

# Xavier Mestre

## List of Publications by Year in descending order

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115  
papers

1,905  
citations

361388

20  
h-index

289230

40  
g-index

116  
all docs

116  
docs citations

116  
times ranked

1297  
citing authors

#	ARTICLE	IF	CITATIONS
1	Probability of Resolution of MUSIC and g-MUSIC: An Asymptotic Approach. IEEE Transactions on Signal Processing, 2022, 70, 3566-3581.	5.3	7
2	Probability of Resolution of Partially Relaxed Deterministic Maximum Likelihood: An Asymptotic Approach. IEEE Transactions on Signal Processing, 2021, 69, 852-866.	5.3	5
3	On the Detection of Low-Rank Signal in the Presence of Spatially Uncorrelated Noise: A Frequency Domain Approach. IEEE Transactions on Signal Processing, 2021, 69, 4458-4473.	5.3	2
4	Probability of Resolution of G-MUSIC: An Asymptotic Approach. , 2021, , .		1
5	Subspace Based Hierarchical Channel Clustering in Massive MIMO. , 2021, , .		2
6	On the Resolution Probability of Conditional and Unconditional Maximum Likelihood DoA Estimation. IEEE Transactions on Signal Processing, 2020, 68, 4656-4671.	5.3	15
7	User Clustering for MIMO NOMA via Classifier Chains and Gradient-Boosting Decision Trees. IEEE Access, 2020, 8, 211411-211421.	4.2	5
8	Asymptotic Stochastic Analysis of Partially Relaxed DML. , 2020, , .		3
9	Equalization of OFDM Waveforms with Insufficient Cyclic Prefix. , 2020, , .		0
10	Optimum Performance of Short Block Length Codes Under Multivariate Stationary Rayleigh Fading. IEEE Transactions on Wireless Communications, 2020, 19, 2122-2136.	9.2	1
11	Model-Aware Collision Resolution for High-Order Orthogonal Modulations. IEEE Wireless Communications Letters, 2020, 9, 957-961.	5.0	0
12	On The Frequency Domain Detection of High Dimensional Time Series. , 2020, , .		3
13	Efficient Equalization of Time-Varying Channels in MIMO OFDM Systems. IEEE Transactions on Signal Processing, 2019, 67, 5583-5595.	5.3	9
14	Learning and Data-Driven Beam Selection for mmWave Communications: An Angle of Arrival-Based Approach. IEEE Access, 2019, 7, 20404-20415.	4.2	45
15	Probability of Resolution of Partially Relaxed DML an Asymptotic Approach. , 2019, , .		4
16	Performance Analysis of Linear Receivers for Uplink Massive MIMO FBMC-OQAM Systems. IEEE Transactions on Signal Processing, 2018, 66, 830-842.	5.3	19
17	On channel estimation for power line communication systems in the presence of impulsive noise. Computers and Electrical Engineering, 2018, 72, 406-419.	4.8	11
18	Single-tap equalizer for MIMO FBMC systems under doubly selective channels. , 2017, , .		1

