Athina P Petropulu

List of Publications by Year
in descending order

149 papers	5,501 citations	257450 24 h-index	161849 54 g-index
149 all docs	149 docs citations	149 times ranked	2888 citing authors

#	Article	IF	Citations
1	Reinforcement Learning for Motion Policies in Mobile Relaying Networks. IEEE Transactions on Signal Processing, 2022, 70, 850-861.	5.3	6
2	Simultaneous Monitoring of Multiple People's Vital Sign Leveraging a Single Phased-MIMO Radar. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2022, 6, 311-320.	3.4	20
3	Deep Actor-Critic for Continuous 3D Motion Control in Mobile Relay Beamforming Networks. , 2022, , .		2
4	CramÃ©r-Rao Bound and Antenna Selection Optimization for Dual Radar-Communication Design. , 2022, , .		4
5	DFRC with Improved Communication-Sensing Trade-off via Private Subcarrier Permutations and Pairing with Antennas. , 2022, , .		2
6	An Anti-Jamming Multiple Access Channel Game Using Latency as Metric. IEEE Wireless Communications Letters, 2022, 11, 1800-1804.	5.0	2
7	An Overview of Signal Processing Techniques for Joint Communication and Radar Sensing. IEEE Journal on Selected Topics in Signal Processing, 2021, 15, 1295-1315.	10.8	309
8	IEEE Signal Processing Society PROGRESS: Support for Underrepresented Talent in the Field of Signal Processing [Conference Highlights]. IEEE Signal Processing Magazine, 2021, 38, 201-203.	5.6	2
9	Learning to Select for Mimo Radar Based on Hybrid Analog-Digital Beamforming. , 2021, , .		4
10	A Multiple Access Channel Game Using Latency Metric. , 2021, , .		2
11	A Multi-Jammer Power Control Game. IEEE Communications Letters, 2021, 25, 3031-3035.	4.1	3
12	Deep Q Learning With Fourier Feature Mapping For Mobile Relay Beamforming Networks. , 2021, , .		3
13	Double Deep Q Learning with Gradient Biasing for Mobile Relay Beamforming Networks. , 2021, , .		0
14	A Deep Learning Framework for Optimization of MISO Downlink Beamforming. IEEE Transactions on Communications, 2020, 68, 1866-1880.	7.8	171
15	A Multi-Jammer Game With Latency as the User's Communication Utility. IEEE Communications Letters, 2020, 24, 1899-1903.	4.1	11
16	On Range Sidelobe Reduction for Dual-Functional Radar-Communication Waveforms. IEEE Wireless Communications Letters, 2020, 9, 1572-1576.	5.0	39
17	A Power Control Problem for a Dual Communication-Radar System Facing a Jamming Threat. , 2020, , .		2
18	Q-Learning Based Predictive Relay Selection for Optimal Relay Beamforming. , 2020, , .		5

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19	Compressed-Domain Detection and Estimation for Colocated MIMO Radar. IEEE Transactions on Aerospace and Electronic Systems, 2020, 56, 4504-4518.	4.7	9
20	A Dilemma in the Communication of a UAV with its Controller. International Game Theory Review, 2020, 22, 2040003.	0.5	2
21	MIMO Radar for Advanced Driver-Assistance Systems and Autonomous Driving: Advantages and Challenges. IEEE Signal Processing Magazine, 2020, 37, 98-117.	5.6	277
22	Joint Radar and Communication Design: Applications, State-of-the-Art, and the Road Ahead. IEEE Transactions on Communications, 2020, 68, 3834-3862.	7.8	753
23	A Sparse Linear Array Approach in Automotive Radars Using Matrix Completion. , 2020, , .		15
24	A Jamming Game With Rival-Type Uncertainty. IEEE Transactions on Wireless Communications, 2020, 19, 5359-5372.	9.2	27
25	A Joint Design of MIMO-OFDM Dual-Function Radar Communication System Using Generalized Spatial Modulation. , 2020, , .		13
26	Deep Learning Based Beamforming Neural Networks in Downlink MISO Systems. , 2019, , .		15
27	Weighted Sparse Bayesian Learning (WSBL) for Basis Selection in Linear Underdetermined Systems. IEEE Transactions on Vehicular Technology, 2019, 68, 7353-7367.	6.3	14
28	Target Estimation by Exploiting Low Rank Structure in Widely Separated MIMO Radar. , 2019, , .		14
29	Two-Dimensional Beamforming Automotive Radar with Orthogonal Linear Arrays. , 2019, , .		2
30	Side-Channel-Based Code-Execution Monitoring Systems: A Survey. IEEE Signal Processing Magazine, 2019, 36, 22-35.	5.6	10
31	Contactless Monitoring of Critical Infrastructure [From the Guest Editors]. IEEE Signal Processing Magazine, 2019, 36, 19-21.	5.6	4
32	Optimal Mobile Relay Beamforming Via Reinforcement Learning. , 2019, , .		10
33	MIMO Radar Privacy Protection Through Gradient Enforcement in Shared Spectrum Scenarios. , 2019, , .		3
34	A Reinforcement Learning Approach for Mobile Beamforming. , 2019, , .		1
35	Cooperative Beamforming With Predictive Relay Selection for Urban mmWave Communications. IEEE Access, 2019, 7, 157057-157071.	4.2	14
36	Multidimensional Sparse Fourier Transform Based on the Fourier Projection-Slice Theorem. IEEE Transactions on Signal Processing, 2019, 67, 54-69.	5.3	27

