

Cornel Ioana

List of Publications by Year in descending order

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126
papers

1,025
citations

516710

16
h-index

580821

25
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131
all docs

131
docs citations

131
times ranked

721
citing authors

#	ARTICLE	IF	CITATIONS
1	Short-Range Wideband FMCW Radar for Millimetric Displacement Measurements. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 5633-5642.	6.3	108
2	Compressive Sensing in Signal Processing: Algorithms and Transform Domain Formulations. Mathematical Problems in Engineering, 2016, 2016, 1-16.	1.1	45
3	Human gait classification using microDoppler time-frequency signal representations. , 2010, , .		41
4	Wavelet-based characterization of gait signal for neurological abnormalities. Gait and Posture, 2015, 41, 634-639.	1.4	40
5	Generalized Representation of Phase Derivatives for Regular Signals. IEEE Transactions on Signal Processing, 2007, 55, 4831-4838.	5.3	33
6	Localization in Underwater Dispersive Channels Using the Time-Frequency-Phase Continuity of Signals. IEEE Transactions on Signal Processing, 2010, 58, 4093-4107.	5.3	31
7	Effects of Cauchy Integral Formula Discretization on the Precision of IF Estimation: Unified Approach to Complex-Lag Distribution and its Counterpart L-Form. IEEE Signal Processing Letters, 2009, 16, 327-330.	3.6	30
8	Feature Extraction From Underwater Signals Using Time-Frequency Warping Operators. IEEE Journal of Oceanic Engineering, 2006, 31, 628-645.	3.8	26
9	Time-Frequency Analysis Using Warped-Based High-Order Phase Modeling. Eurasip Journal on Advances in Signal Processing, 2005, 2005, 1.	1.7	24
10	Analysis of underwater mammal vocalisations using time-frequency-phase tracker. Applied Acoustics, 2010, 71, 1070-1080.	3.3	23
11	Time-Frequency Characterization and Receiver Waveform Design for Shallow Water Environments. IEEE Transactions on Signal Processing, 2009, 57, 2973-2985.	5.3	22
12	A method for antenna gain measurements in nonanechoic sites. Microwave and Optical Technology Letters, 2014, 56, 1553-1557.	1.4	22
13	A local entropy-based algorithm for information content extraction from time-frequency distributions of noisy signals. , 2017, 70, 155-165.		22
14	Parameter estimation of 2-D cubic phase signal using cubic phase function with genetic algorithm. Signal Processing, 2010, 90, 2698-2707.	3.7	21
15	Source motion detection, estimation, and compensation for underwater acoustics inversion by wideband ambiguity lag-Doppler filtering. Journal of the Acoustical Society of America, 2010, 128, 3416-3425.	1.1	20
16	On the consideration of motion effects in the computation of impulse response for underwater acoustics inversion. Journal of the Acoustical Society of America, 2009, 126, 1739.	1.1	17
17	Time-frequency characterization of micro-multipath signals in over-the-horizon radar. , 2012, , .		17
18	Recent Advances in Non-stationary Signal Processing Based on the Concept of Recurrence Plot Analysis. Springer Proceedings in Mathematics and Statistics, 2014, , 75-93.	0.2	17

