MIIC Design and Preliminary Evaluation. *IEEE Transactions on Learning Technologies*, **2015**, 8, 136-148	4	37
104	Corrections to "Link-State Routing With Hop-By-Hop Forwarding Can Achieve Optimal Traffic Engineering" [Dec 11 1717-1730]. *IEEE/ACM Transactions on Networking*, **2015**, 23, 1702-1703	3.8	3
103	MOOC performance prediction via clickstream data and social learning networks **2015**,		78
102	. *IEEE Transactions on Learning Technologies*, **2014**, 7, 346-359	4	110
101	Delay of Social Search on Small-World Graphs. *Journal of Mathematical Sociology*, **2014**, 38, 1-46	1.2	10
100	Distributed robust optimization (DRO), part I: framework and example. *Optimization and Engineering*, **2014**, 15, 35-67	2.1	12
99	Fast Algorithms and Performance Bounds for Sum Rate Maximization in Wireless Networks. *IEEE/ACM Transactions on Networking*, **2013**, 21, 706-719	3.8	89
98	Pricing-Based Decentralized Spectrum Access Control in Cognitive Radio Networks. *IEEE/ACM Transactions on Networking*, **2013**, 21, 522-535	3.8	47

97	AMUSE: Empowering users for cost-aware offloading with throughput-delay tradeoffs **2013**,		27
96	From Technological Networks to Social Networks. *IEEE Journal on Selected Areas in Communications* , **2013**, 31, 548-572	14.2	58
95	Multiresource Allocation: Fairness-Efficiency Tradeoffs in a Unifying Framework. *IEEE/ACM Transactions on Networking*, **2013**, 21, 1785-1798	3.8	78
94	Selfish Random Access over Wireless Channels with Multipacket Reception. *IEEE Journal on Selected Areas in Communications*, **2012**, 30, 138-152	14.2	9
93	Throughput and Delay Performance of DSL Broadband Access with Cross-Layer Dynamic Spectrum Management. *IEEE Transactions on Communications*, **2012**, 60, 2700-2711	6.9	4
92	Optimized Day-Ahead Pricing for Smart Grids with Device-Specific Scheduling Flexibility. *IEEE Journal on Selected Areas in Communications*, **2012**, 30, 1075-1085	14.2	141
91	Distributed Nonconvex Power Control using Gibbs Sampling. *IEEE Transactions on Communications*, **2012**, 60, 3886-3898	6.9	19
90	Power Control for Cognitive Radio Networks: Axioms, Algorithms, and Analysis. *IEEE/ACM Transactions on Networking*, **2012**, 20, 878-891	3.8	33
89	Content aware optimization for video delivery over WCDMA. *Eurasip Journal on Wireless Communications and Networking*, **2012**, 2012,	3.2	5
88	Iterative resource pooling for bandwidth allocation in TDM-PON: algorithm, convergence and experimental evaluation. *Photonic Network Communications*, **2012**, 24, 138-150	1.7	2
87	Multi-resource allocation: Fairness-efficiency tradeoffs in a unifying framework **2012**,		78
86	Distributed wide-area traffic management for cloud services. *Performance Evaluation Review*, **2012**, 40, 409-410	0.4	4
85	Maximizing Sum Rate and Minimizing MSE on Multiuser Downlink: Optimality, Fast Algorithms and Equivalence via Max-min SINR. *IEEE Transactions on Signal Processing*, **2011**, 59, 6127-6143	4.8	97
84	Measuring fairness: Axioms and applications **2011**,		2
83	Revenue sharing among ISPs in two-sided markets **2011**,		36
82	Time-Dependent Broadband Pricing: Feasibility and Benefits **2011**,		31
81	Stability and Benefits of Suboptimal Utility Maximization. *IEEE/ACM Transactions on Networking*, **2011**, 19, 1194-1207	3.8	6
80	Energy Conservation and Interference Mitigation: From Decoupling Property to Win-Win Strategy. *IEEE Transactions on Wireless Communications*, **2011**, 10, 3943-3955	9.6	9