#	Article	IF	Citations
37	A Power Control Game with Uncertainty On the Type of the Jammer. , 2019, , .		20

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55	Enhancing QoS in spatially controlled beamforming networks via distributed stochastic programming. , 2017, , .		4
56	A practical high-dimensional Sparse Fourier Transform. , 2017, , .		1
57	Block sparse vector recovery via weighted generalized range space property. , 2017, , .		0
58	MIMO radar using sparse sensing: A weighted sparse Bayesian learning (WSBL) approach. , 2017, , .		4
59	Parameter estimation for hierarchical channel profiling. , 2017, , .		0
60	MIMO radar and communication spectrum sharing with clutter mitigation. , 2016, , .		59
61	Bargaining over fair performing dual radar and communication task. , 2016, , .		11
62	SAR imaging using the sparse fourier transform. , 2016, , .		0
63	RSFT: A realistic high dimensional sparse fourier transform and its application in radar signal processing. , 2016, , .		2
64	Spaceborne SAR antenna size reduction enabled by compressive sampling. , 2016, , .		3
65	Optimum Co-Design for Spectrum Sharing between Matrix Completion Based MIMO Radars and a MIMO Communication System. IEEE Transactions on Signal Processing, 2016, 64, 4562-4575.	5.3	269
66	Improving Wireless Physical Layer Security via Exploiting Co-Channel Interference. IEEE Journal on Selected Topics in Signal Processing, 2016, 10, 1433-1448.	10.8	22
67	Weighted sparse Bayesian learning (WSBL) for basis selection in linear underdetermined systems. , 2016, , .		3
68	Sparse target scene reconstruction for SAR using range space rotation. , 2016, , .		5
69	Mobile beamforming & spatially controlled relay communications. , 2016, , .		8
70	Uniform $\hat{I}\mu$-Stability of Distributed Nonlinear Filtering over DNAs: Gaussian-Finite HMMs. IEEE Transactions on Signal and Information Processing Over Networks, 2016, , 1-1.	2.8	0
71	Generalized range space property for group sparsity of linear underdetermined systems. , 2016, , .		2
72	Grid Based Nonlinear Filtering Revisited: Recursive Estimation & Asymptotic Optimality. IEEE Transactions on Signal Processing, 2016, 64, 4244-4259.	5.3	9

