Adel Belouchrani

List of Publications by Year in descending order

158 papers	4,988 citations	257357 24 h-index	138417 58 g-index
159 all docs	159 docs citations	159 times ranked	3088 citing authors

#	Article	IF	Citations
1	A blind source separation technique using second-order statistics. IEEE Transactions on Signal Processing, 1997, 45, 434-444.	3.2	2,199
2	Blind source separation based on time-frequency signal representations. IEEE Transactions on Signal Processing, 1998, 46, 2888-2897.	3.2	337
3	Fault Diagnosis in Industrial Induction Machines Through Discrete Wavelet Transform. IEEE Transactions on Industrial Electronics, 2011, 58, 4385-4395.	5.2	263
4	QRS detection based on wavelet coefficients. Computer Methods and Programs in Biomedicine, 2012, 107, 490-496.	2.6	227
5	Time-frequency MUSIC. IEEE Signal Processing Letters, 1999, 6, 109-110.	2.1	190
6	Underdetermined Blind Separation of Nondisjoint Sources in the Time-Frequency Domain. IEEE Transactions on Signal Processing, 2007, 55, 897-907.	3.2	162
7	Robust whitening procedure in blind source separation context. Electronics Letters, 2000, 36, 2050.	0.5	138
8	Separating More Sources Than Sensors Using Time-Frequency Distributions. Eurasip Journal on Advances in Signal Processing, 2005, 2005, 1.	1.0	82
9	A contribution in the actualization of wind map of Algeria. Renewable and Sustainable Energy Reviews, 2011, 15, 993-1002.	8.2	72
10	Source Separation and Localization Using Time-Frequency Distributions: An Overview. IEEE Signal Processing Magazine, 2013, 30, 97-107.	4.6	54
11	A comparison between wind speed distributions derived from the maximum entropy principle and Weibull distribution. Case of study; six regions of Algeria. Renewable and Sustainable Energy Reviews, 2012, 16, 379-385.	8.2	52
12	Time-Frequency Distributions Based on Compact Support Kernels: Properties and Performance Evaluation. IEEE Transactions on Signal Processing, 2012, 60, 2814-2827.	3.2	50
13	Maximum likelihood angle-frequency estimation in partially known correlated noise for low-elevation targets. IEEE Transactions on Signal Processing, 2005, 53, 3057-3064.	3.2	48
14	Direction finding in correlated noise fields based on joint block-diagonalization of spatio-temporal correlation matrices. IEEE Signal Processing Letters, 1997, 4, 266-268.	2.1	43
15	Wavelet spectral analysis of the temperature and wind speed data at Adrar, Algeria. Renewable Energy, 2010, 35, 1214-1219.	4.3	35
16	The spatial ambiguity function and its applications. IEEE Signal Processing Letters, 2000, 7, 138-140.	2.1	34
17	Separating more sources than sensors using time-frequency distributions. , 0, , .		34
18	Blind Separation of Nonstationary Sources. IEEE Signal Processing Letters, 2004, 11, 605-608.	2.1	34