79	Resource Allocation over Network Dynamics without Timescale Separation **2010**,		23
78	Globally Optimal Distributed Power Control for Nonconcave Utility Maximization **2010**,		8
77	Energy Efficient Assisted GPS Measurement and Path Reconstruction for People Tracking **2010**,		8
76	An Axiomatic Theory of Fairness in Network Resource Allocation **2010**,		174
75	Pricing under Constraints in Access Networks: Revenue Maximization and Congestion Management **2010**,		68
74	Equilibrium of Heterogeneous Congestion Control: Optimality and Stability. *IEEE/ACM Transactions on Networking*, **2010**, 18, 844-857	3.8	20
73	QoS-revenue tradeoff with time-constrained ISP pricing **2010**,		7
72	Online Content Trading: Sharing Mart System and Auction Experiments **2010**,		2
71	Proxy-P2P Streaming under the Microscope: Fine-Grain Measurement of a Configurable Platform **2010**,		5
70	Network resource allocation for competing multiple description transmissions. *IEEE Transactions on Communications*, **2010**, 58, 1493-1504	6.9	2
69	Average Message Delivery Time for Small-World Networks in the Continuum Limit. *IEEE Transactions on Information Theory*, **2010**, 56, 4447-4470	2.8	22
68	Intelligent Video Network Engineering with Distributed Optimization: Two Case Studies. *Studies in Computational Intelligence*, **2010**, 253-290	0.8	1
67	Implementing utility-optimal CSMA **2009**,		20
66	Multi-Path Key Establishment against REM Attacks in Wireless Ad Hoc Networks **2009**,		2
65	Utility-optimal random access: Reduced complexity, fast convergence, and robust performance. *IEEE Transactions on Wireless Communications*, **2009**, 8, 898-911	9.6	37
64	Nonconvex Optimization for Communication Networks. *Advances in Mechanics and Mathematics*, **2009**, 137-196	0.2	26
63	Stability, Fairness, and Performance: A Flow-Level Study on Nonconvex and Time-Varying Rate Regions. *IEEE Transactions on Information Theory*, **2009**, 55, 3437-3456	2.8	9
62	Optimal Rate-Reliability-Delay Tradeoff in Networks with Composite Links. *IEEE Transactions on Communications*, **2009**, 57, 1390-1401	6.9	20

61	Utility-optimal random access without message passing. *IEEE Transactions on Wireless Communications*, **2009**, 8, 1073-1079	9.6	38
60	On unbounded path-loss models: effects of singularity on wireless network performance. *IEEE Journal on Selected Areas in Communications*, **2009**, 27, 1078-1092	14.2	120
59	Scheduling and Resource Allocation for SVC Streaming Over OFDM Downlink Systems. *IEEE Transactions on Circuits and Systems for Video Technology*, **2009**, 19, 1549-1555	6.4	45
58	Optimal Transmission Scheduling for Scalable Wireless Video Broadcast with Rateless Erasure Correction Code **2009**,		4
57	Energy-Efficient Video Transmission Scheduling for Wireless Peer-to-Peer Live Streaming **2009**,		6
56	Cooperative content distribution and traffic engineering in an ISP network. *Performance Evaluation Review*, **2009**, 37, 239-250	0.4	13
55	The Impact of Stochastic Noisy Feedback on Distributed Network Utility Maximization. *IEEE Transactions on Information Theory*, **2008**, 54, 645-665	2.8	48
54	Optimal Power Allocation for Distributed Detection Over MIMO Channels in Wireless Sensor Networks. *IEEE Transactions on Signal Processing*, **2008**, 56, 4124-4140	4.8	68
53	Distributed Uplink Power Control for Optimal SIR Assignment in Cellular Data Networks. *IEEE/ACM Transactions on Networking*, **2008**, 16, 1420-1433	3.8	96
52	Auction-based resource allocation for multi-relay asynchronous cooperative networks. *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, **2008**,	1.6	7
51	Auction-Based Resource Allocation for Cooperative Communications. *IEEE Journal on Selected Areas in Communications*, **2008**, 26, 1226-1237	14.2	192
50	Elastic service availability: utility framework and optimal provisioning. *IEEE Journal on Selected Areas in Communications*, **2008**, 26, 55-65	14.2	17
49	Joint Source Adaptation and Resource Allocation for Multi-User Wireless Video Streaming. *IEEE Transactions on Circuits and Systems for Video Technology*, **2008**, 18, 582-595	6.4	78
48	Content-Aware Distortion-Fair Video Streaming in Networks **2008**,		9
47	Stability of congestion control schemes with delay sensitive traffic **2008**,		1
46	Throughput of random access without message passing **2008**,		37
45	Expected message delivery time for small-world networks in the continuum limit **2008**,		1
44	Stochastic network utility maximisation tribute to Kelly's paper published in this journal a decade ago. *European Transactions on Telecommunications*, **2008**, 19, 421-442		66

