Elias Aboutanios

List of Publications by Year
in descending order

108 papers	2,670 citations	361413 20 h-index	315739 38 g-index
109 all docs	109 docs citations	109 times ranked	1972 citing authors

#	Article	IF	Citations
1	Coarray-domain iterative direction-of-arrival estimation with coprime arrays. , 2022, 122, 103332.		0
2	Joint Radar and Communications for Frequency-Hopped MIMO Systems. IEEE Transactions on Signal Processing, 2022, 70, 729-742.	5.3	27
3	Switch-based hybrid beamforming for massive MIMO communications in mmWave bands. Signal Processing, 2022, 200, 108659.	3.7	5
4	Improved Target Detection in Spiky Sea Clutter using Sparse Signal Separation. , 2021, , .		1
5	Teaching Signal Processing Through Frequent and Diverse Design: A Pedagogical Approach. IEEE Signal Processing Magazine, 2021, 38, 133-143.	5.6	3
6	Online Antenna Selection for Enhanced DOA Estimation. , 2021, , .		3
7	Joint Communications with FH-MIMO Radar Systems: An Extended Signaling Strategy. , 2021, , .		7
8	Online Switch-Based Hybrid Beamforming for Massive MIMO Systems. , 2021, , .		1
9	Online DOA Estimation for Noninteger Linear Antenna Arrays in Coarray Domain. , 2021, , .		0
10	Robust Frequency, Phase, and Amplitude Estimation in Power Systems Considering Harmonics. IEEE Transactions on Power Delivery, 2020, 35, 1158-1168.	4.3	24
11	Fast two-dimensional nuclear magnetic resonance resolution enhancement by use of a Laplacian estimator. Spectroscopy Letters, 2020, 53, 529-535.	1.0	3
12	Low-cost Beamforming-based DOA Estimation with Model Order Determination. , 2020, , .		7
13	A Study on the Performance of Symbol Dictionary Selection for the Frequency Hopped DFRC Scheme. , 2020, , .		8
14	Effect Analysis of Spatial Modulation on Clutter Mitigation for Joint RadCom Systems and Solutions. , 2020, , .		0
15	Single-Snapshot Beamforming using Fast Iterative Adaptive Techniques. , 2020, , .		1
16	Transversal Velocity Measurement of Multiple Targets Based on Spatial Interferometric Averaging. , 2020, , .		2
17	Multi-Stage Antenna Selection for Adaptive Beamforming in MIMO Radar. IEEE Transactions on Signal Processing, 2020, 68, 1374-1389.	5.3	20
18	Sparse array design for multiple switched beams using iterative antenna selection method. , 2020, 105, 102684.		20

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19	A Robust Framework for Low-Cost Cubesat Scientific Missions. Space Science Reviews, 2020, 216, 1.	8.1	13
20	BalSAR: A Stratospheric Balloon-Borne SAR System. NATO Science for Peace and Security Series B: Physics and Biophysics, 2020, , 283-294.	0.3	0
21	Online Antenna Selection for Adaptive Beamforming in MIMO Radar. , 2020, , .		1
22	Hybrid Detection Approaches using the Single Data Set Algorithm. , 2020, , .		3
23	Single Snapshot Coherent Detection in Sea Clutter. , 2019, , .		4
24	Dual-Function Radar Communication Systems: A Solution to the Spectrum Congestion Problem. IEEE Signal Processing Magazine, 2019, 36, 115-126.	5.6	240
25	An algorithm for discovery and determination of exponentially decaying components in nuclear magnetic resonance relaxometry data. Magnetic Resonance in Chemistry, 2019, 57, 878-889.	1.9	1
26	Adaptive Reduced-Dimensional Beamspace Beamformer Design by Analogue Beam Selection. , 2019, , .		3
27	Switch-Based Hybrid Precoding in mmWave Massive MIMO Systems. , 2019, , .		4
28	Iterative Interpolated Beamforming for Exploiting Full Degrees-of-Freedom in DOA Estimation with Co-Prime Arrays. , 2019, , .		1
29	On the Convergence of the Fast Iterative Interpolated Beamformer. , 2019, , .		0
30	Multichannel Target Detection for Maritime Radar. , 2019, , .		4
31	Coprime beamforming: fast estimation of more sources than sensors. IET Radar, Sonar and Navigation, 2019, 13, 1956-1962.	1.8	11
32	Iterative Weighted Least Squares Frequency Estimation for Harmonic Sinusoidal Signal in Power Systems. , 2018, , .		5
33	Spatial Array Thinning for Interference Cancellation Under Connectivity Constraints. , 2018, , .		1
34	Single-Snapshot DOA Estimation in MIMO Radar Using Fast Iterative Interpolated Beamforming. , 2018, , .		9
35	Dual-Function MIMO Radar-Communications Via Frequency-Hopping Code Selection. , 2018, , .		40
36	Corrections to "On the Estimation of the Parameters of a Real Sinusoid in Noise"[May 17 638-642]. IEEE Signal Processing Letters, 2018, 25, 1115-1115.	3.6	4

