

Marco D Migliore

List of Publications by Year in descending order

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133
papers

1,884
citations

279487

23
h-index

288905

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g-index

134
all docs

134
docs citations

134
times ranked

1018
citing authors

#	ARTICLE	IF	CITATIONS
1	The Capacity of Wireless Networks: Information-Theoretic and Physical Limits. IEEE Transactions on Information Theory, 2009, 55, 3413-3424.	1.5	165
2	A Compressed Sensing Approach for Array Diagnosis From a Small Set of Near-Field Measurements. IEEE Transactions on Antennas and Propagation, 2011, 59, 2127-2133.	3.1	161
3	On Electromagnetics and Information Theory. IEEE Transactions on Antennas and Propagation, 2008, 56, 3188-3200.	3.1	91
4	Fast Antenna Array Diagnosis from a Small Number of Far-Field Measurements. IEEE Transactions on Antennas and Propagation, 2016, 64, 2227-2235.	3.1	83
5	Plane-Wave Generators: Design Guidelines, Achievable Performances and Effective Synthesis. IEEE Transactions on Antennas and Propagation, 2013, 61, 2005-2018.	3.1	72
6	Array Diagnosis From Far-Field Data Using the Theory of Random Partial Fourier Matrices. IEEE Antennas and Wireless Propagation Letters, 2013, 12, 745-748.	2.4	62
7	Improving Channel Capacity Using Adaptive MIMO Antennas. IEEE Transactions on Antennas and Propagation, 2006, 54, 3481-3489.	3.1	58
8	An Effective Compressed-Sensing Inspired Deterministic Algorithm for Sparse Array Synthesis. IEEE Transactions on Antennas and Propagation, 2018, 66, 149-159.	3.1	54
9	A Theoretical and Experimental Investigation on the Measurement of the Electromagnetic Field Level Radiated by 5G Base Stations. IEEE Access, 2020, 8, 101448-101463.	2.6	53
10	A simple introduction to compressed sensing/sparse recovery with applications in antenna measurements. IEEE Antennas and Propagation Magazine, 2014, 56, 14-26.	1.2	48
11	Synthesis of Large Sparse Arrays Using IDEA (Inflating-Deflating Exploration Algorithm). IEEE Transactions on Antennas and Propagation, 2018, 66, 4658-4668.	3.1	43
12	On the Sampling of the Electromagnetic Field Radiated by Sparse Sources. IEEE Transactions on Antennas and Propagation, 2015, 63, 553-564.	3.1	38
13	Fast Antenna Far-Field Characterization via Sparse Spherical Harmonic Expansion. IEEE Transactions on Antennas and Propagation, 2017, 65, 5503-5510.	3.1	35
14	Experimental Procedure for Fifth Generation (5G) Electromagnetic Field (EMF) Measurement and Maximum Power Extrapolation for Human Exposure Assessment. Environments - MDPI, 2020, 7, 22.	1.5	34
15	Antenna Arrays for Line-of-Sight Massive MIMO: Half Wavelength Is Not Enough. Electronics (Switzerland), 2017, 6, 57.	1.8	31
16	Horse (Electromagnetics) is More Important Than Horseman (Information) for Wireless Transmission. IEEE Transactions on Antennas and Propagation, 2019, 67, 2046-2055.	3.1	29
17	A new strategy to reduce the truncation error in near-field/far-field transformations. Radio Science, 2000, 35, 3-17.	0.8	28
18	A Deterministic Far-Field Sampling Strategy for Array Diagnosis Using Sparse Recovery. IEEE Antennas and Wireless Propagation Letters, 2018, 17, 1261-1265.	2.4	28

