

# Orhan Arikan

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4166776/publications.pdf>

Version: 2024-02-01

203  
papers

3,672  
citations

236612

25  
h-index

161609

54  
g-index

204  
all docs

204  
docs citations

204  
times ranked

2118  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Method for Automatic Scaling of Ionograms and Electron Density Reconstruction. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-11.	2.7	1
2	Towards goal-oriented semantic signal processing: Applications and future challenges. , 2021, 119, 103134.		26
3	Steklov regularization and trajectory methods for univariate global optimization. Journal of Global Optimization, 2020, 76, 91-120.	1.1	3
4	A Machine Learning-Based Detection of Earthquake Precursors Using Ionospheric Data. Radio Science, 2020, 55, e2019RS006931.	0.8	18
5	A New Method for Specific Emitter Identification With Results on Real Radar Measurements. IEEE Transactions on Information Forensics and Security, 2020, 15, 3335-3346.	4.5	44
6	Estimation Theoretic Optimal Encoding Design for Secure Transmission of Multiple Parameters. IEEE Transactions on Signal Processing, 2019, 67, 4302-4316.	3.2	6
7	Multi-Task Learning Based Joint Pulse Detection and Modulation Classification. , 2019, , .		2
8	Compressive Digital Receiver: First Performance Measurements. , 2019, , .		0
9	Iterative Hessian Sketch with Momentum. , 2019, , .		6
10	Detection of Acute Coronary Syndrome Based on Support Vector Machines and ECG. , 2019, , .		5
11	Coronary Artery Disease Detection by using Support Vector Machines and Gaussian Mixture Model. , 2019, , .		4
12	Terabits-per-Second Throughput for Polar Codes. , 2019, , .		15
13	Fast and Robust Solution Techniques for Large Scale Linear System of Equations. , 2019, , .		1
14	Compressive Digital Receiver: First Results on Sensitivity, Dynamic Range and Instantaneous Bandwidth Measurements. , 2019, , .		3
15	Sparsity based off-grid blind sensor calibration. , 2019, 84, 80-92.		3
16	NVIS HF signal propagation in ionosphere using calculus of variations. Geodesy and Geodynamics, 2019, 10, 72-76.	1.0	0
17	Direct and Two-Step Positioning in Visible Light Systems. IEEE Transactions on Communications, 2018, 66, 239-254.	4.9	47
18	Model based Computerized Ionospheric Tomography in space and time. Advances in Space Research, 2018, 61, 2057-2073.	1.2	8

#	ARTICLE	IF	CITATIONS
19	Dynamo equation solution using Finite Volume Method for midlatitude ionosphere. Geodesy and Geodynamics, 2018, 9, 425-431.	1.0	2
20	Classification of Intra-Pulse Modulation of Radar Signals by Feature Fusion Based Convolutional Neural Networks. , 2018, , .		6
21	Deep learning in electronic warfare systems: Automatic intra-pulse modulation recognition. , 2018, , .		7
22	Compressive Digital Receiver: First hardware implementation results. , 2018, , .		2
23	Detection of acute myocardial ischemia based on support vector machines. , 2018, , .		6
24	Off-Grid sparse blind sensor calibration. , 2018, , .		0
25	Ionogram scaling using Hidden Markov Models. , 2018, , .		0
26	Autofocused Spotlight SAR Image Reconstruction of Off-Grid Sparse Scenes. IEEE Transactions on Aerospace and Electronic Systems, 2017, 53, 1880-1892.	2.6	22
27	Machine-based classification of ADHD and nonADHD participants using time/frequency features of event-related neuroelectric activity. Clinical Neurophysiology, 2017, 128, 2400-2410.	0.7	29
28	Joint multi-emitter signal separation and angle of arrival estimation via variational mode decomposition. , 2017, , .		1
29	Machine-based learning system: Classification of ADHD and non-ADHD participants. , 2017, , .		5
30	Optimal Power Allocation for Jammer Nodes in Wireless Localization Systems. IEEE Transactions on Signal Processing, 2017, 65, 6489-6504.	3.2	8
31	Direct positioning in synchronous and asynchronous visible light systems. , 2017, , .		0
32	Compressive sensing-based robust off-grid stretch processing. IET Radar, Sonar and Navigation, 2017, 11, 1730-1735.	0.9	1
33	Sub-band equalization of modulated wideband converter for improved dynamic range performance. , 2017, , .		0
34	Space weather studies of IONOLAB group. , 2016, , .		5
35	Maximization of average number of correctly received symbols over multiple channels in the presence of idle periods. , 2016, 54, 95-118.		1
36	Maximization of correct decision probability via channel switching over Rayleigh fading channels. , 2016, , .		0

