

# Augusto Aubry

## List of Publications by Year in descending order

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131  
papers

4,180  
citations

109137

35  
h-index

118652

62  
g-index

133  
all docs

133  
docs citations

133  
times ranked

1395  
citing authors

#	ARTICLE	IF	CITATIONS
1	Compatibility Assessment of Multistatic/Polarimetric Clutter Data With the SIRP Model. IEEE Transactions on Aerospace and Electronic Systems, 2023, 59, 359-374.	2.6	3
2	Effects of Plasma Media With Weak Scintillation on the Detection Performance of Spaceborne Radars. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-13.	2.7	3
3	Quasi-Orthogonal Waveforms for Ambiguity Suppression in Spaceborne Quad-Pol SAR. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-17.	2.7	21
4	Assessing Power Amplifier Impairments and Digital Predistortion on Radar Waveforms for Spectral Coexistence. IEEE Transactions on Aerospace and Electronic Systems, 2022, 58, 635-650.	2.6	11
5	Enhanced Target Localization With Deployable Multiplatform Radar Nodes Based on Non-Convex Constrained Least Squares Optimization. IEEE Transactions on Signal Processing, 2022, 70, 1282-1294.	3.2	8
6	Multi-Spectrally Constrained Transceiver Design Against Signal-Dependent Interference. IEEE Transactions on Signal Processing, 2022, 70, 1320-1332.	3.2	39
7	MIMO SBR via Code Division Multiplexing for Track While Simultaneous Search. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-14.	2.7	2
8	Adaptive Radar Detection in Gaussian Interference Using Clutter-Free Training Data. IEEE Transactions on Signal Processing, 2022, 70, 978-993.	3.2	7
9	Polarimetric FDA-MIMO Radar Detection. , 2022, , .		0
10	On Radar Transceiver Design against Signal-Dependent Interference with Discrete-Phase Codes and Multiple Spectral Constraints. , 2022, , .		0
11	ATOM for MLE of Toeplitz Structured Covariance Matrices for RADAR Applications. , 2022, , .		2
12	Spaceborne Radar Sensor Architecture for Debris Detection and Tracking. IEEE Transactions on Geoscience and Remote Sensing, 2021, 59, 6621-6636.	2.7	8
13	GLRT-Based Adaptive Target Detection in FDA-MIMO Radar. IEEE Transactions on Aerospace and Electronic Systems, 2021, 57, 597-613.	2.6	99
14	Experimental Analysis of Block-Sparsity-Based Spectrum Sensing Techniques for Cognitive Radar. IEEE Transactions on Aerospace and Electronic Systems, 2021, 57, 355-370.	2.6	13
15	Adaptive Target Separation Detection. IEEE Transactions on Aerospace and Electronic Systems, 2021, 57, 293-309.	2.6	4
16	Structured Covariance Matrix Estimation With Missing-(Complex) Data for Radar Applications via Expectation-Maximization. IEEE Transactions on Signal Processing, 2021, 69, 5920-5934.	3.2	12
17	Adaptive Radar Detection in Low-Rank Heterogeneous Clutter via Invariance Theory. IEEE Transactions on Signal Processing, 2021, 69, 1492-1506.	3.2	15
18	Single-Snapshot Angle and Incremental Range Estimation for FDA-MIMO Radar. IEEE Transactions on Aerospace and Electronic Systems, 2021, 57, 3705-3718.	2.6	50

#	ARTICLE	IF	CITATIONS
19	Reconfigurable Intelligent Surfaces for N-LOS Radar Surveillance. IEEE Transactions on Vehicular Technology, 2021, 70, 10735-10749.	3.9	45
20	Optimal Opponent Stealth Trajectory Planning Based on an Efficient Optimization Technique. IEEE Transactions on Signal Processing, 2021, 69, 270-283.	3.2	5
21	Experimental Analysis of Structured Covariance Estimators with Missing data. , 2021, , .		1
22	Fading Occurrence Probability for Spaceborne Radar in Weak Plasma Scintillation. , 2021, , .		2
23	An Ontology for Spaceborne Radar Debris Detection and Tracking: Channel-Target Phenomenology and Motion Models. IEEE Aerospace and Electronic Systems Magazine, 2021, 36, 18-42.	2.3	8
24	An Adaptive Radar Signal Processor for UAVs Detection With Super-Resolution Capabilities. IEEE Sensors Journal, 2021, 21, 20778-20787.	2.4	19
25	2-D PBR Localization Complying With Constraints Forced by Active Radar Measurements. IEEE Transactions on Aerospace and Electronic Systems, 2021, 57, 2647-2660.	2.6	7
26	Power Amplifier Distortions on Radar Signals for Spectral Coexistence. , 2021, , .		1
27	A Smart Radar Signal Processing Solution for Ground-Based UAVs Surveillance. , 2021, , .		0
28	3D Localization for Multiplatform Radar Networks with Deployable Nodes. , 2021, , .		1
29	Constrained Target Localization for Multiplatform Radar Systems. , 2021, , .		1
30	Joint Exploitation of TDOA and PCL Techniques for Two-Dimensional Target Localization. IEEE Transactions on Aerospace and Electronic Systems, 2020, 56, 597-609.	2.6	13
31	Assessing Reciprocity in Polarimetric SAR Data. IEEE Geoscience and Remote Sensing Letters, 2020, 17, 87-91.	1.4	12
32	Multi-Class Random Matrix Filtering for Adaptive Learning. IEEE Transactions on Signal Processing, 2020, 68, 359-373.	3.2	9
33	Constant Modulus Discrete Phase Radar Waveforms Design Subject to Multi-Spectral Constraints. , 2020, , .		1
34	Design and Analysis of Adaptive Sidelobe Blanking Architectures. , 2020, , .		1
35	Assessing Block-Sparsity-Based Spectrum Sensing Approaches for Cognitive Radar on Measured Data. , 2020, , .		1
36	Toeplitz Structured Covariance Matrix Estimation for Radar Applications. , 2020, , .		2