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19	An intuitive electromagnetic approach to MIMO communication systems [Wireless Corner]. IEEE Antennas and Propagation Magazine, 2006, 48, 128-137.	1.2	27
20	Optimizing Antenna Arrays for Spatial Multiplexing: Towards 6G Systems. IEEE Access, 2021, 9, 53276-53291.	2.6	27
21	An Experimental Investigation on the Impact of Duplexing and Beamforming Techniques in Field Measurements of 5G Signals. Electronics (Switzerland), 2020, 9, 223.	1.8	26
22	Radar Array Diagnosis from Undersampled Data Using a Compressed Sensing/Sparse Recovery Technique. Journal of Electrical and Computer Engineering, 2013, 2013, 1-5.	0.6	24
23	A NEW ANALYTICALLY REGULARIZING METHOD FOR THE ANALYSIS OF THE SCATTERING BY A HOLLOW FINITE-LENGTH PEC CIRCULAR CYLINDER. Progress in Electromagnetics Research B, 2016, 70, 55-71.	0.7	24
24	Electrical Permittivity and Conductivity of a Graphene Nanoplatelet Contact in the Microwave Range. Materials, 2018, 11, 2519.	1.3	24
25	A Sparse Recovery Approach for Pattern Correction of Active Arrays in Presence of Element Failures. IEEE Antennas and Wireless Propagation Letters, 2015, 14, 1027-1030.	2.4	23
26	Experimental Analysis of a Wideband Adaptive-MIMO Antenna. IEEE Transactions on Antennas and Propagation, 2008, 56, 908-913.	3.1	22
27	The Degrees of Freedom of Wireless Networks Via Cut-Set Integrals. IEEE Transactions on Information Theory, 2011, 57, 3067-3079.	1.5	21
28	Synthesis of Nonuniform MIMO Arrays Through Combinatorial Sets. IEEE Antennas and Wireless Propagation Letters, 2012, 11, 728-731.	2.4	20
29	Microwave treatment for pest control: the case of <i>Rhynchophorus ferrugineus</i> in <i>Phoenix canariensis</i> . EPPO Bulletin, 2011, 41, 128-135.	0.6	19
30	Experimental and numerical evaluations on palm microwave heating for Red Palm Weevil pest control. Scientific Reports, 2017, 7, 45299.	1.6	19
31	A Compressive-Sensing Inspired Alternate Projection Algorithm for Sparse Array Synthesis. Electronics (Switzerland), 2017, 6, 3.	1.8	19
32	Minimum Trace Norm Regularization (MTNR) in Electromagnetic Inverse Problems. IEEE Transactions on Antennas and Propagation, 2016, 64, 630-639.	3.1	18
33	A New Paradigm in 5G Maximum Power Extrapolation for Human Exposure Assessment: Forcing gNB Traffic Toward the Measurement Equipment. IEEE Access, 2021, 9, 101946-101958.	2.6	18
34	The Information Carried by Scattered Waves: Near-Field and Nonasymptotic Regimes. IEEE Transactions on Antennas and Propagation, 2015, 63, 3144-3157.	3.1	17
35	Electromagnetic scattering by a zero-thickness PEC annular ring: a new highly efficient MoM solution. Journal of Electromagnetic Waves and Applications, 2017, 31, 405-416.	1.0	17
36	Far-field antenna pattern estimation from near-field data using a low-cost amplitude-only measurement setup. IEEE Transactions on Instrumentation and Measurement, 2000, 49, 71-76.	2.4	16