#	ARTICLE	IF	CITATIONS
37	Bandwidth selection for kernel density estimation using Fourier domain constraints. IET Signal Processing, 2016, 10, 280-283.	0.9	0
38	Online calibration of Modulated Wideband Converter. , 2016, , .		6
39	Idler-efficiency-enhanced long-wave infrared beam generation using aperiodic orientation-patterned GaAs gratings. Applied Optics, 2016, 55, 2404.	2.1	7
40	Performance of GPS slant total electron content and IRI-Plas-STECh for days with ionospheric disturbance. Geodesy and Geodynamics, 2016, 7, 1-10.	1.0	27
41	FIR Filter Design by Convex Optimization Using Directed Iterative Rank Refinement Algorithm. IEEE Transactions on Signal Processing, 2016, 64, 2209-2219.	3.2	14
42	Analysis of sparsity based joint SAR image reconstruction and autofocus techniques. , 2015, , .		1
43	Adaptive measurement matrix design for compressed DoA estimation with sensor arrays. , 2015, , .		3
44	Regional model-based computerized ionospheric tomography using GPS measurements: IONOLAB. CIT. Radio Science, 2015, 50, 1062-1075.	0.8	15
45	Computation of Fresnel integral by Fractional Fourier Transform methods. , 2015, , .		0
46	Optimal Signal Design for Multi-Parameter Estimation Problems. IEEE Transactions on Signal Processing, 2015, 63, 6074-6085.	3.2	5
47	SAR image reconstruction with joint off-grid target and phase error corrections. , 2015, , .		1
48	Detection of time-varying support via rank evolution approach for effective joint sparse recovery. , 2015, , .		4
49	SAR image reconstruction by expectation maximization based matching pursuit. , 2015, 37, 75-84.		17
50	Backward Differential Flow May Not Converge to a Global Minimizer of Polynomials. Journal of Optimization Theory and Applications, 2015, 167, 401-408.	0.8	2
51	Extraction of primary and secondary frequency control from active power generation data of power plants. International Journal of Electrical Power and Energy Systems, 2015, 73, 16-22.	3.3	22
52	Optimal Channel Switching Over Gaussian Channels Under Average Power and Cost Constraints. IEEE Transactions on Communications, 2015, 63, 1907-1922.	4.9	9
53	Association of ionospheric storms and substorms of Global Electron Content with proxy AE index. Advances in Space Research, 2015, 56, 1343-1353.	1.2	9
54	Sparsity based robust Stretch Processing. , 2015, , .		1

#	ARTICLE	IF	CITATIONS
55	Early diagnosis of acute coronary syndromes with automatic ST/T classifier. , 2014, , .		5
56	Remote sensing and 2-D imaging of ionosphere by IONOLAB group. , 2014, , .		0
57	Investigation of short-period ionospheric variation over Turkey. , 2014, , .		0
58	Sparsity order estimation for single snapshot compressed sensing. , 2014, , .		4
59	A recursive way for sparse reconstruction of parametric spaces. , 2014, , .		0
60	Mathematical modeling of the plasma frequency-height profile of the ionosphere for HF communications. , 2014, , .		3
61	Sparse delay-Doppler image reconstruction under off-grid problem. , 2014, , .		5
62	Optimal stochastic design for multi-parameter estimation problems. , 2014, , .		0
63	A recursive approach to reconstruction of sparse signals. , 2014, , .		0
64	AM/FM signal estimation with micro-segmentation and polynomial fit. Signal, Image and Video Processing, 2014, 8, 399-413.	1.7	1
65	Online user-friendly slant total electron content computation from IRI Plas: IRI Plas STEC. Space Weather, 2014, 12, 64-75.	1.3	17
66	A robust compressive sensing based technique for reconstruction of sparse radar scenes. , 2014, 27, 23-32.		51
67	FIR filter design by iterative convex relaxations with rank refinement. , 2014, , .		0
68	Tribological interaction between polytetrafluoroethylene and silicon oxide surfaces. Journal of Chemical Physics, 2014, 141, 164702.	1.2	6
69	Optimal Detector Randomization for Multiuser Communications Systems. IEEE Transactions on Communications, 2013, 61, 2876-2889.	4.9	10
70	Spatio-temporal interpolation of total electron content using a GPS network. Radio Science, 2013, 48, 302-309.	0.8	12
71	Compressive sensing based target detection in delay-Doppler radars. , 2013, , .		0
72	Off-grid sparse SAR image reconstruction by EMMP algorithm. , 2013, , .		9

