

Nir Shlezinger

List of Publications by Year in descending order

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105
papers

2,715
citations

236925

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105
all docs

105
docs citations

105
times ranked

1217
citing authors

#	ARTICLE	IF	CITATIONS
1	Joint Transmit Beamforming for Multiuser MIMO Communications and MIMO Radar. IEEE Transactions on Signal Processing, 2020, 68, 3929-3944.	5.3	268
2	Joint Radar-Communication Strategies for Autonomous Vehicles: Combining Two Key Automotive Technologies. IEEE Signal Processing Magazine, 2020, 37, 85-97.	5.6	222
3	Dynamic Metasurface Antennas for 6G Extreme Massive MIMO Communications. IEEE Wireless Communications, 2021, 28, 106-113.	9.0	151
4	Communication-efficient federated learning. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	120
5	MAJoRCom: A Dual-Function Radar Communication System Using Index Modulation. IEEE Transactions on Signal Processing, 2020, 68, 3423-3438.	5.3	112
6	UVeQFed: Universal Vector Quantization for Federated Learning. IEEE Transactions on Signal Processing, 2021, 69, 500-514.	5.3	100
7	ViterbiNet: A Deep Learning Based Viterbi Algorithm for Symbol Detection. IEEE Transactions on Wireless Communications, 2020, 19, 3319-3331.	9.2	95
8	KalmanNet: Neural Network Aided Kalman Filtering for Partially Known Dynamics. IEEE Transactions on Signal Processing, 2022, 70, 1532-1547.	5.3	88
9	Over-the-Air Federated Learning From Heterogeneous Data. IEEE Transactions on Signal Processing, 2021, 69, 3796-3811.	5.3	86
10	Reconfigurable Intelligent Surfaces for Rich Scattering Wireless Communications: Recent Experiments, Challenges, and Opportunities. IEEE Communications Magazine, 2021, 59, 28-34.	6.1	80
11	Dynamic Metasurface Antennas for Uplink Massive MIMO Systems. IEEE Transactions on Communications, 2019, 67, 6829-6843.	7.8	69
12	DeepSIC: Deep Soft Interference Cancellation for Multiuser MIMO Detection. IEEE Transactions on Wireless Communications, 2021, 20, 1349-1362.	9.2	60
13	Federated Learning with Quantization Constraints. , 2020, , .		57
14	A reconfigurable intelligent surface with integrated sensing capability. Scientific Reports, 2021, 11, 20737.	3.3	57
15	On the Capacity of Narrowband PLC Channels. IEEE Transactions on Communications, 2015, 63, 1191-1201.	7.8	52
16	Spatial Modulation for Joint Radar-Communications Systems: Design, Analysis, and Hardware Prototype. IEEE Transactions on Vehicular Technology, 2021, 70, 2283-2298.	6.3	52
17	Hardware-Limited Task-Based Quantization. IEEE Transactions on Signal Processing, 2019, 67, 5223-5238.	5.3	51
18	Federated Learning: A signal processing perspective. IEEE Signal Processing Magazine, 2022, 39, 14-41.	5.6	48

#	ARTICLE	IF	CITATIONS
19	A Block Sparsity Based Estimator for mmWave Massive MIMO Channels With Beam Squint. IEEE Transactions on Signal Processing, 2020, 68, 49-64.	5.3	47
20	FRaC: FMCW-Based Joint Radar-Communications System Via Index Modulation. IEEE Journal on Selected Topics in Signal Processing, 2021, 15, 1348-1364.	10.8	46
21	Frequency-Shift Filtering for OFDM Signal Recovery in Narrowband Power Line Communications. IEEE Transactions on Communications, 2014, 62, 1283-1295.	7.8	42
22	ViterbiNet: Symbol Detection Using a Deep Learning Based Viterbi Algorithm. , 2019, , .		37
23	Asymptotic Task-Based Quantization With Application to Massive MIMO. IEEE Transactions on Signal Processing, 2019, 67, 3995-4012.	5.3	34
24	RF Chain Reduction for MIMO Systems: A Hardware Prototype. IEEE Systems Journal, 2020, 14, 5296-5307.	4.6	34
25	Deep Task-Based Quantization. Entropy, 2021, 23, 104.	2.2	30
26	Data-Driven Factor Graphs for Deep Symbol Detection. , 2020, , .		29
27	Multi-Carrier Agile Phased Array Radar. IEEE Transactions on Signal Processing, 2020, 68, 5706-5721.	5.3	27
28	Dynamic Metasurface Antennas for MIMO-OFDM Receivers With Bit-Limited ADCs. IEEE Transactions on Communications, 2021, 69, 2643-2659.	7.8	26
29	Task-Based Quantization for Recovering Quadratic Functions Using Principal Inertia Components. , 2019, , .		25
30	Adaptive Filtering Based on Time-Averaged MSE for Cyclostationary Signals. IEEE Transactions on Communications, 2017, 65, 1746-1761.	7.8	24
31	LoRD-Net: Unfolded Deep Detection Network With Low-Resolution Receivers. IEEE Transactions on Signal Processing, 2021, 69, 5651-5664.	5.3	23
32	The Secrecy Capacity of Gaussian MIMO Channels With Finite Memory. IEEE Transactions on Information Theory, 2017, 63, 1874-1897.	2.4	22
33	Kalmannet: Data-Driven Kalman Filtering. , 2021, , .		19
34	Data-driven symbol detection via model-based machine learning. Communications in Information and Systems, 2020, 20, 283-317.	0.5	19
35	Task-based quantization with application to MIMO receivers. Communications in Information and Systems, 2020, 20, 131-162.	0.5	19
36	The Communication-Aware Clustered Federated Learning Problem. , 2020, , .		18