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19	Parallel Equalization Structure for MIMO FBMC-OQAM Systems Under Strong Time and Frequency Selectivity. IEEE Transactions on Signal Processing, 2017, 65, 4454-4467.	5.3	8
20	Correlation Tests and Linear Spectral Statistics of the Sample Correlation Matrix. IEEE Transactions on Information Theory, 2017, 63, 4585-4618.	2.4	15
21	Downlink Scheduling and Resource Allocation for 5G MIMO-Multicarrier: OFDM vs FBMC/OQAM. IEEE Access, 2017, 5, 13770-13786.	4.2	29
22	Single-Tap Precoders and Decoders for Multiuser MIMO FBMC-OQAM Under Strong Channel Frequency Selectivity. IEEE Transactions on Signal Processing, 2017, 65, 587-600.	5.3	26
23	FBMC Over Frequency Selective Channels. , 2017, , 199-219.		0
24	MIMO-FBMC Transceivers. , 2017, , 341-374.		0
25	FBMC Channel Equalization Techniques. , 2017, , 299-337.		1
26	MIMO-FBMC Receivers. , 2017, , 375-406.		0
27	Evaluation of IR-HARQ schemes in FBMC/OQAM systems with imperfect CSIR. , 2017, , .		0
28	Uplink FBMC/OQAM-Based Multiple Access Channel: Distortion Analysis Under Strong Frequency Selectivity. IEEE Transactions on Signal Processing, 2016, 64, 4260-4272.	5.3	15
29	Linear receivers for massive MIMO FBMC/OQAM under strong channel frequency selectivity. , 2016, , .		2
30	Pilot-based channel estimation for FBMC/OQAM systems under strong frequency selectivity. , 2016, , .		10
31	Corrections to "Parallelized Structures for MIMO FBMC Under Strong Channel Frequency Selectivity" [no. 5, Mar 16 1200-1215]. IEEE Transactions on Signal Processing, 2016, 64, 4644-4644.	5.3	0
32	Link adaptation in FBMC/OQAM systems using NB-LDPC codes. , 2016, , .		4
33	Optimal zero forcing precoder and decoder design for multi-user MIMO FBMC under strong channel selectivity. , 2016, , .		9
34	MIMO Signal Processing in Offset-QAM Based Filter Bank Multicarrier Systems. IEEE Transactions on Signal Processing, 2016, 64, 5733-5762.	5.3	96
35	Parallelized Structures for MIMO FBMC Under Strong Channel Frequency Selectivity. IEEE Transactions on Signal Processing, 2016, 64, 1200-1215.	5.3	33
36	Une méthode MUSIC adaptée aux grands réseaux de capteurs. Traitement Du Signal, 2016, 33, 249-272.	1.3	0

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37	Extended GLRT detectors of correlation and sphericity: The undersampled regime. , 2015, , .		0
38	Distortion analysis in OQAM/FBMC-based OFDMA. , 2015, , .		1
39	When SDR meets a 5G candidate waveform : Agile use of fragmented spectrum and interference protection in PMR networks. IEEE Wireless Communications, 2015, 22, 56-66.	9.0	16
40	Eigenvector precoding for FBMC modulations under strong channel frequency selectivity. , 2015, , .		4
41	Performance Analysis of an Improved MUSIC DoA Estimator. IEEE Transactions on Signal Processing, 2015, 63, 6407-6422.	5.3	99
42	AF relaying for FBMC signals. , 2014, , .		0
43	Diversity Analysis of Randomized Linear Dispersion Codes in a Half-Duplex Amplify-and-Forward Multiple-Relay System. IEEE Transactions on Information Theory, 2013, 59, 2936-2959.	2.4	5
44	A subspace estimator for fixed rank perturbations of large random matrices. Journal of Multivariate Analysis, 2013, 114, 427-447.	1.0	26
45	An Asymptotic Approach to Parallel Equalization of Filter Bank Based Multicarrier Signals. IEEE Transactions on Signal Processing, 2013, 61, 3592-3606.	5.3	36
46	Finite-Sample Linear Filter Optimization in Wireless Communications and Financial Systems. IEEE Transactions on Signal Processing, 2013, 61, 5014-5025.	5.3	14
47	Robust adaptive beamforming with imprecise steering vector and noise covariance matrix due to finite sample size. , 2013, , .		2
48	LARGE INFORMATION PLUS NOISE RANDOM MATRIX MODELS AND CONSISTENT SUBSPACE ESTIMATION IN LARGE SENSOR NETWORKS. Random Matrices: Theory and Application, 2012, 01, 1150006.	1.1	23
49	Randomized Isometric Linear-Dispersion Space-Time Block Coding for the DF Relay Channel. IEEE Transactions on Signal Processing, 2012, 60, 426-442.	5.3	2
50	Performance Analysis and Optimal Selection of Large Minimum Variance Portfolios Under Estimation Risk. IEEE Journal on Selected Topics in Signal Processing, 2012, 6, 337-350.	10.8	47
51	On the consistency of likelihood penalization methods in large sensor networks. , 2012, , .		0
52	Improved estimation of the logarithm of the covariance matrix. , 2012, , .		6
53	A CLT on the SNR of Diagonally Loaded MVDR Filters. IEEE Transactions on Signal Processing, 2012, 60, 4178-4195.	5.3	12
54	Fifteen years of continuous improvement of quality care of type 2 diabetes mellitus in primary care in Catalonia, Spain. International Journal of Clinical Practice, 2012, 66, 289-298.	1.7	61