#	ARTICLE	IF	CITATIONS
73	Optimal Randomization of Signal Constellations on the Downlink of a Multiuser DS-CDMA System. IEEE Transactions on Wireless Communications, 2013, 12, 4878-4891.	6.1	3
74	Detection of sparse targets with structurally perturbed echo dictionaries. , 2013, 23, 1630-1644.		3
75	Perturbed Orthogonal Matching Pursuit. IEEE Transactions on Signal Processing, 2013, 61, 6220-6231.	3.2	48
76	Convexity Properties of Detection Probability Under Additive Gaussian Noise: Optimal Signaling and Jamming Strategies. IEEE Transactions on Signal Processing, 2013, 61, 3303-3310.	3.2	16
77	Online, automatic, near-real time estimation of GPS-TEC: IONOLAB-TEC. Space Weather, 2013, 11, 297-305.		98
78	Stochastic signaling in the presence of channel state information uncertainty. , 2013, 23, 635-645.		2
79	Sparse ground-penetrating radar imaging method for off-the-grid target problem. Journal of Electronic Imaging, 2013, 22, 021007.	0.5	12
80	Lossless polar compression of q-ary sources. , 2013, , .		1
81	Investigation of ionospheric trend over Turkey using Sliding Window Statistical Analysis method. , 2013, , .		3
82	Estimation of $f_{hmF2}$ and $f_{ofF2}$ Communication Parameters of Ionosphere $F2$ -Layer Using GPS Data and IRI-Plas Model. IEEE Transactions on Antennas and Propagation, 2013, 61, 5264-5273.	3.1	32
83	Observed Ionospheric Effects of 23 October 2011 Van, Turkey Earthquake. Geomatics, Natural Hazards and Risk, 2012, 3, 1-8.	2.0	19
84	Parameter estimation for synthetic TEC surfaces by using Particle Swarm Optimization. , 2012, , .		0
85	Optimal Stochastic Parameter Design for Estimation Problems. IEEE Transactions on Signal Processing, 2012, 60, 4950-4956.	3.2	10
86	Real time noise-cancellation using ICA, PSO and PE. , 2012, , .		0
87	SAR image reconstruction by EMMP algorithm. , 2012, , .		0
88	Empirical Mode Decomposition aided by adaptive low pass filtering. , 2012, , .		0
89	A new OMP technique for sparse recovery. , 2012, , .		4
90	Ultra-Wideband orthogonal pulse shape set design by using Hermite-Gaussian functions. , 2012, , .		1

#	ARTICLE	IF	CITATIONS
91	Stochastic signal design on the downlink of a multiuser communications system. , 2012, , .		2
92	Piecewise constant line fitting on noisy ramped signals by Particle Swarm Optimization. , 2012, , .		0
93	Timeâ€“frequency analysis of signals using support adaptive Hermiteâ€“Gaussian expansions. , 2012, 22, 1010-1023.		21
94	SAR image reconstruction and autofocus by compressed sensing. , 2012, 22, 923-932.		48
95	Polar code construction for non-binary source alphabets. , 2012, , .		3
96	Expectation maximization based matching pursuit. , 2012, , .		7
97	Cross-ambiguity function domain multipath channel parameter estimation. , 2012, 22, 275-287.		3
98	Maximum likelihood estimation of Gaussian mixture models using stochastic search. Pattern Recognition, 2012, 45, 2804-2816.	5.1	38
99	Determining F2 layer parameters via optimization using IRI model and IONOLAB TEC estimations. , 2011, , .		1
100	Optimization of F2 layer parameters using IRI-Plas model and IONOLAB Total Electron Content. , 2011, , .		2
101	Space weather activities of IONOLAB group using TNPGN GPS Network. , 2011, , .		2
102	Self-adaptive randomized and rank-based differential evolution for multimodal problems. Journal of Global Optimization, 2011, 51, 607-640.	1.1	9
103	Multipath channel identification by using global optimization in ambiguity function domain. Signal Processing, 2011, 91, 2647-2660.	2.1	2
104	Space-time interpolation and automatic mapping of TEC using TNPGN-active. , 2011, , .		2
105	Optimization of F2 layer parameters using IRI-Plas and IONOLAB-TEC. , 2011, , .		2
106	Spatio-temporal interpolation of ionospheric TEC data. , 2011, , .		1
107	Recovery of sparse perturbations in Least Squares problems. , 2011, , .		1
108	Effects of Channel State Information Uncertainty on the Performance of Stochastic Signaling. , 2011, , .		1