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37	Automatically Tunable AMF for Radar Detection in Diffuse Multipath. , 2020, , .		2
38	Spaceborne Radar Functional Architecture for Debris Bayesian Inference. , 2020, , .		4
39	Design of GLR-Based Detectors for FDA-MIMO radar. , 2020, , .		1
40	2D Constrained PBR Localization Via Active Radar Designation. , 2020, , .		3
41	Transceiver Design in Signal-Dependent Interference and Spectrally Dense Environments. , 2020, , .		2
42	Single-Pulse Simultaneous Target Detection and Angle Estimation in a Multichannel Phased Array Radar. IEEE Transactions on Signal Processing, 2020, 68, 6649-6664.	3.2	20
43	Design of Constant Modulus Discrete Phase Radar Waveforms Subject to Multi-Spectral Constraints. IEEE Signal Processing Letters, 2020, 27, 875-879.	2.1	40
44	Hidden Convexity in Robust Waveform and Receive Filter Bank Optimization Under Range Unambiguous Clutter. IEEE Signal Processing Letters, 2020, 27, 885-889.	2.1	19
45	Design of adaptive detectors for FDA-MIMO radar. , 2020, , .		4
46	Assessing Agile Spectrum Management for Cognitive Radar on Measured Data. IEEE Aerospace and Electronic Systems Magazine, 2020, 35, 20-32.	2.3	18
47	Hidden Convexity in Robust Waveform and Receive Filter Bank Optimization for Range Unambiguous Clutter. , 2020, , .		1
48	Diffuse Multipath Exploitation for Adaptive Detection of Range Distributed Targets. IEEE Transactions on Signal Processing, 2020, 68, 1197-1212.	3.2	24
49	Localization in 2D PBR With Multiple Transmitters of Opportunity: A Constrained Least Squares Approach. IEEE Transactions on Signal Processing, 2020, 68, 634-646.	3.2	21
50	Toeplitz Structured Covariance Matrix Estimation for Radar Applications. IEEE Signal Processing Letters, 2020, 27, 595-599.	2.1	22
51	On the Design of Multi-Spectrally Constrained Constant Modulus Radar Signals. IEEE Transactions on Signal Processing, 2020, 68, 2231-2243.	3.2	70
52	Radar Detection, Performance Analysis, and CFAR Techniques. , 2019, , .		5
53	Phase-Only Radar Waveform Design for Spectrally Dense Environments. , 2019, , .		1
54	On the Exploitability of the Ka Band for Spaceborne Radar Debris Detection and Tracking Measurements. , 2019, , .		6

