Ashutosh Sabharwal

List of Publications by Year
in descending order

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138 papers	8,604 citations	279778 23 h-index	69246 77 g-index
141 all docs	141 docs citations	141 times ranked	4734 citing authors

#	Article	IF	Citations
1	In-Band Full-Duplex Wireless: Challenges and Opportunities. IEEE Journal on Selected Areas in Communications, 2014, 32, 1637-1652.	14.0	1,720
2	Experiment-Driven Characterization of Full-Duplex Wireless Systems. IEEE Transactions on Wireless Communications, 2012, 11, 4296-4307.	9.2	1,426
3	Full-duplex wireless communications using off-the-shelf radios: Feasibility and first results. , 2010, , .		675
4	Passive Self-Interference Suppression for Full-Duplex Infrastructure Nodes. IEEE Transactions on Wireless Communications, 2014, 13, 680-694.	9.2	662
5	Design and Characterization of a Full-Duplex Multiantenna System for WiFi Networks. IEEE Transactions on Vehicular Technology, 2014, 63, 1160-1177.	6.3	460
6	DistancePPG: Robust non-contact vital signs monitoring using a camera. Biomedical Optics Express, 2015, 6, 1565.	2.9	334
7	An Axiomatic Theory of Fairness in Network Resource Allocation. , 2010, , .		234
8	On the Impact of Phase Noise on Active Cancelation in Wireless Full-Duplex. IEEE Transactions on Vehicular Technology, 2013, 62, 4494-4510.	6.3	228
9	Low density parity check codes for the relay channel. IEEE Journal on Selected Areas in Communications, 2007, 25, 280-291.	14.0	215
10	Empowering full-duplex wireless communication by exploiting directional diversity. , 2011, , .		169
11	Opportunistic Spectral Usage: Bounds and a Multi-Band CSMA/CA Protocol. IEEE/ACM Transactions on Networking, 2007, 15, 533-545.	3.8	135
12	Power-Controlled Medium Access Control Protocol for Full-Duplex WiFi Networks. IEEE Transactions on Wireless Communications, 2015, 14, 3601-3613.	9.2	125
13	SoftNull: Many-Antenna Full-Duplex Wireless via Digital Beamforming. IEEE Transactions on Wireless Communications, 2016, 15, 8077-8092.	9.2	122
14	TabletGaze: dataset and analysis for unconstrained appearance-based gaze estimation in mobile tablets. Machine Vision and Applications, 2017, 28, 445-461.	2.7	118
15	Rate Gain Region and Design Tradeoffs for Full-Duplex Wireless Communications. IEEE Transactions on Wireless Communications, 2013, 12, 3556-3565.	9.2	106
16	Self-interference cancellation with nonlinear distortion suppression for full-duplex systems. , 2013, , .		98
17	Efficient Beam Alignment in Millimeter Wave Systems Using Contextual Bandits. , 2018, , .		92
18	WARP. Mobile Computing and Communications Review, 2008, 12, 56-58.	1.7	85