#	ARTICLE	IF	CITATIONS
109	PERFORMANCE EVALUATION OF TRACK ASSOCIATION AND MAINTENANCE FOR A MFPAR WITH DOPPLER VELOCITY MEASUREMENTS. <i>Progress in Electromagnetics Research</i> , 2010, 108, 249-275.	1.6	9
110	Polar compressive sampling: A novel technique using Polar codes. , 2010, , .		0
111	A study of Lithosphere-ionosphere coupling using TUSAGA active TEC estimates. , 2010, , .		1
112	Particle swarm optimization based channel identification in cross-ambiguity domain. , 2010, , .		2
113	On the optimality of stochastic signaling under an average power constraint. , 2010, , .		6
114	Application of Fractional Fourier Transform to finite difference time domain method. , 2010, , .		0
115	Investigation of total electron content variability due to seismic and geomagnetic disturbances in the ionosphere. <i>Radio Science</i> , 2010, 45, n/a-n/a.	0.8	38
116	Fourier transform magnetic resonance current density imaging (FT-MRCDI) from one component of magnetic flux density. <i>Physics in Medicine and Biology</i> , 2010, 55, 3177-3199.	1.6	7
117	Structured Least Squares Problems and Robust Estimators. <i>IEEE Transactions on Signal Processing</i> , 2010, 58, 2453-2465.	3.2	17
118	Optimal signaling and detector design for power-constrained binary communications systems over non-gaussian channels. <i>IEEE Communications Letters</i> , 2010, 14, 100-102.	2.5	27
119	Stochastic signaling under second and fourth moment constraints. , 2010, , .		3
120	Compressive sampling and adaptive multipath estimation. , 2010, , .		0
121	Signal denoising by piecewise continuous polynomial fitting. , 2010, , .		0
122	Compressed sensing on ambiguity function domain for high resolution detection. , 2010, , .		0
123	A novel method for signal component incision in the time-frequency plane. , 2010, , .		0
124	Effects of signal randomization on performance of binary communications systems. , 2010, , .		1
125	A particle swarm optimization based SAR motion compensation algorithm for target image reconstruction. , 2010, , .		1
126	Optimal Stochastic Signaling for Power-Constrained Binary Communications Systems. <i>IEEE Transactions on Wireless Communications</i> , 2010, 9, 3650-3661.	6.1	32