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19	Cubic-phase function evaluation for multicomponent signals with application to SAR imaging. IET Signal Processing, 2010, 4, 371.	1.5	16
20	On the reconstruction of nonsparse time-frequency signals with sparsity constraint from a reduced set of samples. Signal Processing, 2018, 142, 480-484.	3.7	16
21	Two dimensional time-frequency analysis based eigenvalue decomposition applied to image watermarking. Multimedia Tools and Applications, 2010, 49, 529-543.	3.9	15
22	Passive acoustic tomography: new concepts and applications using marine mammals: a review. Journal of the Marine Biological Association of the United Kingdom, 2007, 87, 5-10.	0.8	14
23	Extraction of Useful Information Content From Noisy Signals Based on Structural Affinity of Clustered TFDs's Coefficients. IEEE Transactions on Signal Processing, 2019, 67, 3154-3167.	5.3	14
24	Small bowel image classification using cross-co-occurrence matrices on wavelet domain. Biomedical Signal Processing and Control, 2009, 4, 7-15.	5.7	13
25	Characterization of Doppler effects in the context of over-the-horizon radar. , 2010, , .		13
26	Time-Frequency Detection Using Gabor Filter Bank and Viterbi Based Grouping Algorithm. , 0, , .		12
27	Electrical arc surveillance and localization system based on advanced signal processing techniques. , 2014, , .		12
28	New Approach of UAV Movement Detection and Characterization Using Advanced Signal Processing Methods Based on UWB Sensing. Sensors, 2020, 20, 5904.	3.8	12
29	Applications of Transient Signal Analysis Using the Concept of Recurrence Plot Analysis. Springer Proceedings in Physics, 2016, , 19-38.	0.2	12
30	Automated segmentation of linear time-frequency representations of marine-mammal sounds. Journal of the Acoustical Society of America, 2013, 134, 2546-2555.	1.1	11
31	Scattering Centers Detection and Tracking in Refocused Spaceborne SAR Images for Infrastructure Monitoring. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 4379-4393.	6.3	11
32	Time-frequency-phase tracking approach : Application to underwater signals in a passive context. , 2010, , .		10
33	A vector approach to transient signal processing. , 2012, , .		10
34	Short-range FMCW X-band radar platform for millimetric displacements measurement. , 2013, , .		10
35	Arc fault detection & localization by electromagnetic-acoustic remote sensing. , 2016, , .		10
36	Quantization in Compressive Sensing: A Signal Processing Approach. IEEE Access, 2020, 8, 50611-50625.	4.2	10

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37	Toward The Use Of The Time-Warping Principle With Discrete-Time Sequences. Journal of Computers, 2007, 2, .	0.4	9
38	Zernike ultrasonic tomography for fluid velocity imaging based on pipeline intrusive time-of-flight measurements. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 1846-1855.	3.0	8
39	Error in the Reconstruction of Nonsparse Images. Mathematical Problems in Engineering, 2018, 2018, 1-10.	1.1	8
40	A New Method of Secure Authentication Based on Electromagnetic Signatures of Chipless RFID Tags and Machine Learning Approaches. Sensors, 2020, 20, 6385.	3.8	8
41	On the characterization of time-scale underwater acoustic signals using matching pursuit decomposition. , 2009, , .		7
42	Detection and Localization of Transient Sources: Comparative Study of Complex-Lag Distribution Concept Versus Wavelets and Spectrogram-Based Methods. Eurasip Journal on Advances in Signal Processing, 2009, 2009, .	1.7	7
43	Time-frequency analysis of multipath doppler signatures of maneuvering targets. , 2012, , .		7
44	FMCW transceiver wideband sweep nonlinearity software correction. , 2013, , .		7
45	Advanced signal processing techniques for detection and localization of electrical arcs. , 2014, , .		7
46	Micro-Doppler Reconstruction in Spaceborne SAR Images Using Azimuth Time-Frequency Tracking of the Phase History. IEEE Geoscience and Remote Sensing Letters, 2016, 13, 604-608.	3.1	7
47	Motion effect modeling in multipath configuration using warping based lag-Doppler filtering. , 2009, , .		6
48	Optimization of partial discharge detection in high voltage cables based on advanced signal processing techniques. , 2012, , .		6
49	Water hammer effect characterization using an acoustic signal processing approach. , 2015, , .		6
50	Target-depth estimation in active sonar: Cramer-Rao bounds for a bilinear sound-speed profile. Journal of the Acoustical Society of America, 2016, 140, 1771-1782.	1.1	6
51	Adaptive Algorithm for Chirp-Rate Estimation. Eurasip Journal on Advances in Signal Processing, 2009, 2009, .	1.7	5
52	Modification of the robust chirp-rate estimator for impulse noise environments. Signal Processing, 2010, 90, 1730-1736.	3.7	5
53	MIMO array imaging for ultrasonic nondestructive testing. Proceedings of SPIE, 2011, , .	0.8	5
54	On the multi-modal sensing of electrical arcs. , 2017, , .		5

