Matti Latva-aho

List of Publications by Year in descending order

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135 papers	4,102 citations	136740 32 h-index	143772 57 g-index
135 all docs	135 docs citations	135 times ranked	3616 citing authors

#	Article	IF	Citations
1	Precoding for Full Duplex Multiuser MIMO Systems: Spectral and Energy Efficiency Maximization. IEEE Transactions on Signal Processing, 2013, 61, 4038-4050.	3.2	245
2	On the spectral efficiency of full-duplex small cell wireless systems. IEEE Transactions on Wireless Communications, 2014, 13, 4896-4910.	6.1	224
3	Ultra Dense Small Cell Networks: Turning Density Into Energy Efficiency. IEEE Journal on Selected Areas in Communications, 2016, 34, 1267-1280.	9.7	139
4	On the Joint Impact of Beamwidth and Orientation Error on Throughput in Directional Wireless Poisson Networks. IEEE Transactions on Wireless Communications, 2014, 13, 7072-7085.	6.1	136
5	Performance of Block-Markov Full Duplex Relaying with Self Interference in Nakagami-m Fading. IEEE Wireless Communications Letters, 2013, 2, 311-314.	3.2	130
6	Joint Design of Tx-Rx Beamformers in MIMO Downlink Channel. IEEE Transactions on Signal Processing, 2007, 55, 4639-4655.	3.2	128
7	Resource Allocation for Cross-Layer Utility Maximization in Wireless Networks. IEEE Transactions on Vehicular Technology, 2011, 60, 2790-2809.	3.9	116
8	Six Key Features of Machine Type Communication in 6G. , 2020, , .		108
9	Micro Operators to Boost Local Service Delivery in 5G. Wireless Personal Communications, 2017, 95, 69-82.	1.8	100
10	Weighted Sum-Rate Maximization for Full-Duplex MIMO Interference Channels. IEEE Transactions on Communications, 2015, 63, 801-815.	4.9	95
11	Massive Wireless Energy Transfer: Enabling Sustainable IoT Toward 6G Era. IEEE Internet of Things Journal, 2021, 8, 8816-8835.	5.5	94
12	Ultra-Reliable and Low Latency Communication in mmWave-Enabled Massive MIMO Networks. IEEE Communications Letters, 2017, 21, 2041-2044.	2.5	92
13	Models for the modern power grid. European Physical Journal: Special Topics, 2014, 223, 2423-2437.	1.2	89
14	6G Vision, Value, Use Cases and Technologies From European 6G Flagship Project Hexa-X. IEEE Access, 2021, 9, 160004-160020.	2.6	88
15	Weighted Sum-Rate Maximization for a Set of Interfering Links via Branch and Bound. IEEE Transactions on Signal Processing, 2011, 59, 3977-3996.	3.2	84
16	Statistical Analysis of Self-Organizing Networks With Biased Cell Association and Interference Avoidance. IEEE Transactions on Vehicular Technology, 2013, 62, 1950-1961.	3.9	83
17	On regulations for 5G: Micro licensing for locally operated networks. Telecommunications Policy, 2018, 42, 622-635.	2.6	83
18	Effects of Outdated CSI on the Secrecy Performance of MISO Wiretap Channels with Transmit Antenna Selection. IEEE Communications Letters, 2013, 17, 864-867.	2.5	80