#	ARTICLE	IF	CITATIONS
127	PERFORMANCE EVALUATION OF THE SEQUENTIAL TRACK INITIATION SCHEMES WITH 3D POSITION AND DOPPLER VELOCITY MEASUREMENTS. Progress in Electromagnetics Research B, 2009, 18, 121-148.	0.7	8
128	A novel technique for a linear system of equations applied to channel equalization. , 2009, , .		1
129	A new multipath channel parameter estimation technique using swarm intelligence. , 2009, , .		0
130	Structured least squares with bounded data uncertainties. , 2009, , .		6
131	Tomographic reconstruction of the ionospheric electron density as a function of space and time. Advances in Space Research, 2009, 43, 1702-1710.	1.2	23
132	A new technique for direction of arrival estimation for ionospheric multipath channels. Advances in Space Research, 2009, 44, 653-662.	1.2	5
133	Multipath Separation-Direction of Arrival (MS-DOA) with Genetic Search Algorithm for HF channels. Advances in Space Research, 2009, 44, 641-652.	1.2	5
134	Dipole source reconstruction of brain signals by using particle swarm optimization. , 2009, , .		1
135	ERP source reconstruction by using Particle Swarm Optimization. , 2009, , .		3
136	Investigation of hourly and daily patterns for lithosphere-ionosphere coupling before strong earthquakes. , 2009, , .		4
137	Randomized and Rank Based Differential Evolution. , 2009, , .		0
138	A Bayesian approach to respiration rate estimation via pulse-based ultra-wideband signals. , 2009, , .		4
139	Investigation of lithosphere-ionosphere coupling using total electron content. , 2009, , .		1
140	Estimation of single station interfrequency receiver bias using GPSâ€¢TEC. Radio Science, 2008, 43, .	0.8	170
141	Regional TEC mapping with Random Field Priors and Kriging. Radio Science, 2008, 43, .	0.8	51
142	Efficient computation of joint fractional Fourier domain signal representation. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2008, 25, 765.	0.8	2
143	Piecewise smooth signal denoising via principal curve projections. , 2008, , .		3
144	Performance analysis of Cross Ambiguity Function â€” Direction Finding technique in multipath environments. , 2008, , .		1

#	ARTICLE	IF	CITATIONS
145	Comparison of the CAF-DF and SAGE algorithms in multipath channel parameter estimation. , 2008, , .		4
146	GPS/TEC Estimation with IONOLAB Method. , 2007, , .		7
147	Synthetic TEC Mapping with Ordinary and Universal Kriging. , 2007, , .		6
148	Synthetic TEC Mapping with Kriging and Random Field Priors. , 2007, , .		2
149	Theoretical Limits and a Practical Estimator for Joint Estimation of Respiration and Heartbeat Rates Using UWB Impulse Radio. , 2007, , .		2
150	Ionospheric Total Electron Content Estimation Using IONOLAB Method. , 2007, , .		2
151	A Novel Array Signal Processing Technique for Multipath Channel Parameter Estimation. , 2007, , .		5
152	Total Electron Content Estimation with Regâ€Est. Journal of Geophysical Research, 2007, 112, .	3.3	93
153	Regularized estimation of TEC from GPS data for certain midlatitude stations and comparison with the IRI model. Advances in Space Research, 2007, 39, 867-874.	1.2	52
154	Computerized ionospheric tomography with the IRI model. Advances in Space Research, 2007, 39, 859-866.	1.2	6
155	3-D Computerized ionospheric tomography with random field priors. , 2007, , 325-334.		6
156	Performance Improvement of Track Initiation Algorithms with the Incorporation of Doppler Velocity Measurement. , 2006, , .		0
157	Early time-locked gamma response and gender specificity. International Journal of Psychophysiology, 2006, 60, 225-239.	0.5	19
158	Early gamma response of sleep is sensory/perceptual in origin. International Journal of Psychophysiology, 2006, 62, 152-167.	0.5	9
159	Incorporating Doppler velocity measurement for track initiation and maintenance. , 2006, , 113.		1
160	Timeâ€frequency component analyser and its application to brain oscillatory activity. Journal of Neuroscience Methods, 2005, 145, 107-125.	1.3	16
161	On robust solutions to linear least squares problems affected by data uncertainty and implementation errors with application to stochastic signal modeling. Linear Algebra and Its Applications, 2004, 391, 223-243.	0.4	5
162	Regularized estimation of vertical total electron content from GPS data for a desired time period. Radio Science, 2004, 39, n/a-n/a.	0.8	65