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19	A New Algorithm for Complex Non-Orthogonal Joint Diagonalization Based on Shear and Givens Rotations. IEEE Transactions on Signal Processing, 2014, 62, 1913-1925.	3.2	34
20	A new composite criterion for adaptive and iterative blind source separation. , 0, , .		32
21	Estimation of Multicomponent Polynomial-Phase Signals Impinging on a Multisensor Array Using State–Space Modeling. IEEE Transactions on Signal Processing, 2007, 55, 32-45.	3.2	31
22	AUTOMATIC THRESHOLD SELECTION IN OS-CFAR RADAR DETECTION USING INFORMATION THEORETIC CRITERIA. Progress in Electromagnetics Research B, 2011, 30, 157-175.	0.7	31
23	Joint anti-diagonalization for blind source separation. , 0, , .		30
24	A new Jacobi-like method for joint diagonalization of arbitrary non-defective matrices. Applied Mathematics and Computation, 2009, 211, 363-373.	1.4	30
25	Jacobi-like algorithm for blind signal separation of convolutive mixtures. Electronics Letters, 2001, 37, 1049.	0.5	28
26	Performance Bounds Analysis for Semi-Blind Channel Estimation in MIMO-OFDM Communications Systems. IEEE Transactions on Wireless Communications, 2017, 16, 5925-5938.	6.1	28
27	Frequency and Phasor Estimations in Three-Phase Systems: Maximum Likelihood Algorithms and Theoretical Performance. IEEE Transactions on Smart Grid, 2019, 10, 3248-3258.	6.2	28
28	Jammer mitigation in spread spectrum communications using blind sources separation. Signal Processing, 2000, 80, 723-729.	2.1	21
29	Estimation of Amplitude, Phase and Unbalance Parameters in Three-phase Systems: Analytical Solutions, Efficient Implementation and Performance Analysis. IEEE Transactions on Signal Processing, 2014, 62, 4064-4076.	3.2	21
30	Blind carrier phase tracking with guaranteed global convergence. IEEE Transactions on Signal Processing, 1997, 45, 1889-1894.	3.2	20
31	Blind separation of second-order nonstationary and temporally colored sources. , 0, , .		20
32	Second-order near-field source localization: algorithm and performance analysis. , 0, , .		19
33	Performance analysis for time-frequency MUSIC algorithm in presence of both additive noise and array calibration errors. Eurasip Journal on Advances in Signal Processing, 2012, 2012, .	1.0	18
34	Separation of Dependent Autoregressive Sources Using Joint Matrix Diagonalization. IEEE Signal Processing Letters, 2015, 22, 1180-1183.	2.1	18
35	Performance analysis and computational cost evaluation of high-resolution time-frequency distributions derived from compact support time-lag kernels. , 2018, 78, 1-19.		18
36	Blind Identification of Thermal Models and Power Sources From Thermal Measurements. IEEE Sensors Journal, 2018, 18, 680-691.	2.4	16

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37	Novel Reliable and Practical Decoupling Mechanism for Strongly Coupled Antenna Arrays. IEEE Transactions on Antennas and Propagation, 2019, 67, 5892-5899.	3.1	16
38	Application of time–frequency representation in the study of the cyclical behavior of wind speed in Algeria: wavelet transform. Stochastic Environmental Research and Risk Assessment, 2010, 24, 1233-1239.	1.9	15
39	A NEW ADAPTIVE LINEAR COMBINED CFAR DETECTOR IN PRESENCE OF INTERFERING TARGETS. Progress in Electromagnetics Research B, 2011, 34, 367-387.	0.7	15
40	Blind source separation using time-frequency distributions: algorithm and asymptotic performance. , 0, , .		14
41	Blind separation of convolutive mixtures using joint block diagonalization. , 0, , .		13
42	Fast Adaptive Blind MMSE Equalizer for Multichannel FIR Systems. Eurasip Journal on Advances in Signal Processing, 2006, 2006, 1.	1.0	12
43	On the application of chirp modulation in spread spectrum communication systems. , 0, , .		11
44	Heartbeats classification using QRS and T waves autoregressive features and RR interval features. Expert Systems, 2017, 34, e12219.	2.9	11
45	New approach for blind source separation using time-frequency distributions. , 1996, , .		10
46	HEARTBEAT CLASSIFICATION USING SUPPORT VECTOR MACHINES (SVMs) WITH AN EMBEDDED REJECT OPTION. International Journal of Pattern Recognition and Artificial Intelligence, 2012, 26, 1250001.	0.7	10
47	Parametric estimation and suppression of non-stationary interference in DS-spread spectrum communications. , 0, , .		9
48	A subspace-based method for speech encryption. , 2010, , .		9
49	Sea Clutter Texture Estimation: Exploiting Decorrelation and Cyclostationarity. IEEE Transactions on Aerospace and Electronic Systems, 2013, 49, 726-743.	2.6	9
50	Toward green communications using semi-blind channel estimation. , 2017, , .		9
51	Monitoring of Three-Phase Signals Based on Singular-Value Decomposition. IEEE Transactions on Smart Grid, 2019, 10, 6156-6166.	6.2	9
52	A two-sensor array blind beamformer for direct sequence spread spectrum communications. IEEE Transactions on Signal Processing, 1999, 47, 2191-2199.	3.2	8
53	A one step time-frequency blind identification. , 2003, , .		8
54	Blind system identification using cross-relation methods: further results and developments. , 2003, , .		8

