

Upamanyu Madhow

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.

81
papers

1,960
citations

20
h-index

42
g-index

96
ext. papers

2,513
ext. citations

5.8
avg, IF

5.19
L-index

#	Paper	IF	Citations
81	All-Digital LoS MIMO with Low-Precision Analog-to-Digital Conversion. <i>IEEE Transactions on Wireless Communications</i> , 2022 , 1-1	9.6	0
80	Multi-Sensor Spatial Association Using Joint Range-Doppler Features. <i>IEEE Transactions on Signal Processing</i> , 2021 , 69, 5756-5769	4.8	
79	A Design Framework for All-Digital mmWave Massive MIMO With per-Antenna Nonlinearities. <i>IEEE Transactions on Wireless Communications</i> , 2021 , 20, 5689-5701	9.6	3
78	Distributed Base Station: A Concept System for Long-Range Broadband Wireless Access. <i>Electronics (Switzerland)</i> , 2021 , 10, 2396	2.6	
77	Phase Noise in Modular Millimeter Wave Massive MIMO. <i>IEEE Transactions on Wireless Communications</i> , 2021 , 1-1	9.6	2
76	Joint Routing and Resource Allocation for Millimeter Wave Picocellular Backhaul. <i>IEEE Transactions on Wireless Communications</i> , 2020 , 19, 783-794	9.6	13
75	Scalable Nonlinear Multiuser Detection for mmWave Massive MIMO 2020 ,		1
74	Robust Wireless Fingerprinting via Complex-Valued Neural Networks 2019 ,		12
73	2019 ,		2
72	Short Range 3D MIMO mmWave Channel Reconstruction via Geometry-aided AoA Estimation 2019 ,		1
71	Interference Management and Capacity Analysis for mm-Wave Picocells in Urban Canyons. <i>IEEE Journal on Selected Areas in Communications</i> , 2019 , 37, 2715-2726	14.2	2
70	Beamspace Local LMMSE: An Efficient Digital Backend for mmWave Massive MIMO 2019 ,		10
69	Design of Large Effective Apertures for Millimeter Wave Systems Using a Sparse Array of Subarrays. <i>IEEE Transactions on Signal Processing</i> , 2019 , 67, 6483-6497	4.8	1
68	Towards All-digital mmWave Massive MIMO: Designing around Nonlinearities 2018 ,		11
67	Noncoherent compressive channel estimation for mm-wave massive MIMO 2018 ,		5
66	. <i>IEEE Transactions on Wireless Communications</i> , 2018 , 17, 7759-7773	9.6	7
65	Slicer Architectures for Analog-to-Information Conversion in Channel Equalizers. <i>IEEE Transactions on Communications</i> , 2017 , 65, 1234-1246	6.9	5

64	Noncoherent mmWave Path Tracking 2017 ,		47
63	Distributed MIMO Multicast With Protected Receivers: A Scalable Algorithm for Joint Beamforming and Nullforming. <i>IEEE Transactions on Wireless Communications</i> , 2017 , 16, 512-525	9.6	6
62	Newtonized Orthogonal Matching Pursuit: Frequency Estimation Over the Continuum. <i>IEEE Transactions on Signal Processing</i> , 2016 , 64, 5066-5081	4.8	75
61	Near-Coherent QPSK Performance With Coarse Phase Quantization: A Feedback-Based Architecture for Joint Phase/Frequency Synchronization and Demodulation. <i>IEEE Transactions on Signal Processing</i> , 2016 , 64, 4432-4443	4.8	14
60	Compressive Channel Estimation and Tracking for Large Arrays in mm-Wave Picocells. <i>IEEE Journal on Selected Topics in Signal Processing</i> , 2016 , 10, 514-527	7.5	121
59	A Scalable Architecture for Distributed Receive Beamforming: Analysis and Experimental Demonstration. <i>IEEE Transactions on Wireless Communications</i> , 2016 , 15, 2039-2053	9.6	15
58	Capacity maximization for distributed broadband beamforming 2016 ,		2
57	A Scalable Feedback Mechanism for Distributed Nullforming With Phase-Only Adaptation. <i>IEEE Transactions on Signal and Information Processing Over Networks</i> , 2015 , 1, 58-70	2.8	11
56	Interference Analysis for mm-Wave Picocells 2015 ,		12
55	Interference-aware routing and spectrum allocation for millimeter wave backhaul in urban picocells 2015 ,		6
54	Quadrotor control for RF source localization and tracking 2014 ,		21
53	Bayesian localization and mapping using GNSS SNR measurements 2014 ,		19
52	Compressive Parameter Estimation in AWGN. <i>IEEE Transactions on Signal Processing</i> , 2014 , 62, 2012-2027	4.8	29
51	Distributed Reception with Hard Decision Exchanges. <i>IEEE Transactions on Wireless Communications</i> , 2014 , 13, 3406-3418	9.6	15
50	Belief propagation based localization and mapping using sparsely sampled GNSS SNR measurements 2014 ,		7
49	Frequency tracking with intermittent wrapped phase measurement using the Rao-Blackwellized particle filter 2014 ,		2
48	Probabilistic 3D mapping based on GNSS SNR measurements 2014 ,		4
47	Limited feedback in massive MIMO systems: Exploiting channel correlations via noncoherent trellis-coded quantization 2013 ,		8