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73	Nonlinear spatiotemporal channel gain map tracking in mobile cooperative networks. , 2015, , .		2
74	On waveform conditions in MIMO radars using matrix completion. , 2015, , .		0
75	Distributed nonlinear filtering of partially observed Markov chains over WSNs: Truncating the ADMM. , 2015, , .		1
76	EEG sparse source localization via Range Space Rotation. , 2015, , .		6
77	Asymptotically Optimal Discrete-Time Nonlinear Filters From Stochastically Convergent State Process Approximations. IEEE Transactions on Signal Processing, 2015, 63, 3522-3536.	5.3	6
78	Waveform Design for MIMO Radars With Matrix Completion. IEEE Journal on Selected Topics in Signal Processing, 2015, 9, 1400-1414.	10.8	26
79	Mobi-cliques for improving ergodic secrecy in fading wiretap channels under power constraints. , 2014, , .		7
80	On the applicability of matrix completion on MIMO radars. , 2014, , .		3
81	RIP bounds for naively subsampled Scrambled Fourier sensing matrices. , 2014, , .		2
82	Distributed Cooperative Beamforming in Multi-Source Multi-Destination Clustered Systems. IEEE Transactions on Signal Processing, 2014, 62, 6105-6117.	5.3	21
83	Matrix Completion in Colocated MIMO Radar: Recoverability, Bounds & Theoretical Guarantees. IEEE Transactions on Signal Processing, 2014, 62, 309-321.	5.3	60
84	Robust beamforming via matrix completion. , 2013, , .		0
85	On the coherence properties of random Euclidean distance matrices. , 2013, , .		0
86	Target estimation in colocated MIMO radar via matrix completion. , 2013, , .		36
87	Sparse sensing in colocated MIMO radar: A matrix completion approach. , 2013, , .		7
88	MC-MIMO radar: Recoverability and performance bounds. , 2013, , .		0
89	Destination Assisted Cooperative Jamming for Wireless Physical-Layer Security. IEEE Transactions on Information Forensics and Security, 2013, 8, 682-694.	6.9	176
90	Uncoordinated Cooperative Jamming for Secret Communications. IEEE Transactions on Information Forensics and Security, 2013, 8, 1081-1090.	6.9	57

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91	Mobile jammers for secrecy rate maximization in cooperative networks. , 2013, , .		14
92	A distributed algorithm for cooperative relay beamforming. , 2013, , .		4
93	Controlling groups of mobile beamformers. , 2012, , .		25
94	Explicit Solution of Worst-Case Secrecy Rate for MISO Wiretap Channels With Spherical Uncertainty. IEEE Transactions on Signal Processing, 2012, 60, 3892-3895.	5.3	20
95	Optimality of beamforming for secrecy capacity of MIMO wiretap channels. , 2012, , .		7
96	Using simple relays to improve physical-layer security. , 2012, , .		13
97	Relay selection and scaling law in destination assisted physical layer secrecy systems. , 2012, , .		8
98	Destination assisted cooperative jamming for wireless physical layer security. , 2012, , .		6
99	Outage secrecy rate in wireless relay channels using cooperative jamming. , 2012, , .		2
100	Power allocation for CS-based colocated MIMO radar systems. , 2012, , .		11
101	On Transmit Beamforming for Physical-Layer Multicasting. , 2011, , .		0
102	On exploring sparsity in widely separated MIMO radar. , 2011, , .		17
103	On Cooperative Relaying Schemes for Wireless Physical Layer Security. IEEE Transactions on Signal Processing, 2011, 59, 4985-4997.	5.3	456
104	Cooperative Transmission for Relay Networks Based on Second-Order Statistics of Channel State Information. IEEE Transactions on Signal Processing, 2011, 59, 1280-1291.	5.3	113
105	Power Allocation Strategies for Target Localization in Distributed Multiple-Radar Architectures. IEEE Transactions on Signal Processing, 2011, 59, 3226-3240.	5.3	240
106	Measurement Matrix Design for Compressive Sensingâ€"Based MIMO Radar. IEEE Transactions on Signal Processing, 2011, 59, 5338-5352.	5.3	141
107	On Ergodic Secrecy Rate for Gaussian MISO Wiretap Channels. IEEE Transactions on Wireless Communications, 2011, 10, 1176-1187.	9.2	122
108	Ergodic Secrecy Rate for Multiple-Antenna Wiretap Channels With Rician Fading. IEEE Transactions on Information Forensics and Security, 2011, 6, 861-867.	6.9	43