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19	Distributed Full-Duplex via Wireless Side-Channels: Bounds and Protocols. IEEE Transactions on Wireless Communications, 2013, 12, 4162-4173.	9.2	81
20	Understanding the impact of phase noise on active cancellation in wireless full-duplex. , 2012, , .		72
21	WARP, a Unified Wireless Network Testbed for Education and Research. , 2007, , .		64
22	Directional Training for FDD Massive MIMO. IEEE Transactions on Wireless Communications, 2018, 17, 5183-5197.	9.2	54
23	On Achieving Local View Capacity Via Maximal Independent Graph Scheduling. IEEE Transactions on Information Theory, 2011, 57, 2711-2729.	2.4	52
24	Single-input two-way SIMO channel: diversity-multiplexing tradeoff with two-way training. IEEE Transactions on Wireless Communications, 2008, 7, 4877-4885.	9.2	49
25	Antenna Packing in Low-Power Systems: Communication Limits and Array Design. IEEE Transactions on Information Theory, 2008, 54, 429-440.	2.4	47
26	On degrees-of-freedom of full-duplex uplink/downlink channel. , 2013, , .		47
27	Asynchronous full-duplex wireless. , 2012, , .		44
28	Full- or half-duplex? A capacity analysis with bounded radio resources. , 2012, , .		40
29	Tracking and Predicting Depressive Symptoms of Adolescents Using Smartphone-Based Self-Reports, Parental Evaluations, and Passive Phone Sensor Data: Development and Usability Study. JMIR Mental Health, 2020, 7, e14045.	3.3	40
30	Design, Implementation, and Characterization of a Cooperative Communications System. IEEE Transactions on Vehicular Technology, 2011, 60, 2534-2544.	6.3	39
31	Self-interference cancellation with phase noise induced ICI suppression for full-duplex systems. , 2013, , .		38
32	Sequential Beamforming for Multiuser MIMO With Full-Duplex Training. IEEE Transactions on Wireless Communications, 2016, 15, 8551-8564.	9.2	36
33	Code designs for cooperative communication. IEEE Signal Processing Magazine, 2007, 24, 16-26.	5.6	32
34	Probabilistic Medium Access Control for Full-Duplex Networks With Half-Duplex Clients. IEEE Transactions on Wireless Communications, 2017, 16, 2627-2640.	9.2	30
35	Simultaneous transmit and sense for cognitive radios using full-duplex: A first study. , 2012, , .		29
36	Half-Duplex Estimate-and-Forward Relaying: Bounds and Code Design. , 2006, , .		28

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37	JointNull: Combining Partial Analog Cancellation With Transmit Beamforming for Large-Antenna Full-Duplex Wireless Systems. IEEE Transactions on Wireless Communications, 2018, 17, 2094-2108.	9.2	27
38	A Flexible Framework for Wireless Medium Access Protocols. , 2006, , .		24
39	A Survey on Smart Homes for Aging in Place: Toward Solutions to the Specific Needs of the Elderly. IEEE Signal Processing Magazine, 2018, 35, 111-119.	5.6	24
40	On the asymptotic performance of multiple antenna channels with quantized feedback. IEEE Transactions on Wireless Communications, 2008, 7, 3869-3877.	9.2	23
41	Self-interference cancellation in multi-hop full-duplex networks via structured signaling. , 2011, , .		23
42	Asymptotic Analysis of MIMO Multi-Cell Full-Duplex Networks. IEEE Transactions on Wireless Communications, 2017, 16, 2168-2180.	9.2	23
43	The Case for Transmitter Training. , 2006, , .		20
44	Findings From a Trial of the Smartphone and OnLine Usage-based eValuation for Depression (SOLVD) Application: What Do Apps Really Tell Us About Patients with Depression? Concordance Between App-Generated Data and Standard Psychiatric Questionnaires for Depression and Anxiety. Journal of Psychiatric Practice, 2019, 25, 365-373.	0.7	20
45	1-bit Phase Shifters for Large-Antenna Full-Duplex mmWave Communications. IEEE Transactions on Wireless Communications, 2020, 19, 6916-6931.	9.2	19
46	PulseCam: a camera-based, motion-robust and highly sensitive blood perfusion imaging modality. Scientific Reports, 2020, 10, 4825.	3.3	19
47	HRVCam: robust camera-based measurement of heart rate variability. Journal of Biomedical Optics, 2021, 26, .	2.6	19
48	Farming for life: impact of medical prescriptions for fresh vegetables on cardiometabolic health for adults with or at risk of type 2 diabetes in a predominantly Mexican-American population. BMJ Nutrition, Prevention and Health, 2020, 3, 239-246.	3.7	18
49	Factors Determining In Vitro Lung Deposition of Albuterol Aerosol Delivered by Ventolin Metered-Dose Inhaler. Journal of Aerosol Medicine and Pulmonary Drug Delivery, 2017, 30, 256-266.	1.4	17
50	Energy and Latency of Beamforming Architectures for Initial Access in mmWave Wireless Networks. Journal of the Indian Institute of Science, 2020, 100, 281-302.	1.9	17
51	Angle-of-arrival based beamforming for FDD massive MIMO. , 2015, , .		16
52	Dysglycemia in adults at risk for or living with non-insulin treated type 2 diabetes: Insights from continuous glucose monitoring. EClinicalMedicine, 2021, 35, 100853.	7.1	16
53	Power-Controlled Feedback and Training for Two-Way MIMO Channels. IEEE Transactions on Information Theory, 2010, 56, 3310-3331.	2.4	15
54	Practical Quantizer Design for Half-Duplex Estimate-and-Forward Relaying. IEEE Transactions on Communications, 2011, 59, 74-83.	7.8	15