46	Phase-Quantized Block Noncoherent Communication. <i>IEEE Transactions on Communications</i> , 2013 , 61, 2828-2839	6.9	13
45	Sidestepping the Rayleigh limit for LoS spatial multiplexing: A distributed architecture for long-range wireless fiber 2013 ,		6
44	A Scalable Architecture for Distributed Transmit Beamforming with Commodity Radios: Design and Proof of Concept. <i>IEEE Transactions on Wireless Communications</i> , 2013 , 12, 1418-1428	9.6	65
43	Distributed Receive Beamforming: A Scalable Architecture and Its Proof of Concept 2013 ,		10
42	RF source-seeking by a micro aerial vehicle using rotation-based angle of arrival estimates 2013 ,		20
41	On the capacity of picocellular networks 2013 ,		8
40	Receiver-coordinated distributed transmit nullforming with channel state uncertainty 2012 ,		27
39	Compressive tracking with 1000-element arrays: A framework for multi-Gbps mm wave cellular downlinks 2012 ,		47
38	Demonstrating distributed transmit beamforming with software-defined radios 2012 ,		19
37	Distributed beamforming with software-defined radios: Frequency synchronization and digital feedback 2012 ,		29
36	Shaping Throughput Profiles in Multihop Wireless Networks: A Resource-Biasing Approach. <i>IEEE Transactions on Mobile Computing</i> , 2012 , 11, 367-376	4.6	8
35	Compressive adaptation of large steerable arrays 2012 ,		53
34	Analog multitone with interference suppression: Relieving the ADC bottleneck for wideband 60 GHz systems 2012 ,		19
33	Localizing Multiple Events Using Times of Arrival: a Parallelized, Hierarchical Approach to the Association Problem. <i>IEEE Transactions on Signal Processing</i> , 2012 , 60, 5464-5477	4.8	18
32	Multiple event localization in a sparse acoustic sensor network using UAVs as data mules 2012 ,		8
31	Attaining fundamental bounds on timing synchronization 2012 ,		20
30	Interference Analysis for Highly Directional 60-GHz Mesh Networks: The Case for Rethinking Medium Access Control. <i>IEEE/ACM Transactions on Networking</i> , 2011 , 19, 1513-1527	3.8	260
29	Indoor Millimeter Wave MIMO: Feasibility and Performance. <i>IEEE Transactions on Wireless Communications</i> , 2011 , 10, 4150-4160	9.6	160

28	Space-time localization using times of arrival 2011 ,		2
27	Networking at 60 GHz: The emergence of multiGigabit wireless 2010 ,		5
26	A Reaction-Diffusion Model for Epidemic Routing in Sparsely Connected MANETs 2010 ,		18
25	A 2.4 Gb/s millimeter-wave link using adaptive spatial multiplexing 2010 ,		5
24	Channel Modeling and MIMO Capacity for Outdoor Millimeter Wave Links 2010 ,		81
23	Scalable Mismatch Compensation for Time-Interleaved A/D Converters in OFDM Reception 2010 ,		1
22	Joint Mismatch and Channel Compensation for High-Speed OFDM Receivers with Time-Interleaved ADCs. <i>IEEE Transactions on Communications</i> , 2010 , 58, 2391-2401	6.9	12
21	Matrix Embedding With Pseudorandom Coefficient Selection and Error Correction for Robust and Secure Steganography. <i>IEEE Transactions on Information Forensics and Security</i> , 2010 , 5, 225-239	8	17
20	Distributed Transmit Beamforming Using Feedback Control. <i>IEEE Transactions on Information Theory</i> , 2010 , 56, 411-426	2.8	143
19	Nonuniform Array Design for Robust Millimeter-Wave MIMO Links 2009 ,		15
18	Millimeter-Wave Spatial Multiplexing in an Indoor Environment 2009 ,		29
17	On the limits of communication with low-precision analog-to-digital conversion at the receiver. <i>IEEE Transactions on Communications</i> , 2009 , 57, 3629-3639	6.9	200
16	Multi-Gigabit communication: the ADC bottleneck1 2009 ,		21
15	Signal processing for multiGigabit communication 2009 ,		3
14	Coded noncoherent communication with amplitude/phase modulation: from shannon theory to practical architectures. <i>IEEE Transactions on Communications</i> , 2008 , 56, 2040-2049	6.9	8
13	Noncoherent eigenbeamforming and interference suppression for outdoor OFDM systems. <i>IEEE Transactions on Communications</i> , 2008 , 56, 915-924	6.9	1
12	MultiGigabit millimeter wave communication: System concepts and challenges 2008 ,		4
11	Broadband millimeter wave networks: Architectures and applications 2008 ,		3

10	A feedback-based distributed phased array technique and its application to 60-GHz wireless sensor network 2008 ,		3
9	A 60GHz line-of-sight 2x2 MIMO link operating at 1.2Gbps 2008 ,		11
8	Distributed detection with a minimalistic signal model: A framework for exploiting correlated sensing 2008 ,		2
7	Joint Channel and Mismatch Correction for OFDM Reception with Time-interleaved ADCs: Towards Mostly Digital MultiGigabit Transceiver Architectures 2008 ,		8
6	On Localization Performance in Imaging Sensor Nets. <i>IEEE Transactions on Signal Processing</i> , 2007 , 55, 5044-5057	4.8	7
5	Millimeterwave (60 GHz) Imaging Wireless Sensor Network: Recent Progress. <i>Conference Record of the Asilomar Conference on Signals, Systems and Computers</i> , 2007 ,	0.3	1
4	Generalized Blind Mismatch Correction for Two-Channel Time-Interleaved A-to-D Converters 2007 ,		12
3	Print and Scan Resilient Data Hiding in Images. <i>IEEE Transactions on Information Forensics and Security</i> , 2006 , 1, 464-478	8	51
2	A Low Computation Adaptive Blind Mismatch Correction for Time-Interleaved ADCs. <i>Midwest Symposium on Circuits and Systems</i> , 2006 ,	1	7
1	Adaptive Interference Suppression for the Downlink of a Direct Sequence CDMA System with Long Spreading Sequences. <i>Journal of Signal Processing Systems</i> , 2002 , 30, 273-291		5