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37	Iterative classification strategy for multi-resolution wireless sensing of passive targets. <i>Electronics Letters</i> , 2018, 54, 101-103.	0.5	16
38	Antenna Measurements-by-Design for Antenna Qualification. <i>IEEE Transactions on Antennas and Propagation</i> , 2018, 66, 6300-6312.	3.1	16
39	Compliance Boundaries of 5G Massive MIMO Radio Base Stations: A Statistical Approach. <i>IEEE Access</i> , 2020, 8, 182787-182800.	2.6	16
40	An Investigation on UWB-MIMO Communication Systems Based on an Experimental Channel Characterization. <i>IEEE Transactions on Antennas and Propagation</i> , 2008, 56, 3081-3083.	3.1	15
41	Wide Band Permittivity Measurements of Palm (Phoenix Canariensis) and Rhynchophorus ferrugineus (Coleoptera Curculionidae) for RF Pest Control. <i>Journal of Microwave Power and Electromagnetic Energy</i> , 2014, 48, 158-169.	0.4	15
42	COMPARISON GUIDELINES AND BENCHMARK PROCEDURE FOR SPARSE ARRAY SYNTHESIS. <i>Progress in Electromagnetics Research M</i> , 2016, 52, 129-139.	0.5	14
43	MIMO Antennas Explained Using the Woodward-Lawson Synthesis Method [Wireless Corner]. <i>IEEE Antennas and Propagation Magazine</i> , 2007, 49, 175-182.	1.2	13
44	Near Field Antenna Measurement Sampling Strategies: From Linear to Nonlinear Interpolation. <i>Electronics (Switzerland)</i> , 2018, 7, 257.	1.8	13
45	On the Interpolation of Electromagnetic Near Field Without Prior Knowledge of the Radiating Source. <i>IEEE Transactions on Antennas and Propagation</i> , 2017, 65, 3568-3574.	3.1	13
46	Isophoric Inflating Deflating Exploration Algorithm (I-IDEA) for Equal-Amplitude Aperiodic Arrays. <i>IEEE Transactions on Antennas and Propagation</i> , 2022, 70, 10405-10416.	3.1	12
47	Power Reduction Estimation of 5G Active Antenna Systems for Human Exposure Assessment in Realistic Scenarios. <i>IEEE Access</i> , 2020, 8, 220095-220107.	2.6	11
48	A Novel Nonuniform Fast Fourier Transform Algorithm and Its Application to Aperiodic Arrays. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2017, 16, 1472-1475.	2.4	10
49	A LEXICOGRAPHIC APPROACH FOR MULTI-OBJECTIVE OPTIMIZATION IN ANTENNA ARRAY DESIGN. <i>Progress in Electromagnetics Research M</i> , 2017, 59, 85-102.	0.5	10
50	Methodology Based on Vector and Scalar Measurement of Traffic Channel Power Levels to Assess Maximum Exposure to Electromagnetic Radiation Generated by 5G NR Systems. <i>IEEE Access</i> , 2022, 10, 12125-12136.	2.6	10
51	A Low-Cost MIMO Channel Sounder Architecture Without Phase Synchronization. <i>IEEE Transactions on Antennas and Propagation</i> , 2012, 60, 548-556.	3.1	9
52	Efficient Large Sparse Arrays Synthesis by Means of Smooth Re-Weighted L1 Minimization. <i>Electronics (Switzerland)</i> , 2019, 8, 83.	1.8	9
53	Reliable Antenna Measurements in a Near-Field Cylindrical Setup With a Sparsity Promoting Approach. <i>IEEE Transactions on Antennas and Propagation</i> , 2020, 68, 4143-4148.	3.1	9
54	An effective algorithm for the synthesis of a plane wave generator for linear array testing. , 2012, , .		8

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55	The degrees of freedom of wireless networks: information-theoretic and physical limits. , 2008, , .		7
56	The accurate calibration of EMC antennas in compact chambers â€™ Measurements and uncertainty evaluations. Computer Standards and Interfaces, 2011, 33, 201-205.	3.8	7
57	A Virtual Subarray Architecture for Imaging Radar. IEEE Transactions on Antennas and Propagation, 2014, 62, 5171-5179.	3.1	7
58	The World Beneath the Physical Layer: An Introduction to the Deep Physical Layer. IEEE Access, 2021, 9, 77106-77126.	2.6	7
59	Accurate array diagnosis from near-field measurements using ℓ</inf>1</inf>; reweighted minimization. , 2013, , .		6
60	Truncation-Error Reduction in Antenna Near-Field Measurements Using an Overcomplete Basis Representation. IEEE Antennas and Wireless Propagation Letters, 2019, 18, 283-287.	2.4	6
61	Some physical limitations in the performance of statistical multiple-input multiple-output RADARs. IET Microwaves, Antennas and Propagation, 2008, 2, 650-658.	0.7	5
62	An Ultra Wide Permittivity Antenna (UWPA) for Reliable Through-Wall Communications. IEEE Transactions on Antennas and Propagation, 2013, 61, 957-960.	3.1	5
63	Compressed Sensing: Applications in Radar and Communications. Scientific World Journal, The, 2016, 2016, 1-2.	0.8	5
64	Effectively Exploiting Parasitic Arrays for Secret Key Sharing. IEEE Transactions on Vehicular Technology, 2016, 65, 123-131.	3.9	5
65	Experimental Characterization of a Dual-Polarised Parasitic Patch Antenna. Electronics (Switzerland), 2017, 6, 108.	1.8	5
66	Some Notes on the Verification of the Exposure Limits in 5G Systems. , 2019, , .		5
67	Efficient Evaluation of Slowly Converging Integrals Arising from MAP Application to a Spectral-Domain Integral Equation. Electronics (Switzerland), 2019, 8, 1500.	1.8	5
68	5G DSS communications: pilot signalsâ€™ variability analysis from measurements on the field. , 2022, , .		5
69	A Simple and Effective Procedure for Connector Deembedding in Antenna Arrays. IEEE Antennas and Wireless Propagation Letters, 2009, 8, 534-537.	2.4	4
70	On the synthesis of plane wave generators: Performance limits, design paradigms and effective algorithms. , 2012, , .		4
71	Some Electromagnetic Limitations on the Number of Users in MU-MIMO Communication Systems. IEEE Antennas and Wireless Propagation Letters, 2014, 13, 181-184.	2.4	4
72	Antenna measurements by design: A novel paradigm for antenna testing. , 2017, , .		4