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109	A Message From the Outgoing Editor-in-Chief. IEEE Transactions on Signal Processing, 2011, 59, 5673-5673.	5.3	0
110	On beamforming solution for secrecy capacity of MIMO wiretap channels. , 2011, , .		10
111	Explicit solution of worst-case secrecy rate for MISO wiretap channels with spherical uncertainty. , 2011, , .		2
112	On the Sumrate of Amplify-and-Forward Relay Networks with Multiple Source-Destination Pairs. IEEE Transactions on Wireless Communications, 2011, 10, 3732-3742.	9.2	35
113	MIMO Radar Using Compressive Sampling. IEEE Journal on Selected Topics in Signal Processing, 2010, 4, 146-163.	10.8	269
114	Ergodic Secrecy Rate for Gaussian MISO Wiretap Channels with Non-Trivial Covariance. , 2010, , .		1
115	ALOHA with Collision Resolution: Physical layer description and software defined radio implementation. , 2010, , .		1
116	Optimal input covariance for achieving secrecy capacity in Gaussian MIMO wiretap channels. , 2010, , .		28
117	Step-frequency radar with compressive sampling (SFR-CS). , 2010, , .		29
118	Range estimation for MIMO step-frequency radar with compressive sensing. , 2010, , .		3
119	Announcing a New Peer Review Model for the IEEE Transactions on Signal Processing. IEEE Transactions on Signal Processing, 2010, 58, 3425-3425.	5.3	0
120	MIMO radar based on reduced complexity compressive sampling. , 2010, , .		2
121	Ergodic secrecy rate for Gaussian MISO wiretap channels with Rician fading. , 2010, , .		1
122	ALOHA with Collision Resolution: MAC layer analysis and software defined radio implementation. , 2010, , .		1
123	Cooperative jamming for wireless physical layer security. , 2009, , .		62
124	Compressive sensing for MIMO radar. , 2009, , .		39
125	Reduced complexity angle-Doppler-range estimation for MIMO radar that employs compressive sensing. , 2009, , .		8
126	Amplify-and-forward based cooperation for secure wireless communications. , 2009, , .		61

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127	Collision resolution based on pulse shape diversity. , 2009, , .		3
128	Carrier frequency offset estimation in OFDMA systems based on averaging over successive blocks. , 2009, , .		1
129	A Novel Location Relay Selection Scheme for ALLIANCES. IEEE Transactions on Vehicular Technology, 2008, 57, 1272-1284.	6.3	23
130	PARAFAC-Based Blind Estimation Of Possibly Underdetermined Convolutive MIMO Systems. IEEE Transactions on Signal Processing, 2008, 56, 111-124.	5.3	21
131	Multichannel ALLIANCES: A Cooperative Cross-Layer Scheme for Wireless Networks. IEEE Transactions on Signal Processing, 2008, 56, 771-784.	5.3	8
132	A Cross-Layer Approach to Collaborative Beamforming for Wireless Ad Hoc Networks. IEEE Transactions on Signal Processing, 2008, 56, 2981-2993.	5.3	71
133	Distributed MIMO radar using compressive sampling. , 2008, , .		27
134	Secure wireless communications via cooperation. , 2008, , .		88
135	Pulse-shaping for blind multi-user separation in distributed MISO configurations. , 2008, , .		2
136	Pulse-shaping for blind multi-user separation in distributed MISO configurations. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	3
137	A comparison of cooperative beamforming to direct transmission based on spectral efficiency. , 2008, , .		2
138	A precoded OFDMA system with user cooperation. , 2008, , .		0
139	Performance analysis of a cross-layer collaborative beamforming approach in the presence of channel and phase errors. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	1
140	Blind Estimation of Multiple Carrier Frequency Offsets. , 2007, , .		14
141	Alliances with Optimal Relay Selection. , 2007, , .		7
142	A Multichannel Cooperative Scheme for Wireless Networks and Performance Characterization. , 2007, , .		1
143	Cooperative Beamforming and Power Control. Conference Record of the Asilomar Conference on Signals, Systems and Computers, 2007, , .	0.0	5
144	Cooperative Beamforming for Wireless Ad Hoc Networks. , 2007, , .		17

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145	A High-Throughput Cross-Layer Scheme for Distributed Wireless Ad Hoc Networks. , 2007, , .		8
146	Blind identification of distributed antenna systems with multiple carrier frequency offsets. , 2007, , .		3
147	The Effect of Carrier Frequency Offset on Collision Resolution in Wireless Networks. , 2006, , .		2
148	Joint statistics of interference in a wireless communications link resulted from a poisson field of interferers. , 2002, , .		1
149	Multimedia digital signal processing laboratory. Computer Applications in Engineering Education, 2000, 8, 209-215.	3.4	3