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55	An EL Approach for Similarity Parameter Selection in KA Covariance Matrix Estimation. IEEE Signal Processing Letters, 2019, 26, 1217-1221.	2.1	13
56	Optimal Stealth Trajectory Design to Deceive Anomaly Detection Process. , 2019, , .		1
57	High Range Resolution Profile Estimation via a Cognitive Stepped Frequency Technique. IEEE Transactions on Aerospace and Electronic Systems, 2019, 55, 444-458.	2.6	38
58	Multi-Snapshot Spectrum Sensing for Cognitive Radar via Block-Sparsity Exploitation. IEEE Transactions on Signal Processing, 2019, 67, 1396-1406.	3.2	48
59	A Geometric Approach to Covariance Matrix Estimation and its Applications to Radar Problems. IEEE Transactions on Signal Processing, 2018, 66, 907-922.	3.2	83
60	Bayesian Multi-Class Covariance Matrix Filtering for Adaptive Environment Learning. , 2018, , .		1
61	Assessing Spectral Compatibility Between Radar and Communication Systems on Measured Data. , 2018, , .		2
62	A New Sequential Optimization Procedure and Its Applications to Resource Allocation for Wireless Systems. IEEE Transactions on Signal Processing, 2018, 66, 6518-6533.	3.2	82
63	Comments on "Waveform Design for Radar STAP in Signal Dependent Interference" IEEE Transactions on Signal Processing, 2018, 66, 5206-5207.	3.2	3
64	Two-dimensional spectrum sensing for cognitive radar. , 2018, , .		10
65	Robust Waveform and Filter Bank Design of Polarimetric Radar. IEEE Transactions on Aerospace and Electronic Systems, 2017, 53, 370-384.	2.6	78
66	A geometric approach for structured radar covariance estimation. , 2017, , .		4
67	Rician MIMO Channel- and Jamming-Aware Decision Fusion. IEEE Transactions on Signal Processing, 2017, 65, 3866-3880.	3.2	143
68	A New Optimality Property of the Capon Estimator. IEEE Signal Processing Letters, 2017, 24, 1706-1708.	2.1	9
69	A Coordinate-Descent Framework to Design Low PSL/ISL Sequences. IEEE Transactions on Signal Processing, 2017, 65, 5942-5956.	3.2	161
70	Design of binary sequences with low PSL/ISL. , 2017, , .		12
71	Joint Radar Waveform and Bank of Filter Design Forwind Farm Clutter Mitigation. , 2017, , .		0
72	Optimization theory-based radar waveform design for spectrally dense environments. IEEE Aerospace and Electronic Systems Magazine, 2016, 31, 14-25.	2.3	138

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73	New Results on Generalized Fractional Programming Problems With Toeplitz Quadratics. IEEE Signal Processing Letters, 2016, 23, 848-852.	2.1	18
74	Optimizing polarimetric radar waveform and filter bank for extended targets in clutter. , 2016, , .		2
75	Coincidence of Maximal Invariants for Two Adaptive Radar Detection Problems. IEEE Signal Processing Letters, 2016, , 1-1.	2.1	5
76	Radar waveform design with multiple spectral compatibility constraints. , 2016, , .		8
77	A cognitive approach for radar receiver adaptation. , 2016, , .		2
78	Cognitive Radar Waveform Design for Spectral Compatibility. , 2016, , .		6
79	Radar Filters Design in the Presence of Target Doppler Frequency and Interference Covariance Matrix Uncertainties. , 2016, , .		0
80	Radar Phase Noise Modeling and Effects-Part I : MTI Filters. IEEE Transactions on Aerospace and Electronic Systems, 2016, 52, 698-711.	2.6	25
81	Radar phase noise modeling and effects-part II: pulse doppler processors and sidelobe blankers. IEEE Transactions on Aerospace and Electronic Systems, 2016, 52, 712-725.	2.6	19
82	Robust Design of Radar Doppler Filters. IEEE Transactions on Signal Processing, 2016, 64, 5848-5860.	3.2	42
83	MIMO Radar Beampattern Design Via PSL/ISL Optimization. IEEE Transactions on Signal Processing, 2016, 64, 3955-3967.	3.2	147
84	Forcing Multiple Spectral Compatibility Constraints in Radar Waveforms. IEEE Signal Processing Letters, 2016, 23, 483-487.	2.1	98
85	Optimizing Radar Waveform and Doppler Filter Bank via Generalized Fractional Programming. IEEE Journal on Selected Topics in Signal Processing, 2015, 9, 1387-1399.	7.3	141
86	Diffuse Multipath Exploitation for Adaptive Radar Detection. IEEE Transactions on Signal Processing, 2015, 63, 1268-1281.	3.2	67
87	Robust Transmit Code and Receive Filter Design for Extended Targets in Clutter. IEEE Transactions on Signal Processing, 2015, 63, 1965-1976.	3.2	89
88	A new radar waveform design algorithm with improved feasibility for spectral coexistence. IEEE Transactions on Aerospace and Electronic Systems, 2015, 51, 1029-1038.	2.6	194
89	Phase noise modeling and its effects on the performance of some radar signal processors. , 2015, , .		3
90	Radar detection and range estimation using oversampled data. IEEE Transactions on Aerospace and Electronic Systems, 2015, 51, 1039-1052.	2.6	28