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73	Development of the measurement method for challenging NLOS conditions in mobile networks. , 2017, , .		4
74	Who Cares About the Horse? A Gentle Introduction to Information in Electromagnetic Theory [Wireless Corner]. IEEE Antennas and Propagation Magazine, 2020, 62, 126-137.	1.2	4
75	Fast non-convex compressed sensing approach for diagnosis of defective array elements using planar near-field measurements. IET Microwaves, Antennas and Propagation, 2019, 13, 1940-1947.	0.7	4
76	The MIMO antenna as a communication channel. , 2007, , .		3
77	Leaky-Wave Applicators: Experimental Verification of the Effectiveness of the Single Pole-Wave Approximation for the Estimation of the Power Deposition Pattern. IEEE Transactions on Antennas and Propagation, 2010, 58, 2146-2149.	3.1	3
78	Correction of Beam Direction in Adaptive Parasitic Monopole Arrays Using a Truncated Cone Structure. IEEE Antennas and Wireless Propagation Letters, 2012, 11, 1486-1488.	2.4	3
79	A simple procedure for effective secret key sharing from wireless channel estimation. , 2013, , .		3
80	Effective sparse array synthesis using a generalized alternate projection algorithm. , 2014, , .		3
81	Comparison of methods for reflectarray diagnostic from far field measurements. , 2015, , .		3
82	Compressed sensing approach for reflectarray diagnostic from far field measurements. , 2015, , .		3
83	A Simple and Effective Inverse Source Reconstruction With Minimum <i>A Priori</i> Information on the Source. IEEE Geoscience and Remote Sensing Letters, 2017, 14, 454-458.	1.4	3
84	A Hybrid Non-Convex Compressed Sensing Approach for Array Diagnosis Using Sparse Promoting Norm with Perturbation Technique. Electronics (Switzerland), 2018, 7, 350.	1.8	3
85	The degrees of freedom of wireless networks. , 2009, , .		2
86	Failures identification in a linear slot array using a sparse recovery technique. , 2014, , .		2
87	Experimental results on the effectiveness of microwave treatment of phoenix canariensis palm infested by Rhynchophorus ferrugineus. , 2015, , .		2
88	Influence of Microwave Exposure on the Development of Phaseolus vulgaris L. Plants. , 2015, , .		2
89	Online failure detection in large massive MIMO linear arrays. , 2017, , .		2
90	A sparse forcing conformal array synthesis method. , 2017, , .		2