#	ARTICLE	IF	CITATIONS
37	On the Spectral Efficiency of Noncooperative Uplink Massive MIMO Systems. IEEE Transactions on Communications, 2019, 67, 1956-1971.	7.8	17
38	Model-Based Deep Learning: Key Approaches and Design Guidelines. , 2021, , .		16
39	Collaborative Inference via Ensembles on the Edge. , 2021, , .		16
40	COTAF: Convergent Over-the-Air Federated Learning. , 2020, , .		15
41	Learned Factor Graphs for Inference From Stationary Time Sequences. IEEE Transactions on Signal Processing, 2022, 70, 366-380.	5.3	15
42	Joint Estimation of Carrier Frequency Offset and Channel Impulse Response for Linear Periodic Channels. IEEE Transactions on Communications, 2018, 66, 302-319.	7.8	14
43	A Dual-Function Radar Communication System Using Index Modulation. , 2019, , .		14
44	Dynamic Metasurface Antennas Based Downlink Massive MIMO Systems. , 2019, , .		13
45	Deep Neural Network Symbol Detection for Millimeter Wave Communications. , 2019, , .		13
46	On the Capacity of MIMO Broadband Power Line Communications Channels. IEEE Transactions on Communications, 2018, , 1-1.	7.8	12
47	Learning Task-Based Analog-to-Digital Conversion for MIMO Receivers. , 2020, , .		12
48	Meta-ViterbiNet: Online Meta-Learned Viterbi Equalization for Non-Stationary Channels. , 2021, , .		12
49	Data-Driven Symbol Detection Via Model-Based Machine Learning. , 2021, , .		12
50	Task-Based Analog-to-Digital Converters. IEEE Transactions on Signal Processing, 2021, 69, 5403-5418.	5.3	12
51	Hardware-Limited Task-Based Quantization. , 2019, , .		11
52	A DFRC System Based on Multi-Carrier Agile FMCW MIMO Radar for Vehicular Applications. , 2020, , .		11
53	Multi-Level Group Testing with Application to One-Shot Pooled COVID-19 Tests. , 2021, , .		11
54	Deep Quantization for MIMO Channel Estimation. , 2019, , .		10

#	ARTICLE	IF	CITATIONS
55	Joint Sampling and Recovery of Correlated Sources. , 2019, , .		10
56	Beam Focusing for Multi-User MIMO Communications with Dynamic Metasurface Antennas. , 2021, , .		10
57	Bit Constrained Communication Receivers In Joint Radar Communications Systems. , 2021, , .		10
58	Channel Estimation with Simultaneous Reflecting and Sensing Reconfigurable Intelligent Metasurfaces. , 2021, , .		10
59	Wideband Multi-User MIMO Communications with Frequency Selective RISs: Element Response Modeling and Sum-Rate Maximization. , 2022, , .		10
60	Deep Soft Interference Cancellation for MIMO Detection. , 2020, , .		9
61	BiLiMO: Bit-Limited MIMO Radar via Task-Based Quantization. IEEE Transactions on Signal Processing, 2021, 69, 6267-6282.	5.3	9
62	Data-Driven Kalman-Based Velocity Estimation for Autonomous Racing. , 2021, , .		9
63	Jointly Learned Symbol Detection and Signal Reflection in RIS-Aided Multi-user MIMO Systems. , 2021, , .		9
64	Performance analysis of LMS filters with non-Gaussian cyclostationary signals. Signal Processing, 2019, 154, 260-271.	3.7	8
65	Power-Efficient Hybrid MIMO Receiver with Task-Specific Beamforming using Low-Resolution ADCs. , 2022, , .		8
66	Measurement Matrix Design for Phase Retrieval Based on Mutual Information. IEEE Transactions on Signal Processing, 2018, 66, 324-339.	5.3	7
67	RTSNet: Deep Learning Aided Kalman Smoothing. , 2022, , .		6
68	The capacity of discrete-time Gaussian MIMO channels with periodic characteristics. , 2016, , .		5
69	Adaptive LMS-type filter for cyclostationary signals. , 2016, , .		5
70	Automotive Dual-Function Radar Communications Systems: An Overview. , 2020, , .		5
71	Fedrec: Federated Learning of Universal Receivers Over Fading Channels. , 2021, , .		5
72	Deep-Learning-Assisted Configuration of Reconfigurable Intelligent Surfaces in Dynamic Rich-Scattering Environments. , 2022, , .		5