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55	On degrees-of-freedom of multi-user MIMO full-duplex network. , 2015, , .		15
56	Transmit Power Optimization and Feasibility Analysis of Self-Backhauling Full-Duplex Radio Access Systems. IEEE Transactions on Wireless Communications, 2018, 17, 4219-4236.	9.2	15
57	Decode-and-cancel for interference cancellation in a three-node full-duplex network. , 2012, , .		14
58	Balancing Queueing and Retransmission: Latency-Optimal Massive MIMO Design. IEEE Transactions on Wireless Communications, 2020, 19, 2293-2307.	9.2	14
59	Beamforming in MISO Systems: Empirical Results and EVM-Based Analysis. IEEE Transactions on Wireless Communications, 2010, 9, 3214-3225.	9.2	13
60	Capacity of All Nine Models of Channel Output Feedback for the Two-User Interference Channel. IEEE Transactions on Information Theory, 2013, 59, 6957-6979.	2.4	13
61	RENEW: Programmable and Observable Massive MIMO Networks. , 2018, , .		13
62	Design criterion and construction methods for partially coherent multiple antenna constellations. IEEE Transactions on Wireless Communications, 2009, 8, 4122-4133.	9.2	12
63	Real-time testbed implementation of a distributed cooperative MAC and PHY. , 2010, , .		12
64	Bits About the Channel: Multiround Protocols for Two-Way Fading Channels. IEEE Transactions on Information Theory, 2011, 57, 3352-3370.	2.4	12
65	Sum Capacity of Interference Channels With a Local View: Impact of Distributed Decisions. IEEE Transactions on Information Theory, 2012, 58, 1630-1659.	2.4	12
66	Leveraging Physical-Layer Cooperation for Energy Conservation. IEEE Transactions on Vehicular Technology, 2014, 63, 131-145.	6.3	12
67	FaceEngage: Robust Estimation of Gameplay Engagement from User-Contributed (YouTube) Videos. IEEE Transactions on Affective Computing, 2022, 13, 651-665.	8.3	12
68	Design and Implementation of a Full-Duplex Pipelined MAC Protocol for Multihop Wireless Networks. IEEE Access, 2017, 5, 14930-14942.	4.2	11
69	Paranoid Secondary: Waterfilling in a Cognitive Interference Channel with Partial Knowledge. IEEE Transactions on Wireless Communications, 2012, 11, 1045-1055.	9.2	9
70	MU-MIMO beamforming with full-duplex open-loop training. , 2015, , .		9
71	Measuring Competence in Metered Dose Inhaler Use Using Capmedic Electronic Inhaler MonitoringÂTool. Chest, 2016, 150, 14A.	0.8	9
72	Performance of multiple access channels with asymmetric feedback. IEEE Journal on Selected Areas in Communications, 2008, 26, 1516-1525.	14.0	8