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19	6Genesis Flagship Program: Building the Bridges Towards 6G-Enabled Wireless Smart Society and Ecosystem. , 2018, , .		76
20	Business Models for Local 5G Micro Operators. IEEE Transactions on Cognitive Communications and Networking, 2019, 5, 730-740.	4.9	75
21	Caching in Wireless Small Cell Networks: A Storage-Bandwidth Tradeoff. IEEE Communications Letters, 2016, 20, 1175-1178.	2.5	72
22	Joint Load Balancing and Interference Mitigation in 5G Heterogeneous Networks. IEEE Transactions on Wireless Communications, 2017, 16, 6032-6046.	6.1	62
23	Resource optimization and power allocation in in-band full duplex-enabled non-orthogonal multiple access networks. IEEE Journal on Selected Areas in Communications, 2017, 35, 2860-2873.	9.7	57
24	Dynamic Clustering and on/off Strategies for Wireless Small Cell Networks. IEEE Transactions on Wireless Communications, 2016, 15, 2164-2178.	6.1	54
25	Backhaul-Aware Interference Management in the Uplink of Wireless Small Cell Networks. IEEE Transactions on Wireless Communications, 2013, 12, 5813-5825.	6.1	49
26	Effects of Feedback Delay in Partial Relay Selection Over Nakagami- m Fading Channels. IEEE Transactions on Vehicular Technology, 2012, 61, 1620-1634.	3.9	46
27	On Dimensions of OTA Setups for Massive MIMO Base Stations Radiated Testing. IEEE Access, 2016, 4, 5971-5981.	2.6	45
28	Channel coding for enhanced mobile broadband communication in 5G systems. , 2017, , .		44
29	Analysis of Spectrum Valuation Elements for Local 5G Networks: Case Study of 3.5-GHz Band. IEEE Transactions on Cognitive Communications and Networking, 2019, 5, 741-753.	4.9	43
30	Decentralized Coordinated Downlink Beamforming via Primal Decomposition. IEEE Signal Processing Letters, 2011, 18, 647-650.	2.1	42
31	Joint Path Selection and Rate Allocation Framework for 5G Self-Backhauled mm-wave Networks. IEEE Transactions on Wireless Communications, 2019, 18, 2431-2445.	6.1	41
32	Multi-Operator Spectrum Sharing for Small Cell Networks: A Matching Game Perspective. IEEE Transactions on Wireless Communications, 2017, 16, 3761-3774.	6.1	40
33	Coordination Mechanisms for Self-Organizing Femtocells in Two-Tier Coexistence Scenarios. IEEE Transactions on Wireless Communications, 2012, 11, 2212-2223.	6.1	39
34	Hexa-X The European 6G flagship project. , 2021, , .		36
35	Average Rate and Error Probability Analysis in Short Packet Communications Over RIS-Aided URLLC Systems. IEEE Transactions on Vehicular Technology, 2021, 70, 10320-10334.	3.9	36
36	Aggregation and Resource Scheduling in Machine-Type Communication Networks: A Stochastic Geometry Approach. IEEE Transactions on Wireless Communications, 2018, 17, 4750-4765.	6.1	34

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37	An Adaptive Transmission Scheme for Cognitive Decode-and-Forward Relaying Networks: Half Duplex, Full Duplex, or No Cooperation. IEEE Transactions on Wireless Communications, 2016, 15, 5586-5602.	6.1	29
38	Ultra-Low Latency, Low Energy, and Massiveness in the 6G Era via Efficient CSIT-Limited Scheme. IEEE Communications Magazine, 2020, 58, 56-61.	4.9	29
39	Physical Layer Security in MIMO OSTBC Line-of-Sight Wiretap Channels with Arbitrary Transmit/Receive Antenna Correlation. IEEE Wireless Communications Letters, 2013, 2, 467-470.	3.2	28
40	Vehicle-to-vehicle radio channel characterization in urban environment at 2.3 GHz and 5.25 GHz. , 2014, , .		28
41	Linear Precoder-Decoder Design of MIMO Device-to-Device Communication Underlaying Cellular Communication. IEEE Transactions on Communications, 2014, 62, 4304-4319.	4.9	28
42	Co-Primary Multi-Operator Resource Sharing for Small Cell Networks. IEEE Transactions on Wireless Communications, 2015, 14, 3120-3130.	6.1	28
43	Ultra-Reliable Communication in 5G mmWave Networks: A Risk-Sensitive Approach. IEEE Communications Letters, 2018, 22, 708-711.	2.5	27
44	Effective Capacity and Power Allocation for Machine-Type Communication. IEEE Transactions on Vehicular Technology, 2019, 68, 4098-4102.	3.9	27
45	Secure Beamforming Design for Physical Layer Network Coding Based MIMO Two-Way Relaying. IEEE Communications Letters, 2014, 18, 1270-1273.	2.5	25
46	Secrecy Analysis of Transmit Antenna Selection Cooperative Schemes With No Channel State Information at the Transmitter. IEEE Transactions on Communications, 2015, 63, 1330-1342.	4.9	25
47	Dynamic Inter-Operator Spectrum Sharing via Lyapunov Optimization. IEEE Transactions on Wireless Communications, 2017, 16, 6365-6381.	6.1	25
48	Transmission strategies for full duplex multiuser MIMO systems. , 2012, , .		24
49	Infrastructure Sharing for Mobile Network Operators: Analysis of Trade-Offs and Market. IEEE Transactions on Mobile Computing, 2018, 17, 2804-2817.	3.9	23
50	On the performance of non-orthogonal multiple access in the finite blocklength regime. Ad Hoc Networks, 2019, 84, 148-157.	3.4	23
51	Parallel Interference Cancellation in Multiuser CDMA Channel Estimation. Wireless Personal Communications, 1998, 7, 171-195.	1.8	22
52	Frames FMA2 widebandâ€CDMA for UMTS. European Transactions on Telecommunications, 1998, 9, 325-335.	1.2	21
53	Joint Power Control and Rate Allocation Enabling Ultra-Reliability and Energy Efficiency in SIMO Wireless Networks. IEEE Transactions on Communications, 2019, 67, 5768-5782.	4.9	21
54	On the Performance of Secure Full-Duplex Relaying under Composite Fading Channels. IEEE Signal Processing Letters, 2015, 22, 867-870.	2.1	19