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55	Phase Diagram-Based Sensing with Adaptive Waveform Design and Recurrent States Quantification for the Instantaneous Frequency Law Tracking. <i>Sensors</i> , 2019, 19, 2434.	3.8	5
56	Entropy-Based Characterization of the Transient Phenomena—Systemic Approach. <i>Mathematics</i> , 2021, 9, 648.	2.2	5
57	Nonstationary System Analysis Methods for Underwater Acoustic Communications. <i>Eurasip Journal on Advances in Signal Processing</i> , 2011, 2011, .	1.7	4
58	SAR images refocusing and scattering center detection for infrastructure monitoring. , 2014, , .		4
59	Vibration estimation in SAR images using azimuth time-frequency tracking and a matched signal transform. , 2015, , .		4
60	Analysis of underwater signals with nonlinear time-frequency structures using warping-based compressive sensing algorithm. , 2015, , .		4
61	Model-based parameters estimation of non-stationary signals using time warping and a measure of spectral concentration. , 2015, , .		4
62	Range autofocus for FMCW radars using time warping and a spectral concentration measure. , 2015, , .		4
63	On the Quantization and the Probability of Misdetection in Compressive Sensing. , 2019, , .		4
64	Sequence Comparison in Reconstruction and Targeting in Underwater Sonar Imaging. , 2019, , .		4
65	Bit-depth quantization and reconstruction error in digital images. <i>Signal, Image and Video Processing</i> , 2020, 14, 1545-1553.	2.7	4
66	A Novel Approach for Characterization of Transient Signals Using the Phase Diagram Features. , 2021, , .		4
67	Time-Frequency Modeling of Shallow Water Environments: Rigid vs. Fluid Seabed. , 2007, , .		3
68	Diversity in Shallow Water Environments Using Blind Time-Frequency Separation Techniques. <i>Conference Record of the Asilomar Conference on Signals, Systems and Computers</i> , 2007, , .	0.0	3
69	A time-distributed phase space histogram for detecting transient signals. , 2011, , .		3
70	Algorithms for Compressive Sensing Signal Reconstruction with Applications. <i>Mathematical Problems in Engineering</i> , 2016, 2016, 1-3.	1.1	3
71	Decomposition of signals in dispersive channels using dual polynomial fourier transform. , 2017, , .		3
72	Analysis of off-grid effects in wideband sonar images using compressive sensing. , 2018, , .		3

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73	Multivariate Decomposition of Acoustic Signals in Dispersive Channels. Mathematics, 2021, 9, 2796.	2.2	3
74	On the Recognitions Capabilities of Modulated Signals in Phase Diagram Domain. , 2018, , .		3
75	Modelling of Signal's Time-Frequency Content Using Warped Complex-Time Distributions. , 0, , .		2
76	An audio watermarking method based on molecular matching pursuit. , 2008, , .		2
77	Wideband discrete transformation of acoustic signals in underwater environments. , 2009, , .		2
78	Time-Scale and Dispersive Processing for Wideband Time-Varying Channels. , 2011, , 375-416.		2
79	Scattering centers monitoring in refocused SAR images on a high-resolution DEM. , 2014, , .		2
80	Robust sparse representation for adaptive sensing of turbulent phenomena. IET Signal Processing, 2014, 8, 285-290.	1.5	2
81	Transient signal characterization using multi-lag phase space analysis. , 2015, , .		2
82	Range, velocity and immersion estimation of a moving target in a water-filled tank with an active sonar system. , 2015, , .		2
83	Compensation of position offset of acoustic transducers using compressive sensing concept. , 2016, , .		2
84	Time-frequency signal reconstruction of nonsparse audio signals. , 2017, , .		2
85	On the Recognitions Capabilities of Modulated Signals in Phase Diagram Domain. , 2018, , .		2
86	Decomposition and analysis of signals sparse in the dual polynomial Fourier transform. Microprocessors and Microsystems, 2018, 63, 209-215.	2.8	2
87	On the signal interference structure generated by modified wigner-ville distribution. , 2002, , .		1
88	Monitoring partial discharges in power networks: Contribution to the energetic distribution security. , 2010, , .		1
89	Using wide band signals for obstacle path correction in acoustic scintillation flow meters. , 2012, , .		1
90	Time-frequency tracking using multi-window local phase analysis. , 2012, , .		1