43	Distributed Rate Allocation for Inelastic Flows. *IEEE/ACM Transactions on Networking*, **2007**, 15, 1240-1253	3.8	92
42	Optimization Based Rate Control for Multicast with Network Coding **2007**,		75
41	. *IEEE Transactions on Automatic Control*, **2007**, 52, 2254-2269	5.9	173
40	Autonomous Spectrum Balancing for Digital Subscriber Lines. *IEEE Transactions on Signal Processing* , **2007**, 55, 4241-4257	4.8	124
39	Re-examining Probabilistic Versus Deterministic Key Management **2007**,		9
38	Joint Beamforming and Power Control for Optimal SIR Assignment in Cellular Uplinks **2007**,		3
37	Congestion Control in Networks with Delay Sensitive Traffic **2007**,		14
36	Utility-optimal random-access control. *IEEE Transactions on Wireless Communications*, **2007**, 6, 2741-2751	9.6	84
35	. *IEEE Transactions on Wireless Communications*, **2007**, 6, 2640-2651	9.6	547
34	Layering as Optimization Decomposition: A Mathematical Theory of Network Architectures. *Proceedings of the IEEE*, **2007**, 95, 255-312	14.3	814
33	Equilibrium of Heterogeneous Congestion Control: Existence and Uniqueness. *IEEE/ACM Transactions on Networking*, **2007**, 15, 824-837	3.8	53
32	Power Allocation in Distributed Detection with Wireless Sensor Networks **2006**,		4
31	Equilibrium of Heterogeneous Congestion Control Protocols **2006**,		8
30	Jointly optimal congestion and contention control based on network utility maximization. *IEEE Communications Letters*, **2006**, 10, 216-218	3.8	71
29	Layering As Optimization Decomposition: Current Status and Open Issues **2006**,		8
28	Layering as Optimization Decomposition: Questions and Answers **2006**,		24
27	A game-theoretic approach to energy-efficient power control in multicarrier CDMA systems. *IEEE Journal on Selected Areas in Communications*, **2006**, 24, 1115-1129	14.2	172
26	Price-based distributed algorithms for rate-reliability tradeoff in network utility maximization. *IEEE Journal on Selected Areas in Communications*, **2006**, 24, 962-976	14.2	81

25	. *IEEE Journal on Selected Areas in Communications*, **2006**, 24, 1439-1451	14.2	1035
24	Joint rate control and scheduling for wireless uplink video streaming. *Journal of Zhejiang University: Science A*, **2006**, 7, 801-810	2.1	
23	Alternative decompositions and distributed algorithms for network utility maximization **2005**,		3
22	Geometric Programming for Communication Systems. *Foundations and Trends in Communications and Information Theory*, **2005**, 2, 1-154	6.1	185
21	Channel capacity and state estimation for state-dependent Gaussian channels. *IEEE Transactions on Information Theory*, **2005**, 51, 1486-1495	2.8	67
20	Balancing transport and physical Layers in wireless multihop networks: jointly optimal congestion control and power control. *IEEE Journal on Selected Areas in Communications*, **2005**, 23, 104-116	14.2	176
19	Solving nonconvex power control problems in wireless networks: low SIR regime and distributed algorithms **2005**,		2
18	Geometric programming duals of channel capacity and rate distortion. *IEEE Transactions on Information Theory*, **2004**, 50, 245-258	2.8	59
17	Distributed Optimization of Coupled Systems With Applications to Network Utility Maximization		2
16	Reverse Engineering MAC		11
15	Optimal and suboptimal finger selection algorithms for MMSE RAKE receivers in impulse radio ultra-wideband systems		9
14	The value of clustering in distributed estimation for sensor networks		3
13	A genetic algorithm based finger selection scheme for UWB MMSE rake receivers		9
12	Distributed Utility Maximization for Network Coding Based Multicasting: A Critical Cut Approach		1
11	Layering As Optimization Decomposition: Framework and Examples		4
10	Balancing supply and demand of bandwidth in wireless cellular networks: utility maximization over powers and rates		26
9	To layer or not to layer: balancing transport and physical layers in wireless multihop networks		45
8	Convex optimization of output link scheduling and active queue management in QoS constrained packet switches		2

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7	QoS and fairness constrained convex optimization of resource allocation for wireless cellular and ad hoc networks	100
6	Distributed network control through sum product algorithm on graphs	6
5	Resource allocation for QoS provisioning in wireless ad hoc networks	10
4	Tradeoff between message and state information rates	6
3	Robust and QoS constrained optimization of power control in wireless cellular networks	6
2	Writing on colored paper	13
1	Mind Your Own Bandwidth24-51	