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55	Decentralized Robust Beamforming for Coordinated Multi-Cell MISO Networks. IEEE Signal Processing Letters, 2014, 21, 334-338.	2.1	18
56	Maximizing the link throughput between smart meters and aggregators as secondary users under power and outage constraints. Ad Hoc Networks, 2016, 41, 57-68.	3.4	18
57	Autonomous Driving without a Burden: View from Outside with Elevated LiDAR. , 2019, , .		17
58	Low-Complexity Iterative Algorithm for Finding the MIMO-OFDM Broadcast Channel Sum Capacity. IEEE Transactions on Communications, 2007, 55, 48-53.	4.9	16
59	Energy-Efficient Resource Management in Ultra Dense Small Cell Networks: A Mean-Field Approach. , 2015, , .		16
60	Bi-Directional Beamformer Training for Dynamic TDD Networks. IEEE Transactions on Signal Processing, 2018, 66, 6252-6267.	3.2	16
61	A Low-Complexity Beamforming Design for Multiuser Wireless Energy Transfer. IEEE Wireless Communications Letters, 2021, 10, 58-62.	3.2	16
62	Business Models for Local 5G Micro Operators. , 2018, , .		15
63	A Predictive Interference Management Algorithm for URLLC in Beyond 5G Networks. IEEE Communications Letters, 2021, 25, 995-999.	2.5	15
64	Weighted-Sum-Rate Maximization for an Reconfigurable Intelligent Surface Aided Vehicular Network. IEEE Open Journal of the Communications Society, 2021, 2, 687-703.	4.4	15
65	Noncoherent Amplify-and-Forward MIMO Relaying With OSTBC Over Rayleighâ€“Rician Fading Channels. IEEE Transactions on Vehicular Technology, 2013, 62, 1610-1622.	3.9	14
66	Enhanced Transmit Antenna Selection Scheme for Secure Throughput Maximization Without CSI at the Transmitter. IEEE Access, 2016, 4, 4861-4873.	2.6	14
67	Ultra Reliable Communication via Optimum Power Allocation for HARQ Retransmission Schemes. IEEE Access, 2020, 8, 89768-89781.	2.6	14
68	Safeguarding MTC at the Physical Layer: Potentials and Challenges. IEEE Access, 2020, 8, 101437-101447.	2.6	14
69	Network Slicing with Mobile Edge Computing for Micro-Operator Networks in Beyond 5G. , 2018, , .		13
70	Cognitive Full-Duplex Decode-and-Forward Relaying Networks With Usable Direct Link and Transmit-Power Constraints. IEEE Access, 2018, 6, 24983-24995.	2.6	13
71	Framework for spectrum authorization elements and its application to 5G micro-operators. , 2017, , .		12
72	Modeling Nonsaturated Contention-Based IEEE 802.11 Multihop Ad Hoc Networks. IEEE Transactions on Vehicular Technology, 2009, 58, 3518-3532.	3.9	11