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55	Improved Subspace Estimation for Multivariate Observations of High Dimension: The Deterministic Signals Case. IEEE Transactions on Information Theory, 2012, 58, 1043-1068.	2.4	57
56	Asymptotic analysis and consistent estimation of high-dimensional Markowitz portfolios. , 2011, , .		0
57	Large-SNR Outage Analysis for the DF Relay Channel with Randomized Space-Time Block Coding. IEEE Transactions on Wireless Communications, 2011, 10, 2090-2100.	9.2	2
58	An improved music algorithm based on low rank perturbation of large random matrices. , 2011, , .		5
59	Spectral convergence for a general class of random matrices. Statistics and Probability Letters, 2011, 81, 592-602.	0.7	29
60	A CLT on the SINR of the diagonally loaded Capon/MVDR beamformer. , 2011, , .		3
61	Asymptotic analysis of a consistent subspace estimator for observations of increasing dimension. , 2011, , .		3
62	On the consistency of the G-MUSIC DoA estimator. , 2011, , .		1
63	DOA Estimation in the Small-Sample Threshold Region. , 2009, , 219-287.		8
64	Large system analysis of beamforming for MIMO systems with limited training. , 2009, , .		0
65	Improved subspace DoA estimation methods with large arrays: The deterministic signals case. , 2009, , .		8
66	Decode and forward relays: Full diversity with randomized distributed space-time coding. , 2009, , .		7
67	Diversity Analysis of a Randomized Distributed Space-Time Coding in an Amplify and Forward Relay Channel. , 2009, , .		3
68	Consistent Reduced-Rank LMMSE Estimation With a Limited Number of Samples per Observation Dimension. IEEE Transactions on Signal Processing, 2009, 57, 2889-2902.	5.3	8
69	Generalized Consistent Estimation on Low-Rank Krylov Subspaces of Arbitrarily High Dimension. IEEE Transactions on Signal Processing, 2009, 57, 3787-3800.	5.3	10
70	Random DS/CDMA for the amplify and forward relay channel. IEEE Transactions on Wireless Communications, 2009, 8, 1017-1027.	9.2	17
71	Impact of CSI on distributed space-time coding in wireless relay networks. IEEE Transactions on Wireless Communications, 2009, 8, 2580-2591.	9.2	12
72	Cooperative Communications in Wireless Networks. Eurasip Journal on Wireless Communications and Networking, 2009, 2009, .	2.4	61