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91	Distributed data classification in underwater acoustic sensors based on local time-frequency coherence analysis. , 2014, , .		1
92	Distributed array of cooperating acoustic sensors using local time-frequency coherence analysis. , 2015, , .		1
93	Electric arc localization based on antenna arrays and MUSIC direction of arrival estimation. , 2015, , .		1
94	Instantaneous frequency law tracking using signal's representation in phase diagram domain. , 2017, , .		1
95	Hausdorff distance applied on real data experiment for underwater localization. , 2017, , .		1
96	Wideband signal processing techniques for Interferometric Sonars. , 2018, , .		1
97	Wideband Signals for Phase Differencing Sonar Systems. , 2018, , .		1
98	Sparse signal reconstruction in dual polynomial Fourier transform. , 2018, , .		1
99	Gradient-Descent Algorithm Performance With Reduced Set of Quantized Measurements. , 2019, , .		1
100	High rate acoustic imagery for underwater object classification in dynamic configuration. , 2019, , .		1
101	Statistical intrusion detection and eavesdropping in quantum channels with coupling: multiple-preparation and single-preparation methods. Quantum Information Processing, 2022, 21, 1.	2.2	1
102	An Approach to Digital Watermarking of Speech Signals in the Time-Frequency Domain. Proceedings ELMAR, 2006, , .	0.0	0
103	Time-Frequency Characterization using Instantaneous Moment Concept : Theory and Applications. , 2006, , .		0
104	A Watermarking Method for Speech Signals Based on the Time-Warping Signal Processing Concept. , 2007, , .		0
105	Time-frequency-phase coherence - general framework for signal analysis in passive context. , 2008, , .		0
106	Signal characterization using generalized “Time-phase derivatives” representation. , 2009, , .		0
107	Systemic approach explored in the context of passive target tracking. IET Signal Processing, 2010, 4, 314.	1.5	0
108	Wideband time reversal processing for ultrasound NDE imaging. , 2011, , .		0

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109	Ultrasound testing of metallic structures using a dual symmetric path inspection and a matched filter-based method. , 2013, , .		0
110	Sphericity of complex stochastic models in multivariate SAR images. , 2013, , .		0
111	On the vortex parameter estimation using wide band signals in active acoustic system. , 2014, , .		0
112	High-speed sensing for object detection in underwater bi-static acoustic paths. , 2015, , .		0
113	A Software-Defined Radio approach for locating Electric Arcs. , 2015, , .		0
114	Between two engineering ages: Of information and complex systems, professional research is based on a team work!. , 2015, , .		0
115	On the distributed acoustic sensing based on local time-frequency coherence analysis. , 2015, , .		0
116	On the detection of non-stationary signals in the matched signal transform domain. , 2016, , .		0
117	Cavitation characterization using wide band signals in an acoustic active sensing system. , 2016, , .		0
118	High-resolution local polynomial Fourier transform in acoustic signal analysis. , 2017, , .		0
119	Time of flight estimation in multi-path dispersive configuration using compressive sensing reconstruction in the warped domain. , 2017, , .		0
120	Exploring the Properties of the Phase Diagram Domain for the Instantaneous Frequency Law Estimation. , 2018, , .		0
121	Effect of Random Sampling on Noisy Nonsparse Signals in Time-Frequency Analysis. , 2018, , .		0
122	On the extension of acoustic flow metering devices to monitor underwater transient phenomena. , 2018, , .		0
123	Time-Varying Cross-Range in Wideband Sonar Imaging. , 2019, , .		0
124	Transmitted Sequence Influence to Sonar Target Detection using Compressive Sensing. , 2019, , .		0
125	Quantization Effect in Nonuniform Nonsparse Signal Reconstruction. , 2020, , .		0
126	Low Complexity Acoustic Imaging System Based on Time of Arrivals Dynamic Estimation. , 2021, , .		0