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73	Throughput analysis of cognitive wireless networks with Poisson distributed nodes based on location information. Ad Hoc Networks, 2015, 33, 1-15.	3.4	11
74	Average Error Probability in Wireless Sensor Networks With Imperfect Sensing and Communication for Different Decision Rules. IEEE Sensors Journal, 2016, 16, 3948-3957.	2.4	11
75	Radio Resource Sharing and Edge Caching with Latency Constraint for Local 5G Operator: Geometric Programming Meets Stackelberg Game. IEEE Transactions on Mobile Computing, 2021, 20, 707-721.	3.9	11
76	Performance Analysis of Optimal Beamforming in Fixed-Gain AF MIMO Relaying over Asymmetric Fading Channels. IEEE Transactions on Communications, 2014, 62, 1201-1217.	4.9	10
77	Maximization of Worst-Case Weighted Sum-Rate for MISO Downlink Systems With Imperfect Channel Knowledge. IEEE Transactions on Communications, 2015, 63, 3671-3685.	4.9	10
78	Incentivizing Selected Devices to Perform Cooperative Content Delivery: A Carrier Aggregation based Approach. IEEE Transactions on Wireless Communications, 2016, , 1-1.	6.1	10
79	Enhanced Co-Primary Spectrum Sharing Method for Multi-Operator Networks. IEEE Transactions on Mobile Computing, 2017, 16, 3347-3360.	3.9	10
80	On spectrum sharing among micro-operators in 5G. , 2017, , .		10
81	Rate Control under Finite Blocklength for Downlink Cellular Networks with Reliability Constraints. , 2018, , .		10
82	An FPGA-Based Implementation of a Multifunction Environment Sensing Device for Shared Access With Rotating Radars. IEEE Transactions on Instrumentation and Measurement, 2018, 67, 2561-2578.	2.4	10
83	Finite Blocklength Error Probability Distribution for Designing Ultra Reliable Low Latency Systems. IEEE Access, 2020, 8, 107353-107363.	2.6	10
84	Machine-type wireless communications enablers for beyond 5G: Enabling URLLC via diversity under hard deadlines. Computer Networks, 2020, 174, 107227.	3.2	10
85	Mission Effective Capacityâ€"A Novel Dependability Metric: A Study Case of Multiconnectivity-Enabled URLLC for IIoT. IEEE Transactions on Industrial Informatics, 2022, 18, 4180-4188.	7.2	10
86	Effective Energy Efficiency of Ultrareliable Low-Latency Communication. IEEE Internet of Things Journal, 2021, 8, 11135-11149.	5.5	10
87	An Adaptive Transmission Scheme for Amplify-and-Forward Relaying Networks. IEEE Transactions on Communications, 2016, , 1-1.	4.9	9
88	Secrecy performance of MIMO Nakagamiâ€m wiretap channels with optimal TAS and different antenna schemes. Transactions on Emerging Telecommunications Technologies, 2016, 27, 828-841.	2.6	9
89	Impact of Interference Between Neighbouring 5G Micro Operators. Wireless Personal Communications, 2018, 100, 127-144.	1.8	9
90	Distributed Rate Control in Downlink NOMA Networks With Reliability Constraints. IEEE Transactions on Wireless Communications, 2019, 18, 5410-5423.	6.1	9

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91	On the Optimal Deployment of Power Beacons for Massive Wireless Energy Transfer. IEEE Internet of Things Journal, 2021, 8, 10531-10542.	5.5	9
92	A Functional Architecture for 6G Special-Purpose Industrial IoT Networks. IEEE Transactions on Industrial Informatics, 2023, 19, 2530-2540.	7.2	9
93	Powerâ€“Throughput Tradeoff in MIMO Heterogeneous Networks. IEEE Transactions on Wireless Communications, 2014, 13, 4309-4322.	6.1	8
94	Effects of relay selection strategies on the spectral efficiency of wireless systems with half- and full-duplex nodes. IEEE Transactions on Vehicular Technology, 2017, 66, 7578-7583.	3.9	8
95	Inter-operator infrastructure sharing: Trade-offs and market. , 2017, , .		8
96	On the Dual-Decomposition-Based Sum Capacity Maximization for Vector Broadcast Channels. IEEE Transactions on Vehicular Technology, 2007, 56, 3577-3581.	3.9	7
97	On the Secrecy of Interference-Limited Networks under Composite Fading Channels. IEEE Signal Processing Letters, 2015, 22, 1306-1310.	2.1	7
98	Joint sampling-communication strategies for smart-meters to aggregator link as secondary users. , 2016, , .		7
99	CSI-Free Rotary Antenna Beamforming for Massive RF Wireless Energy Transfer. IEEE Internet of Things Journal, 2022, 9, 7375-7387.	5.5	7
100	CSI-Free vs CSI-Based Multi-Antenna WET for Massive Low-Power Internet of Things. IEEE Transactions on Wireless Communications, 2021, 20, 3078-3094.	6.1	7
101	Dynamic RF Combining for Multi-Antenna Ambient Energy Harvesting. IEEE Wireless Communications Letters, 2022, 11, 493-497.	3.2	7
102	A Nonlinear Autoregressive Neural Network for Interference Prediction and Resource Allocation in URLLC Scenarios. , 2021, , .		7
103	Effects of Antenna Correlation in MIMO Two Hop AF Relay Network over Rayleigh-Rician Channels. IEEE Communications Letters, 2011, 15, 941-943.	2.5	6
104	Effective deployment of cooperative moving relay nodes in a high speed train. , 2016, , .		6
105	Fog-RAN Enabled Multi-Connectivity and Multi-Cell Scheduling Framework for Ultra-Reliable Low Latency Communication. IEEE Access, 2022, 10, 7059-7072.	2.6	6
106	Supervised Learning Based Sparse Channel Estimation For RIS Aided Communications. , 2022, , .		6
107	On a Distributed Cognitive MAC Protocol for IEEE 802.11s Wireless Mesh Networks. Wireless Personal Communications, 2011, 58, 565-580.	1.8	5
108	Application of a leakage based precoding scheme to mitigate intrinsic interference in FBMC. , 2013, , .		5