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37	Interferometric Array Design Under Regularized Antenna Placements for Interference suppression. , 2018, , .		2
38	Fast Direction-of-Arrival Estimation in Coprime Arrays. , 2018, , .		8
39	A dual-function MIMO radar-communication system via waveform permutation. , 2018, 83, 118-128.		41
40	Array partitioning for multi-task operation in dual function MIMO systems. , 2018, 82, 106-117.		9
41	Fast Iterative Interpolated Beamforming for Accurate Single-Snapshot DOA Estimation. IEEE Geoscience and Remote Sensing Letters, 2017, 14, 574-578.	3.1	46
42	Matched filter constrained MIMO array spatial thinning for interference mitigation. , 2017, , .		1
43	Receiver-transmitter pair selection in MIMO phased array radar. , 2017, , .		8
44	On the Estimation of the Parameters of a Real Sinusoid in Noise. IEEE Signal Processing Letters, 2017, 24, 638-642.	3.6	37
45	Recent Advances in Indoor Localization: A Survey on Theoretical Approaches and Applications. IEEE Communications Surveys and Tutorials, 2017, 19, 1327-1346.	39.4	638
46	LocMAP: A new localization method for the parametric processing of high resolution NMR data. Journal of Magnetic Resonance, 2017, 282, 62-70.	2.1	4
47	Interference DOA estimation and suppression for GNSS receivers using fully augmentable arrays. IET Radar, Sonar and Navigation, 2017, 11, 474-480.	1.8	21
48	Localised high resolution spectral estimator for resolving superimposed peaks in NMR signals. Signal Processing, 2017, 130, 343-354.	3.7	5
49	Rapid accurate frequency estimation of multiple resolved exponentials in noise. Signal Processing, 2017, 132, 29-39.	3.7	34
50	Array spatial thinning for interference mitigation by semidefinite programming. , 2017, , .		1
51	An adaptive Clarke transform based estimator for the frequency of balanced and unbalanced three-phase power systems. , 2017, , .		10
52	Advances in DOA Estimation and Source Localization. International Journal of Antennas and Propagation, 2017, 2017, 1-3.	1.2	5
53	Robust and rapid estimation of the parameters of harmonic signals in three phase power systems. , 2016, , .		7
54	Estimating Parameters of Multiple Damped Complex Sinusoids with Model Order Estimation. , 2016, , .		3

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55	Sparse Arrays and Sampling for Interference Mitigation and DOA Estimation in GNSS. Proceedings of the IEEE, 2016, 104, 1302-1317.	21.3	112
56	Towards a dual-function MIMO radar-communication system. , 2016, , .		62
57	Fast iterative interpolated beamforming for high fidelity single snapshot DOA estimation. , 2016, , .		10
58	IMMGNNF with visibility for multiple maneuvering target tracking. , 2016, , .		0
59	Slow radar target detection in heterogeneous clutter using thinned space–time adaptive processing. IET Radar, Sonar and Navigation, 2016, 10, 726-734.	1.8	46
60	Target visibility for multiple maneuvering target tracking. Proceedings of SPIE, 2015, , .	0.8	0
61	Iterative windowed parameter estimation of multiple superimposed damped exponentials in noise. , 2015, , .		2
62	A novel algorithm for the estimation of the parameters of a real sinusoid in noise. , 2015, , .		7
63	Reduced-Rank STAP for Slow-Moving Target Detection by Antenna-Pulse Selection. IEEE Signal Processing Letters, 2015, 22, 1156-1160.	3.6	28
64	An algorithm for the parameter estimation of multiple superimposed exponentials in noise. , 2015, , .		19
65	Enhanced performance for the interacting multiple model estimator with integrated multiple filters. , 2015, , .		2
66	Target detection and tracking in maritime surveillance mission. Proceedings of SPIE, 2015, , .	0.8	0
67	Bayesian compressive sensing for DOA estimation using the difference coarray. , 2015, , .		9
68	Generalised array reconfiguration for adaptive beamforming by antenna selection. , 2015, , .		9
69	Adaptive Array Thinning for Enhanced DOA Estimation. IEEE Signal Processing Letters, 2015, 22, 799-803.	3.6	40
70	Thinned Array Beampattern Synthesis by Iterative Soft-Thresholding-Based Optimization Algorithms. IEEE Transactions on Antennas and Propagation, 2014, 62, 6102-6113.	5.1	45
71	Efficient peak extraction of proton NMR spectroscopy using lineshape adaptation. , 2014, , .		3
72	Enhanced target tracking by incorporating target visibility into the IMM algorithms. , 2014, , .		1