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55	New hybrid adaptive blind equalization algorithms for QAM signals. , 2009, , .		8
56	Constant modulus algorithms using hyperbolic Givens rotations. Signal Processing, 2014, 104, 412-423.	2.1	8
57	An efficient fourth order system identification (FOSI) algorithm utilizing the joint diagonalization procedure. , 0, , .		7
58	Blind separation of non stationary sources using joint block diagonalization. , 0, , .		7
59	A fast adaptive blind equalization algorithm robust to channel order over-estimation errors. , 0, , .		7
60	Fast principal component analysis and data whitening algorithms. , 2011, , .		7
61	Identification and analysis of wind speed patterns extracted from multi-sensors measurements. Stochastic Environmental Research and Risk Assessment, 2013, 27, 1-9.	1.9	7
62	Low complexity adaptive algorithms for Principal and Minor Component Analysis. , 2013, 23, 19-29.		7
63	Closed-form solution to motion parameter estimation of an acoustic source exploiting Doppler effect. , 2017, 63, 35-43.		7
64	Blind source separation using the spatial ambiguity functions. , 0, , .		6
65	Compact support kernels based time-frequency distributions: Performance evaluation. , 2011, , .		6
66	Remote monitoring system of electrical machines via INTERNET. , 2013, , .		6
67	Enhanced bit-width optimization for linear circuits with feedbacks. , 2014, , .		6
68	Minimum noise subspace: concepts and applications. , 0, , .		5
69	A second order multi output deconvolution (SOMOD) technique. , 0, , .		5
70	On the use of a new compact support kernel in time frequency analysis. , 0, , .		5
71	Maximum likelihood joint angle and delay estimation in unknown noise fields. , 0, , .		5
72	A new blind adaptive MMSE equalizer for MIMO systems. , 0, , .		5

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73	ARCTANGENT ARCHITECTURE FOR HIGH SPEED AND HIGH PRECISION DATA. Journal of Circuits, Systems and Computers, 2011, 20, 1243-1259.	1.0	5
74	Min-norm based alphabet-matching algorithm for adaptive blind equalisation of high-order QAM signals. Transactions on Emerging Telecommunications Technologies, 2013, 24, 552-556.	2.6	5
75	Premature ventricular contraction arrhythmia detection using wavelet coefficients. , 2013, , .		5
76	Performance improvement of direction finding algorithms in non-homogeneous environment through data fusion. , 2015, 41, 41-47.		5
77	What semi-blind channel estimation brings in terms of throughput gain ?. , 2016, , .		5
78	Semiâ€blind MIMOâ€OFDM channel estimation using expectation maximisation like techniques. IET Communications, 2019, 13, 3452-3462.	1.5	5
79	Time-frequency readability enhancement of compact support kernel-based distributions using image post-processing: Application to instantaneous frequency estimation of M-ary frequency shift keying signals. , 2022, 127, 103535.		5
80	Asymptotic performance of second order blind separation. , 0, , .		4
81	<title>Time-frequency MUSIC: an array signal processing method based on time-frequency signal representations</title>. , 1998, , .		4
82	ON THE USE OF MULTIFRACTAL ANALYSIS AND GENETIC ALGORITHMS FOR THE SEGMENTATION OF CERVICAL CELL IMAGES. International Journal of Pattern Recognition and Artificial Intelligence, 2003, 17, 1227-1244.	0.7	4
83	Multiplicative multiresolution decomposition for 2D signals: application to speckle reduction in sar images. , 0, , .		4
84	Multipath parameter estimation of linear chirp signals using sensor arrays. , 0, , .		4
85	Design and Real Time Implementation of a Novel Combined CA-CFAR/SLB System on TMS320C67x Processor. , 2006, , .		4
86	Joint diagonalization of non defective matrices using generalized Jacobi rotations. , 2010, , .		4
87	Minor subspace tracking using MNS technique. , 2012, , .		4
88	Blind identification of power sources in processors. , 2017, , .		4
89	Ground moving target classification based on micro-Doppler signature using novel spectral information features. , 2017, , .		4
90	An analytical derivation for second-order blind separation of two signals. Annales Des Telecommunications/Annals of Telecommunications, 2018, 73, 711-717.	1.6	4