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109	Resource allocation for co-primary spectrum sharing in MIMO networks. , 2015, , .		5
110	Multi-operator spectrum sharing using matching game in small cells network. , 2016, , .		5
111	Multiple-Screen Diffraction Measurement at 10â€“18 GHz. IEEE Antennas and Wireless Propagation Letters, 2017, 16, 2002-2005.	2.4	5
112	Average Rate Analysis of RIS-aided Short Packet Communication in URLLC Systems. , 2021, , .		5
113	eMACâ€”A Medium-Access Control Protocol for the Next-Generation Ad Hoc Networks. IEEE Transactions on Vehicular Technology, 2009, 58, 4476-4490.	3.9	4
114	Hybrid resource scheduling for aggregation in massive machine-type communication networks. Ad Hoc Networks, 2019, 94, 101932.	3.4	4
115	Performance Comparison of Alternative Indoor 5G Micro-Operator Deployments in 3.6-GHz and 26-GHz Bands. IEEE Transactions on Cognitive Communications and Networking, 2019, 5, 886-899.	4.9	4
116	Interference Between 5G Indoor Micro Operators Utilizing Beamforming and Dynamic TDD in 26 GHz Band. , 2019, , .		4
117	Deep Contextual Bandits for Fast Neighbor-Aided Initial Access in mmWave Cell-Free Networks. IEEE Wireless Communications Letters, 2021, 10, 2752-2756.	3.2	4
118	Confidence Aware Deep Learning Driven Wireless Resource Allocation in Shared Spectrum Bands. IEEE Access, 2022, 10, 34945-34959.	2.6	4
119	Deep Reinforcement Learning for Practical Phase Shift Optimization in RIS-assisted Networks over Short Packet Communications. , 2022, , .		4
120	Effects of Line-of-Sight Interference on the Performance of Amplify-and-Forward Relay Network. IEEE Communications Letters, 2013, 17, 940-943.	2.5	3
121	Outage Probability and Capacity for Two-Tier Femtocell Networks by Approximating Ratio of Rayleigh and Log Normal Random Variables. , 2013, , .		3
122	Bandwidth Resource Competition in Cooperative Cognitive Wireless Communications. International Journal of Wireless Information Networks, 2011, 18, 243-256.	1.8	2
123	Optimal Relay Selection for Energy-Efficient Multicast. Wireless Personal Communications, 2011, 59, 433-446.	1.8	2
124	Linear and non-linear transceiver processing for MEVIO-FBMC systems. , 2014, , .		2
125	An Interior-Point Method for Modified Total Variation Exploiting Transform-Domain Sparsity. IEEE Signal Processing Letters, 2017, 24, 56-60.	2.1	2
126	Edge Caching for Cache Intensity under Probabilistic Delay Constraint. , 2018, , .		2

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127	Achieving Ultra-Reliable Communication via CRAN-Enabled Diversity Schemes. , 2019, , .		2
128	Fixed Rate Statistical QoS Provisioning for Markovian Sources in Machine Type Communication. , 2019, , .		2
129	On frequency domain equalization for MC-CDMA in Nakagami fading channels. European Transactions on Telecommunications, 2004, 15, 7-13.	1.2	1
130	A novel MAC protocol and layer two transmission scheduling algorithm for WLANs. Telecommunication Systems, 2008, 37, 3-18.	1.6	1
131	Performance Evaluation of Adaptive MIMO-OFDM Systems with Limited Feedback Using Measurement Based Channel Models. International Journal of Wireless Information Networks, 2011, 18, 1-10.	1.8	1
132	On Contract Design for Incentivizing Users in Cooperative Content Delivery With Adverse Selection. IEEE Transactions on Wireless Communications, 2018, 17, 8418-8432.	6.1	1
133	Traffic Aware Beamformer Design for Flexible TDD-Based Integrated Access and Backhaul. IEEE Access, 2020, 8, 205534-205549.	2.6	1
134	Secure Rate Control and Statistical QoS Provisioning for Cloud-Based IoT Networks. Security and Communication Networks, 2021, 2021, 1-19.	1.0	1
135	Energy-Efficient Resource Management in Ultra Dense Small Cell Networks: A Mean-Field Approach. , 2014, , .		0