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73	Reconfigurable Adaptive Array Beamforming by Antenna Selection. IEEE Transactions on Signal Processing, 2014, 62, 2385-2396.	5.3	120
74	Efficient Iterative Estimation of the Parameters of a Damped Complex Exponential in Noise. IEEE Signal Processing Letters, 2014, 21, 975-979.	3.6	15
75	Minimum Output Power anti-jam with fully augmentable arrays in GPS. , 2014, , .		2
76	Bringing signal processing to high school students - A novel gravity measurement experiment. , 2013, , .		1
77	Efficient 2-D Frequency and Damping Estimation by Interpolation on Fourier Coefficients. IEEE Signal Processing Letters, 2013, 20, 137-140.	3.6	6
78	Reconfigurable adaptive linear array signal processing in GNSS applications. , 2013, , .		8
79	Two dimensional frequency estimation by interpolation on Fourier coefficients. , 2012, , .		6
80	Design proficiency - A novel Electrical Engineering course. , 2012, , .		1
81	Instantaneous frequency based spectral analysis of nuclear magnetic resonance spectroscopy data. Computers and Electrical Engineering, 2012, 38, 52-67.	4.8	4
82	Biologically inspired signal processing: analyses, algorithms and applications. Eurasip Journal on Advances in Signal Processing, 2012, 2012, .	1.7	0
83	Estimating the parameters of sinusoids and decaying sinusoids in noise. IEEE Instrumentation and Measurement Magazine, 2011, 14, 8-14.	1.6	46
84	An efficient VLSI architecture for 4Ã—4 16-QAM sorted QR-factorisation based V-BLAST decoder. AEU - International Journal of Electronics and Communications, 2011, 65, 443-452.	2.9	5
85	An instantaneous frequency based algorithm for the processing of NMR data. , 2011, , .		1
86	Instantaneous frequency based spectral analysis of nuclear magnetic spectroscopy data for metabolomics. , 2010, , .		5
87	Generalised DFT-based estimators of the frequency of a complex exponential in noise. , 2010, , .		16
88	Time-frequency and advanced frequency estimation techniques for the investigation of bat echolocation calls. Journal of the Acoustical Society of America, 2010, 127, 1124-1134.	1.1	21
89	Estimation of the Frequency and Decay Factor of a Decaying Exponential in Noise. IEEE Transactions on Signal Processing, 2010, 58, 501-509.	5.3	43
90	Characterization of interference effects in multiple antenna GNSS receivers. , 2010, , .		5

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91	Hybrid Detection Approach for STAP in Heterogeneous Clutter. IEEE Transactions on Aerospace and Electronic Systems, 2010, 46, 1021-1033.	4.7	48
92	Investigation of bat echolocation calls using high resolution spectrogram and instantaneous frequency based analysis. , 2009, , .		3
93	Parameter estimation of a decaying exponential in noise. , 2009, , .		0
94	Heterogeneity detection for hybrid STAP algorithm. , 2008, , .		1
95	Estimation of the frequency of a complex exponential. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	9
96	Evaluation of the single and two data set STAP detection algorithms using measured data. , 2007, , .		9
97	Bistatic JDL-STAP for ground moving target detection. , 2007, , .		0
98	Regularisation methods for covariance matrix estimation in low sample support STAP. , 2007, , .		0
99	Training strategies for joint domain localised-space–time adaptive processing in a bistatic environment. IET Radar, Sonar & Navigation, 2006, 153, 516.	2.1	6
100	Averaging of Sorted Bigenvalues for STAP. , 2006, , .		0
101	A STAP algorithm for radar target detection in heterogeneous environments. , 2005, , .		35
102	Iterative frequency estimation by interpolation on Fourier coefficients. IEEE Transactions on Signal Processing, 2005, 53, 1237-1242.	5.3	349
103	A Modified Dichotomous Search Frequency Estimator. IEEE Signal Processing Letters, 2004, 11, 186-188.	3.6	83
104	A new algorithm for the estimation of the frequency of a complex exponential in additive Gaussian noise. IEEE Communications Letters, 2003, 7, 549-551.	4.1	49
105	Frequency estimation and tracking for low earth orbit satellites. , 0, , .		7
106	Assessment of the single data set detection algorithms under template mismatch. , 0, , .		4
107	Modified JDL with doppler compensation for airborne bistatic radar. , 0, , .		10
108	Linear Prediction of Range-Dependent Inverse Covariance Matrix. , 0, , .		0