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91	Efficient Semi-Blind Subspace Channel Estimation for MIMO-OFDM System. , 2018, , .		4
92	Precision analysis with analytical bitâ€width optimisation process for linear circuits with feedbacks. IET Circuits, Devices and Systems, 2018, 12, 563-570.	0.9	4
93	On the Use of Spatial Time Frequency Distributions for Signal Extraction. Multidimensional Systems and Signal Processing, 1998, 9, 349-354.	1.7	3
94	Parameter estimation in low-elevation target tracking. , 0, , .		3
95	Application of time-frequency distributions to the independent component analysis of ECG signals. , 0, , .		3
96	Contrast functions for blind source separation based on time frequency distributions. , 0, , .		3
97	Blind Adaptive Equalization Method without Channel Order Estimation. , 0, , .		3
98	Blind separation of cyclostationary sources using non-orthogonal approximate joint diagonalization. , 2008, , .		3
99	A low-cost adaptive algorithm for blind equalization without channel order estimation. , 2008, , .		3
100	A new ToAs' CACFAR Wiener Rake Estimator for downlink mobile positioning in UMTS-FDD system. , 2011, , .		3
101	An FPGA based soft multiprocessor for DNS/DNSSEC authoritative server. Microprocessors and Microsystems, 2011, 35, 473-483.	1.8	3
102	Time frequency and array processing of non-stationary signals. Eurasip Journal on Advances in Signal Processing, 2012, 2012, .	1.0	3
103	Subspace-based technique for speech encryption. , 2012, 22, 298-303.		3
104	Minimum error rate detection: An adaptive bayesian approach. Signal Processing, 2017, 140, 1-11.	2.1	3
105	Further investigations on the performance bounds of MIMO-OFDM channel estimation. , 2017, , .		3
106	Understanding the Sources of Power Consumption in Mobile SoCs. , 2018, , .		3
107	Efficient and Stable Joint Eigenvalue Decomposition Based on Generalized Givens Rotations. , 2018, , .		3
108	New algorithms on Complex Joint Eigenvalue Decomposition Based on Generalized Givens Rotations. , 2019, , .		3

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109	Novel flowchart design of frequency independent 180° phase shifters. Microwave and Optical Technology Letters, 2019, 61, 136-140.	0.9	3
110	Blind source separation using joint signal representations for arbitrary variables. , 1997, , .		2
111	Interference mitigation in spread spectrum communications using blind source separation. , 0, , .		2
112	Application of blind signal separation techniques to airborne antenna arrays. Journal of the Franklin Institute, 1999, 336, 3-18.	1.9	2
113	Multiplicative multiresolution decomposition with perfect reconstruction. , 0, , .		2
114	Analysis and Real Time Implementation of a Clutter Map CFAR Detector with Noncoherent Integration. , 2006, , .		2
115	Blind Separation of Cyclostationary Signals. Lecture Notes in Computer Science, 2009, , 25-33.	1.0	2
116	A new methodology for optimal delay detection in mobile localization context. , 2013, , .		2
117	Comparative performance analysis of non orthogonal joint diagonalization algorithms. , 2013, , .		2
118	Performance analysis of time frequency subspace based direction finding algorithms in presence of perturbed array manifold. , 2014, , .		2
119	Phasor estimation using conditional maximum likelihood: Strengths and limitations. , 2015, , .		2
120	Novel and simple approach for reconfiguring the pattern of an UWB CPW-Fed monopole antenna. , 2017, , .		2
121	Frequency independent 180° phase shifter based on UWB coupled sections. Microwave and Optical Technology Letters, 2017, 59, 3185-3189.	0.9	2
122	Em-Based Semi-Blind Mimo-Ofdm Channel Estimation. , 2018, , .		2
123	Approximate Joint Diagonalization for ARMA Dependent Source Separation. , 2020, , .		2
124	An iterative blind source separation technique: implementation and performance. , 0, , .		1
125	Array processing in correlated noise fields based on joint eigen-decomposition of spatial-temporal correlation matrices. , 0, , .		1
126	Approximate ML direction finding in spatially correlated noise using oblique projections. , 0, , .		1