#	ARTICLE	IF	CITATIONS
73	Multi-Carrier Agile Phased Array Radar. , 2019, , .		4
74	The Capacity of Memoryless Channels With Sampled Cyclostationary Gaussian Noise. IEEE Transactions on Communications, 2020, 68, 106-121.	7.8	4
75	Joint Resource Management and Model Compression for Wireless Federated Learning. , 2021, , .		4
76	Serial Quantization for Representing Sparse Signals. , 2019, , .		3
77	Graph Signal Compression via Task-Based Quantization. , 2021, , .		3
78	Efficient Epileptic Seizure Detection Using CNN-Aided Factor Graphs. , 2021, 2021, 424-429.		3
79	CNN-Aided Factor Graphs with Estimated Mutual Information Features for Seizure Detection. , 2022, , .		3
80	Symbol-Level Online Channel Tracking for Deep Receivers. , 2022, , .		3
81	On the derivation of the capacity of discrete-time narrowband PLC channels. , 2015, , .		2
82	Carrier frequency offset estimation for linear channels with periodic characteristics. , 2016, , .		2
83	Spectral Efficiency of Noncooperative Uplink Massive MIMO Systems with Joint Decoding. , 2019, , .		2
84	Complexity Reduction Methods for Index Modulation Based Dual-Function Radar Communication Systems. , 2020, , .		2
85	Serial Quantization for Sparse Time Sequences. IEEE Transactions on Signal Processing, 2021, 69, 3299-3314.	5.3	2
86	Model-Inspired Deep Detection with Low-Resolution Receivers. , 2021, , .		2
87	Recovery of Noisy Pooled Tests via Learned Factor Graphs with Application to COVID-19 Testing. , 2022, , .		2
88	The secrecy capacity of MIMO Gaussian channels with finite memory. , 2015, , .		1
89	Using mutual information for designing the measurement matrix in phase retrieval problems. , 2017, , .		1
90	Correction to "On the Capacity of Narrowband PLC Channels". IEEE Transactions on Communications, 2018, 66, 461-461.	7.8	1

#	ARTICLE	IF	CITATIONS
91	Theoretical Analysis of Multi-Carrier Agile Phased Array Radar. , 2020, , .		1
92	Distributed Quantization for Sparse Time Sequences. , 2020, , .		1
93	Dynamic Metasurface Antennas for Bit-Constrained MIMO-OFDM Receivers. , 2020, , .		1
94	On the Rate-Distortion Function of Sampled Cyclostationary Gaussian Processes. Entropy, 2020, 22, 345.	2.2	1
95	Task-Based Analog-to-Digital Converters for Bandlimited Systems. , 2021, , .		1
96	On the Acquisition of Stationary Signals Using Uniform ADCs. , 2022, , .		1
97	Frequency-shift filtering for OFDM recovery in narrowband power line communications. , 2014, , .		0
98	Joint carrier frequency offset and channel impulse response estimation for linear periodic channels. , 2017, , .		0
99	Bounds on the Capacity of MIMO Broadband Power Line Communications Channels. , 2018, , .		0
100	Task-Based Quantization for Massive MIMO Channel Estimation. , 2019, , .		0
101	On the Capacity of Sampled Interference-Limited Communications Channels. , 2019, , .		0
102	Dynamic Metasurfaces for Massive MIMO Networks. , 2019, , .		0
103	Energy Harvesting via Analog-to-Digital Conversion. , 2021, , .		0
104	Hybrid Analog-Digital MIMO Radar Receivers With Bit-Limited ADCs. , 2021, , .		0
105	A Hardware Prototype for Joint Radar-Communication System Using Spatial Modulation. , 2021, , .		0