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73	Design of a cooperative OFDM transceiver. , 2009, , .		8
74	Leveraging One-Hop Information in Massive MIMO Full-Duplex Wireless Systems. IEEE/ACM Transactions on Networking, 2017, 25, 1528-1539.	3.8	8
75	Outer Bounds for a Joint Communicating Radar (Comm-Radar): The Uplink Case. IEEE Transactions on Communications, 2022, 70, 1197-1213.	7.8	8
76	An Achievable Rate Region for a Multiuser Half-Duplex Two-Way Channel. , 2006, , .		7
77	Two-User Interference Channels With Local Views: On Capacity Regions of TDM-Dominating Policies. IEEE Transactions on Information Theory, 2013, 59, 7014-7040.	2.4	7
78	Interference management with mismatched partial channel state information. Eurasip Journal on Wireless Communications and Networking, 2017, 2017, .	2.4	7
79	Principles for virtual health care to deliver real equity in diabetes. Lancet Diabetes and Endocrinology,the, 2021, 9, 480-482.	11.4	7
80	Diversity order gain with noisy feedback in multiple access channels. , 2008, , .		6
81	MIMO broadcast channel with continuous feedback using full-duplex radios. , 2014, , .		6
82	Outer Bounds for MIMO Communicating Radars: Three-node Uplink. , 2018, , .		6
83	A review and preview of developments in the measurement of sociability. Bulletin of the Menninger Clinic, 2020, 84, 79-101.	0.6	6
84	On the Degrees of Freedom Region for Simultaneous Imaging & Uplink Communication. IEEE Journal on Selected Areas in Communications, 2022, 40, 1768-1779.	14.0	6
85	An Objective System for Quantitative Assessment of Television Viewing Among Children (Family Level) Tj ETQq1 1 0.784314 rgBT /Ov Parenting, 2022, 5, e33569.	1.6	6
86	PPGMotion: Model-based detection of motion artifacts in photoplethysmography signals. Biomedical Signal Processing and Control, 2022, 75, 103632.	5.7	6
87	Power Management of MIMO Network Interfaces on Mobile Systems. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2012, 20, 1175-1186.	3.1	5
88	Beyond interference avoidance: Distributed sub-network scheduling in wireless networks with local views. , 2013, , .		5
89	Spatial degrees-of-freedom in large-array full-duplex: the impact of backscattering. Eurasip Journal on Wireless Communications and Networking, 2016, 2016, .	2.4	5
90	Interactive app traffic: An action-based model and data-driven analysis. , 2016, , .		5

#	Article	IF	Citations
91	CPLink: Interference-Free Reuse of Cyclic-Prefix Intervals in OFDM-Based Networks. IEEE Transactions on Wireless Communications, 2019, 18, 665-679.	9.2	5
92	Decentralized power control with two-way training for multiple access. , 2008, , .		4
93	Maximal k-Clique Scheduling: A simple algorithm to bound maximal independent graph scheduling. , 2011, , .		4
94	Guest Editorial: In-Band Full-Duplex Wireless Communications and Networks. IEEE Journal on Selected Areas in Communications, 2014, 32, 1633-1636.	14.0	4
95	Probabilistic-Based Adaptive Full-Duplex and Half-Duplex Medium Access Control. , 2015, , .		4
96	Massive MIMO Channels With Inter-User Angle Correlation: Open-Access Dataset, Analysis and Measurement-Based Validation. IEEE Transactions on Vehicular Technology, 2022, 71, 1602-1616.	6.3	4
97	Shared Sensing and Communications in Sensor Networks : The Multihop Case. , 2006, , .		3
98	Leveraging Physical-Layer Capabilites: Distributed Scheduling in Interference Networks With Local Views. IEEE/ACM Transactions on Networking, 2016, 24, 368-382.	3.8	3
99	Leveraging massive MIMO spatial degrees of freedom to reduce random access delay. , 2017, , .		3
100	Outer Bounds for MIMO Communicating Radars: Three-node Downlink. , 2018, , .		3
101	Low Resolution Phase Shifters Suffice for Full-Duplex mmWave Communications. , 2019, , .		3
102	Good times for wireless research. Computer Networks, 2021, 188, 107870.	5.1	3
103	Privacy-Preserving Social Ambiance Measure From Free-Living Speech Associates With Chronic Depressive and Psychotic Disorders. Frontiers in Psychiatry, 2021, 12, 670020.	2.6	3
104	Good Times For Wireless Research. , 2020, , .		3
105	Food Habits: Insights from Food Diaries via Computational Recurrence Measures. Sensors, 2022, 22, 2753.	3.8	3
106	A Systematic Construction of LDPC Codes for Relay Channel in Time-Division mode. , 2006, , .		2
107	A High Throughput Beamforming Architecture for MIMO Systems. , 2006, , .		2
108	Two-Way Fading Channels: Training Protocol and Diversity-Multiplexing Performance. Conference Record of the Asilomar Conference on Signals, Systems and Computers, 2007, , .	0.0	2