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127	Performance Analysis of a Novel Adaptive SLB/CFAR System. , 2006, , .		1
128	Optimized implementation of a parallel DSP architecture for real time stacked beam radar signal processing. , 2007, , .		1
129	Hardware implementation of free division block-based BSS algorithm. , 2009, , .		1
130	Order-statistics minimum error detector for optimal delay detection in multipath Rayleigh fading channel context. , 2013, , .		1
131	Sparsity-based algorithms for blind separation of convolutive mixtures with application to EMG signals. , 2014, , .		1
132	Voltage sags estimation in three-phase systems using Unconditional Maximum Likelihood estimation. , 2015, , .		1
133	On the use of auto-regressive modeling for arrhythmia detection. , 2016, , .		1
134	Decision Feedback Semi-blind Estimation Algorithm for Specular OFDM Channels. , 2019, , .		1
135	Improved order-statistics-based noise power estimator. Signal Processing, 2019, 164, 202-205.	2.1	1
136	On the Use of High-resolution Time-frequency Distribution Based on a Polynomial Compact Support Kernel for Fault Detection in a Two-level Inverter. Periodica Polytechnica Electrical Engineering and Computer Science, 2020, 64, 352-365.	0.6	1
137	Precision Analysis for an Optimal Parallel IIR Filter's Implementation. Circuits, Systems, and Signal Processing, 2022, 41, 4512-4546.	1.2	1
138	Enhancement of a compact support time-frequency distribution derived from a polynomial kernel using image processing. , 2022, , .		1
139	New formulation of the carrier phase tracking problem. , 0, , .		0
140	Two-sensor blind beamformer for direct sequence spread spectrum communications. , 0, , .		0
141	High interference rejection rate achieved through an iterative signal separation. , 0, , .		0
142	Joint estimation of propagation parameters in multicarrier systems. , 0, , .		0
143	Blind carrier phase estimation in PAM systems. , 2003, , .		0
144	Parameter estimation of multicomponent polynomial-phase signals impinging on a multi-sensor array using extended Kalman filter. , 0, , .		0

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145	Comparison of hybrid adaptive blind equalizers for QAM signals. Proceedings of SPIE, 2009, , .	0.8	0
146	A new approach in distributed multisensor tracking systems based on Kalman filter methods. , 2010, , .		0
147	VLSI architecture of the blind carrier phase tracking with guaranteed global convergence. , 2011, , .		0
148	Dynamic accuracy adjustement for fixed width dividers. , 2012, , .		0
149	Floating-point scaling technique for sources separation automatic gain control. International Journal of Electronics, 2012, 99, 995-1004.	0.9	0
150	New algorithms for adaptive BSS. , 2012, , .		0
151	On the impact of signals time-frequency sparsity on the localization performance. , 2016, , .		0
152	A new multi-sensor fusion algorithm based on the Information Filter framework. , 2017, , .		0
153	A Closed Form Solution for Whitenning Based Second Order Blind Identification. , 2017, , .		0
154	Parameter optimization for defeating blind interception in drone protection. , 2017, , .		0
155	Contrast Functions for Blind Source Separation Based on Time-Frequency Information-Theory. Lecture Notes in Computer Science, 2006, , 876-884.	1.0	0
156	Une solution analytique pour l'identification aveugle au second ordre d'un système à deux entrées et deux sorties. Traitement Du Signal, 2016, 33, 385-402.	0.8	0
157	Subspace-Based Encryption. Studies in Systems, Decision and Control, 2019, , 757-794.	0.8	0
158	Alternating Blind Identification of Power Sources for Mobile SoCs. , 2022, , .		0