#	ARTICLE	IF	CITATIONS
163	Short-time fourier transform: two fundamental properties and an optimal implementation. IEEE Transactions on Signal Processing, 2003, 51, 1231-1242.	3.2	187
164	Regularized estimation of vertical total electron content from Global Positioning System data. Journal of Geophysical Research, 2003, 108, .	3.3	139
165	Mode separation and direction of arrival estimation in HF links. Radio Science, 2003, 38, n/a-n/a.	0.8	1
166	Adaptive tracking of narrowband HF channel response. Radio Science, 2003, 38, n/a-n/a.	0.8	1
167	A new approach to time-frequency localized signal design. , 2002, , .		0
168	Generalized time-bandwidth product optimal short-time fourier transformation. , 2002, , .		1
169	A new algorithm for high-quality ionogram generation and analysis. Radio Science, 2002, 37, 1-11.	0.8	14
170	Fast computation of the ambiguity function and the Wigner distribution on arbitrary line segments. IEEE Transactions on Signal Processing, 2001, 49, 381-393.	3.2	34
171	Anaerobic treatability of leachate: a comparative evaluation for three different reactor systems. Water Science and Technology, 2000, 42, 287-292.	1.2	16
172	Algorithm for high quality ionograms. Electronics Letters, 2000, 36, 985.	0.5	5
173	QR-RLS algorithm for error diffusion of color images. Optical Engineering, 2000, 39, 2860.	0.5	0
174	The fractional Fourier domain decomposition. Signal Processing, 1999, 77, 105-109.	2.1	23
175	Wideband maximum likelihood direction finding and signal parameter estimation by using the tree-structured EM algorithm. IEEE Transactions on Signal Processing, 1999, 47, 201-206.	3.2	11
176	Robust adaptive filtering algorithms for $\hat{\pm}$ -stable random processes. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 1999, 46, 198-202.	2.3	37
177	Interpolation and the chirp transform: DSP meets optics. , 1999, , .		5
178	An efficient and accurate technique for the incident-wave excitations in the FDTD method. IEEE Transactions on Microwave Theory and Techniques, 1998, 46, 869-882.	2.9	50
179	Spaceâ€“bandwidth-efficient realizations of linear systems. Optics Letters, 1998, 23, 1069.	1.7	19
180	Deconvolution Under Normalized Autocorrelation Constraints. SPE Journal, 1997, 2, 246-253.	1.7	27

#	ARTICLE	IF	CITATIONS
181	Optimal filtering in fractional Fourier domains. IEEE Transactions on Signal Processing, 1997, 45, 1129-1143.	3.2	245
182	Digital computation of the fractional Fourier transform. IEEE Transactions on Signal Processing, 1996, 44, 2141-2150.	3.2	932
183	Regularized inversion of a two-dimensional integral equation with applications in borehole induction measurements. Radio Science, 1994, 29, 519-538.	0.8	13
184	Adaptive filtering for non-Gaussian stable processes. IEEE Signal Processing Letters, 1994, 1, 163-165.	2.1	93
185	Reflection coefficient null of acoustic waves at a liquidâ€“anisotropicâ€“solid interface. Journal of the Acoustical Society of America, 1989, 85, 1-10.	0.5	43
186	Optimal filtering in fractional Fourier domains. , 0, , .		50
187	A synthetic aperture imaging system using surface wave modes. , 0, , .		0
188	The discrete fractional Fourier transformation. , 0, , .		12
189	Wide-band maximum likelihood direction finding by using tree-structured EM algorithm. , 0, , .		1
190	Formulation of a general imaging algorithm for high-resolution synthetic aperture radar. , 0, , .		6
191	Cost-efficient approximation of linear systems with repeated and multi-channel filtering configurations. , 0, , .		5
192	Regressor based adaptive infinite impulse response filtering. , 0, , .		0
193	A theoretical investigation on exact blind channel and input sequence estimation. , 0, , .		0
194	Efficient computation of the ambiguity function and the Wigner distribution on arbitrary line segments. , 0, , .		1
195	A high resolution time frequency representation with significantly reduced cross-terms. , 0, , .		6
196	Input sequence estimation and blind channel identification in HF communication. , 0, , .		0
197	An efficient algorithm to extract components of a composite signal. , 0, , .		1
198	High resolution time-frequency analysis by fractional domain warping. , 0, , .		1

#	ARTICLE	IF	CITATIONS
199	A new technique for TEC estimation. , 0, , .		4
200	A hybrid reconstruction algorithm for computerized ionospheric tomography. , 0, , .		5
201	Model based comparison of basis functions and reconstruction algorithms in computerized ionospheric tomography. , 0, , .		0
202	Detection of Gamma Responses in EEG Signals. , 0, , .		0
203	Simulation of Real Beam Ground Mapping Mode of a Pulsed Radar. , 0, , .		0