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109	Joint Channel Estimation and Data Transmission: Achievable Rates. , 2007, , .		2
110	Compound Gaussian multiple access channels with noisy feedback. , 2008, , .		2
111	Secondary transmission profile for a single-band cognitive interference channel. , 2008, , .		2
112	A vector mapping scheme for efficient implementation of beamforming MIMO systems. , 2008, , .		2
113	On-demand cooperation with power control: Protocol and experimental results. , 2011, , .		2
114	Distributed Protocols for Interference Management in Cooperative Networks. IEEE Journal on Selected Areas in Communications, 2012, 30, 1633-1640.	14.0	2
115	Action-Based Scheduling: Leveraging App Interactivity for Scheduler Efficiency. IEEE/ACM Transactions on Networking, 2019, 27, 112-125.	3.8	2
116	"Wireless Paint": Code Design for 3D Orientation Estimation with Backscatter Arrays. , 2020, , .		2
117	Simultaneous Imaging & Uplink Communication: A Degrees of Freedom Perspective. , 2021, , .		2
118	On multiple access channels with asymmetric feedback. , 2008, , .		1
119	Policy-based multiple access for decentralized low power systems. IEEE Transactions on Wireless Communications, 2009, 8, 256-267.	9.2	1
120	Node cooperation with local views in the two-user interference channel. , 2012, , .		1
121	Probabilistic-Based Adaptive Full-Duplex and Half-Duplex Medium Access Control. , 2014, , .		1
122	Spatial half-duplex: Precoder design and experimental evaluation. , 2016, , .		1
123	Scheduling and Power Allocation Dampens the Negative Effect of Channel Misreporting in Massive MIMO. IEEE/ACM Transactions on Networking, 2020, 28, 2531-2544.	3.8	1
124	DoF Analysis for Multipath-Assisted Imaging: Single Frequency Illumination. , 2020, , .		1
125	Scalable user selection in FDD massive MIMO. Eurasip Journal on Wireless Communications and Networking, 2021, 2021, .	2.4	1
126	When Does Multipath Improve Imaging Resolution?. IEEE Journal on Selected Areas in Information Theory, 2022, 3, 135-146.	2.5	1

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127	Patterns of Timing and Intensity of Physical Activity and HbA1c Levels in Hispanic/Latino Adults With or at Risk of Type 2 Diabetes. Journal of Diabetes Science and Technology, 2024, 18, 106-112.	2.2	1
128	Discordance between postprandial plasma glucose measurement and continuous glucose monitoring. American Journal of Clinical Nutrition, 2022, 116, 1059-1069.	4.7	1
129	Algorithms for Wireless Communication Systems: A Power-Efficiency Perspective. Wireless Personal Communications, 2003, 26, 217-226.	2.7	0
130	Feedback induced cooperation. , 2008, , .		0
131	Opportunistic and Cooperative Wireless Networks. , 2008, , .		0
132	Distributed consensus with finite messaging. , 2010, , .		0
133	K-user symmetric MIMO distributed full-duplex network via wireless side-channels. , 2013, , .		0
134	A signal-space analysis of spatial self-interference isolation for full-duplex wireless. , 2014, , .		0
135	Poster: SoftNull. , 2015, , .		0
136	Errata to â€œDistributed Full-Duplex Via Wireless Side-Channelâ€•[Aug 13 4162-4173]. IEEE Transactions on Wireless Communications, 2015, 14, 1755-1756.	9.2	0
137	Degrees of freedom of spatial self-interference suppression for in-band full-duplex with inter-node interference. , 2016, , .		0
138	Vector bin-and-cancel for MIMO distributed full-duplex. Eurasip Journal on Wireless Communications and Networking, 2017, 2017, .	2.4	0