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91	MIMO Channel-State Estimation in the Presence of Partial Data and/or Intermittent Measurements. Electronics (Switzerland), 2017, 6, 33.	1.8	2
92	An Electromagnetic Analysis of Noise-Based Intrinsically Secure Communication in Wireless Systems. Electronics (Switzerland), 2018, 7, 113.	1.8	2
93	Field Measurement for Antenna Configuration Comparison in Challenging NLOS Locations. IEEE Transactions on Instrumentation and Measurement, 2018, 67, 2476-2486.	2.4	2
94	Accurate Reconstruction of the Radiation of Sparse Sources from a Small Set of Near-Field Measurements by Means of a Smooth-Weighted Norm for Cluster-Sparsity Problems. Electronics (Switzerland), 2021, 10, 2854.	1.8	2
95	Energy and information in antenna synthesis. , 2008, , .		1
96	An informational theoretic approach to the microwave tomography. , 2008, , .		1
97	Phase-transition behavior in array diagnosis using sparse recovery techniques. , 2012, , .		1
98	Array diagnosis from far field data via ℓ_1/ℓ_2 minimizations. , 2014, , .		1
99	Sampling of sparse information in electromagnetism. , 2015, , .		1
100	A novel approach for circular array testing. , 2017, , .		1
101	Failure identification and pattern correction in large isophoric sparse arrays. , 2017, , .		1
102	Multiobjective Optimization of a Rotman Lens through the QLWS Minimization. International Journal of Antennas and Propagation, 2017, 2017, 1-6.	0.7	1
103	The minimum trace regularization approach in electromagnetics: Theory and perspectives. , 2017, , .		1
104	A Hybrid Method for Array Diagnosis Using Random Perturbation-Convex Local Minimizer. , 2019, , .		1
105	TM Electromagnetic Scattering from PEC Polygonal Cross-Section Cylinders: A New Analytical Approach for the Efficient Evaluation of Improper Integrals Involving Oscillating and Slowly Decaying Functions. Advances in Mathematical Physics, 2019, 2019, 1-9.	0.4	1
106	Blending Electromagnetic and Information Theory in Antenna Synthesis. , 2019, , .		1
107	A Minimum Rank Approach for Reduction of Environmental Noise in Near-Field Array Antenna Diagnosis. Journal of Imaging, 2019, 5, 51.	1.7	1
108	Efficient and Effective Synthesis of Large Arrays for 5G and Beyond. , 2020, , .		1

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109	Shannon and Kolmogorov in Space Communication Channels. , 2020, , .		1
110	Low-cost antenna architectures with control of the local environment for 5G and beyond 5G. , 2021, , .		1
111	A network-analyser calibration method for accurate measurement of the reflection coefficients of monopolelike antennas. Microwave and Optical Technology Letters, 2005, 47, 330-332.	0.9	0
112	Experimental channel characterization of a MIMO-UWB communication system. , 2008, , .		0
113	Outer bound to the capacity scaling of three dimensional wireless networks. , 2008, , .		0
114	Degrees of freedom of the field in unconditionally secure wireless communications. , 2010, , .		0
115	Degrees of freedom of large planar wireless networks embedded in a 3D domain. , 2010, , .		0
116	Exploiting ADS-arrays for the synthesis of MIMO systems. , 2012, , .		0
117	A MIMO RADAR design procedure from an antenna perspective. , 2013, , .		0
118	Secret key sharing by means of reconfigurable antenna systems. , 2014, , .		0
119	Evaluation of the effects of UHF electromagnetic fields on a blood bag. , 2015, , .		0
120	High power microwave applications of Phoenix canariensis palms for red palm weevil pest control. , 2015, , .		0
121	The linear sampling method for GPR surveys in humanitarian demining: A feasibility assessment towards experimental on-site demonstration. , 2015, , .		0
122	An accurate and efficient analysis of very large but narrow zero-thickness PEC annular rings. , 2017, , .		0
123	On the comparison and evaluation of sparse array synthesis methods. , 2017, , .		0
124	An investigation on an interference filtering technique for array diagnosis using sparsity. , 2017, , .		0
125	GAUSSIAN BEAM ELECTROMAGNETIC SCATTERING FROM PEC POLYGONAL CROSS-SECTION CYLINDERS. Progress in Electromagnetics Research C, 2017, 79, 101-113.	0.6	0
126	Device-free human monitoring using channel state information. , 2017, , .		0

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127	A Structured Deterministic Sampling Strategy for Array Diagnosis from Far-Field Measurements. , 2018, , .		0
128	Compressive Processing for Phased Array Characterization and Direction Finding. , 2019, , .		0
129	A Novel Technique to Reduce Truncation Error in Near-Field Measurements. , 2019, , .		0
130	A Quick Look to 6G Antenna Concepts as seen from the Deep Physical Layer Level. , 2021, , .		0
131	Estimation of the 5G Massive-MIMO Antenna Beams using Drones by Minimum Trace Norm Minimization. , 2021, , .		0
132	Advances on CS-Processing Applied to Phased Arrays Synthesis, Processing, and Characterization. , 2022, , .		0
133	Information Processing at the Deep Physical Layer level. , 2022, , .		0