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91	Robust design of transmit code and receive filter for extended targets in clutter. , 2015, , .		3
92	Knowledge-based design of space-time transmit code and receive filter for a multiple-input-multiple-output radar in signal-dependent interference. IET Radar, Sonar and Navigation, 2015, 9, 1124-1135.	0.9	84
93	PSL-based beam pattern design for MIMO radar systems. , 2015, , .		5
94	Detection of Extended Target in Compound-Gaussian Clutter. , 2015, , 333-374.		1
95	A radar detector with enhanced range estimation capabilities for partially homogeneous environment. IET Radar, Sonar and Navigation, 2014, 8, 1018-1025.	0.9	15
96	Median matrices and their application to radar training data selection. IET Radar, Sonar and Navigation, 2014, 8, 265-274.	0.9	40
97	Adaptive Detection of Point-Like Targets in the Presence of Homogeneous Clutter and Subspace Interference. IEEE Signal Processing Letters, 2014, 21, 848-852.	2.1	58
98	A Doppler Robust Design of Transmit Sequence and Receive Filter in the Presence of Signal-Dependent Interference. IEEE Transactions on Signal Processing, 2014, 62, 772-785.	3.2	105
99	A max-min design of transmit sequence and receive filter. , 2014, , .		2
100	Enhanced radar detection and range estimation via oversampled data. , 2014, , .		0
101	Cognitive radar waveform design for spectral coexistence in signal-dependent interference. , 2014, , .		63
102	Radar waveform design in a spectrally crowded environment via nonconvex quadratic optimization. IEEE Transactions on Aerospace and Electronic Systems, 2014, 50, 1138-1152.	2.6	238
103	Exploiting multiple a priori spectral models for adaptive radar detection. IET Radar, Sonar and Navigation, 2014, 8, 695-707.	0.9	42
104	Adaptive radar detection in diffuse multipath environments. , 2014, , .		2
105	Achievable Rate Region for Gaussian MIMO MAC With Partial CSI. IEEE Transactions on Information Theory, 2013, 59, 4139-4170.	1.5	26
106	Optimality Claims for the FML Covariance Estimator with respect to Two Matrix Norms. IEEE Transactions on Aerospace and Electronic Systems, 2013, 49, 2055-2057.	2.6	48
107	Non-cooperative code design in radar networks: a game-theoretic approach. Eurasip Journal on Advances in Signal Processing, 2013, 2013, .	1.0	28
108	Cognitive radar waveform design for spectral coexistence. , 2013, , .		21

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109	Adaptive radar detection based on multiple a-priori models. , 2013, , .		1
110	Radar Detection of Distributed Targets in Homogeneous Interference Whose Inverse Covariance Structure is Defined via Unitary Invariant Functions. IEEE Transactions on Signal Processing, 2013, 61, 4949-4961.	3.2	91
111	Knowledge-Aided (Potentially Cognitive) Transmit Signal and Receive Filter Design in Signal-Dependent Clutter. IEEE Transactions on Aerospace and Electronic Systems, 2013, 49, 93-117.	2.6	308
112	Advanced SLB Architectures with Invariant Receivers. IEEE Transactions on Aerospace and Electronic Systems, 2013, 49, 798-818.	2.6	13
113	Extended target detection in interference whose covariance matrix is defined via uncertainty convex constraints. , 2013, , .		2
114	Ambiguity Function Shaping for Cognitive Radar Via Complex Quartic Optimization. IEEE Transactions on Signal Processing, 2013, 61, 5603-5619.	3.2	159
115	Covariance matrix estimation via geometric barycenters and its application to radar training data selection. IET Radar, Sonar and Navigation, 2013, 7, 600-614.	0.9	84
116	Cognitive design of the receive filter and transmitted phase code in reverberating environment. IET Radar, Sonar and Navigation, 2012, 6, 822-833.	0.9	123
117	Quantized phase code and receive filter synthesis in reverberating environment. , 2012, , .		0
118	Estimation of a structured covariance matrix with a condition number constraint for radar applications. , 2012, , .		2
119	Geometric barycenters and their application to radar training data selection/target detection. , 2012, , .		0
120	Cognitive design of the transmitted phase code and receive filter in reverberating environment. , 2012, , .		2
121	A coherent SLB architecture with Kelly's receiver. , 2012, , .		0
122	Transmitted phase code/receive filter design for high reverberating environment: A cognitive approach. , 2012, , .		1
123	A cognitive approach for ambiguity function shaping. , 2012, , .		2
124	Maximum Likelihood Estimation of a Structured Covariance Matrix With a Condition Number Constraint. IEEE Transactions on Signal Processing, 2012, 60, 3004-3021.	3.2	118
125	Detection capabilities evaluation of a constrained structured covariance matrix estimator for radar applications. , 2012, , .		1
126	Cumulants-based Radar Specific Emitter Identification. , 2011, , .		25

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127	On MIMO Detection Under Non-Gaussian Target Scattering. IEEE Transactions on Information Theory, 2010, 56, 5822-5838.	1.5	44
128	Multiple-access channel capacity region with incomplete channel state information. , 2010, , .		5
129	On MIMO detection under non-Gaussian target scattering: The power-limited case. , 2009, , .		0
130	Statistical MIMO radar under non-Gaussian target scattering. , 2009, , .		0
131	Analysis of cooperative MIMO networks with incomplete channel state information. , 2008, , .		4