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73	Improved Estimation of Eigenvalues and Eigenvectors of Covariance Matrices Using Their Sample Estimates. IEEE Transactions on Information Theory, 2008, 54, 5113-5129.	2.4	182
74	Modified Subspace Algorithms for DoA Estimation With Large Arrays. IEEE Transactions on Signal Processing, 2008, 56, 598-614.	5.3	139
75	On the Asymptotic Behavior of the Sample Estimates of Eigenvalues and Eigenvectors of Covariance Matrices. IEEE Transactions on Signal Processing, 2008, 56, 5353-5368.	5.3	89
76	On the estimation of the covariance eigenspectrum of array sample observations. , 2008, , .		1
77	MUSIC, G-MUSIC, and Maximum-Likelihood Performance Breakdown. IEEE Transactions on Signal Processing, 2008, 56, 3944-3958.	5.3	66
78	About asymptotic spectral efficiency in the DS/CDMA amplify and forward relay channel. , 2008, , .		0
79	On the lowsource power regime of the DS/CDMA relay channel. , 2008, , .		0
80	The role of subspace swap in music performance breakdown. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	8
81	The role of subspace swap in maximum likelihood estimation performance breakdown. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	6
82	On optimal training and beamforming in uncorrelated MIMO systems with feedback. , 2008, , .		2
83	Performance Breakdown in Music, G-Music and Maximum Likelihood Estimation. , 2007, , .		7
84	Source Power Estimation for Array Processing Applications under Low Sample Size Constraints. , 2007, , .		4
85	Improved consistent estimation on Krylov subspaces. Conference Record of the Asilomar Conference on Signals, Systems and Computers, 2007, , .	0.0	0
86	Asymptotic Spectral Efficiency Analysis of the DS/CDMA Amplify and Forward Relay Channel. Conference Record of the Asilomar Conference on Signals, Systems and Computers, 2007, , .	0.0	4
87	Large System Performance Evaluation of the DS/CDMA Relay Channel Using Linear Receivers. , 2007, , .		4
88	Finite sample size effect on minimum variance beamformers: optimum diagonal loading factor for large arrays. IEEE Transactions on Signal Processing, 2006, 54, 69-82.	5.3	159
89	Asymptotic Performance Evaluation of Space-Frequency MMSE Filters for OFDM. IEEE Transactions on Signal Processing, 2004, 52, 2895-2910.	5.3	5
90	Spatial filtering for pilot-aided WCDMA systems: A semi-blind subspace approach. IEEE Transactions on Signal Processing, 2003, 51, 2665-2678.	5.3	2

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91	Capacity of MIMO channels: asymptotic evaluation under correlated fading. IEEE Journal on Selected Areas in Communications, 2003, 21, 829-838.	14.0	101
92	A comparative performance study of different space-frequency filters for OFDM. , 2002, , .		3
93	ML approaches to channel estimation for pilot-aided multirate DS/CDMA systems. IEEE Transactions on Signal Processing, 2002, 50, 696-709.	5.3	13
94	The IST METRA project. , 2002, 40, 78-86.		21
95	Smart antennas in software radio base stations. , 2001, 39, 166-173.		20
96	Two-stage code reference beamformer for the reception of frequency hopping modulated signals. Signal Processing, 2000, 80, 2623-2632.	3.7	4
97	Joint beamforming and channel estimation for pilot-aided WCDMA systems. , 0, , .		5
98	Asymptotic performance of ML channel estimators in WCDMA systems: randomized codes approach. , 0, , .		1
99	Two-stage code reference beamformer in mobile communications. , 0, , .		3
100	Uplink beamforming for the FDD mode of UTRA. , 0, , .		2
101	Pilot-aided ML schemes for joint beamforming and channel estimation in WCDMA systems. , 0, , .		6
102	Nonlinear system inversion applied to random variable generation. , 0, , .		0
103	Effect of imperfect channel estimation on synchronous multi-rate DS/CDMA systems with high spreading factors. , 0, , .		2
104	Efficient implementation of sphere demodulation. , 0, , .		47
105	Effect of fading correlation on the asymptotic open-loop and closed-loop capacity of MIMO systems. , 0, , .		3
106	Turbo equalization and demodulation of multicode space time codes. , 0, , .		3
107	Optimum transmit architecture of a MIMO system under modulus channel knowledge at the transmitter. , 0, , .		5
108	Ergodic capacity of a 2x2 MIMO system under phase uncertainty at the transmitter. , 0, , .		1

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109	Estimating the optimum loading factor against the finite sample size effect in minimum variance beamformers. , 0, , .		0
110	Robust power allocation techniques for MIMO systems under modulus channel knowledge at the transmitter. , 0, , .		5
111	Semi-blind ML channel estimation for MC-CDMA systems with code-multiplexed pilots. , 0, , .		0
112	Asymptotic Performance of Code-reference Spatial Filters for Multicode DS/CDMA. , 0, , .		0
113	Analysis of Multi-Stage Receivers Under Finite Sample-Support. , 0, , .		1
114	An Improved Subspace-Based Algorithm in the Small Sample Size Regime. , 0, , .		12
115	On the asymptotic behavior of the eigenvalue distribution of block correlation matrices of high-dimensional time series. Random Matrices: Theory and Application, 0, , .	1.1	0