Marco D Migliore

List of Publications by Year
in descending order

133 papers	1,884 citations	279701 23 h-index	289141 40 g-index
134 all docs	134 docs citations	134 times ranked	1018 citing authors

#	Article	IF	Citations
1	Methodology Based on Vector and Scalar Measurement of Traffic Channel Power Levels to Assess Maximum Exposure to Electromagnetic Radiation Generated by 5G NR Systems. IEEE Access, 2022, 10, 12125-12136.	2.6	10
2	Advances on CS-Processing Applied to Phased Arrays Synthesis, Processing, and Characterization. , 2022, , .		0
3	Information Processing at the Deep Physical Layer level. , 2022, , .		0
4	Isophoric Inflating Deflating Exploration Algorithm (I-IDEA) for Equal-Amplitude Aperiodic Arrays. IEEE Transactions on Antennas and Propagation, 2022, 70, 10405-10416.	3.1	12
5	5G DSS communications: pilot signalsâ€™ variability analysis from measurements on the field. , 2022, , .		5
6	Optimizing Antenna Arrays for Spatial Multiplexing: Towards 6G Systems. IEEE Access, 2021, 9, 53276-53291.	2.6	27
7	The World Beneath the Physical Layer: An Introduction to the Deep Physical Layer. IEEE Access, 2021, 9, 77106-77126.	2.6	7
8	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
9	A Quick Look to 6G Antenna Concepts as seen from the Deep Physical Layer Level. , 2021, , .		0
10	Estimation of the 5G Massive-MIMO Antenna Beams using Drones by Minimum Trace Norm Minimization. , 2021, , .		0
11	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
12	Low-cost antenna architectures with control of the local environment for 5G and beyond 5G. , 2021, , .		1
13	Reliable Antenna Measurements in a Near-Field Cylindrical Setup With a Sparsity Promoting Approach. IEEE Transactions on Antennas and Propagation, 2020, 68, 4143-4148.	3.1	9
14	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
15	Efficient and Effective Synthesis of Large Arrays for 5G and Beyond. , 2020, , .		1
16	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
17	Compliance Boundaries of 5G Massive MIMO Radio Base Stations: A Statistical Approach. IEEE Access, 2020, 8, 182787-182800.	2.6	16
18	Shannon and Kolmogorov in Space Communication Channels. , 2020, , .		1

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19	Power Reduction Estimation of 5G Active Antenna Systems for Human Exposure Assessment in Realistic Scenarios. IEEE Access, 2020, 8, 220095-220107.	2.6	11
20	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
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	Efficient Large Sparse Arrays Synthesis by Means of Smooth Re-Weighted L1 Minimization. Electronics (Switzerland), 2019, 8, 83.	1.8	9
23	A Hybrid Method for Array Diagnosis Using Random Perturbation-Convex Local Minimizer. , 2019, , .		1
24	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
25	Blending Electromagnetic and Information Theory in Antenna Synthesis. , 2019, , .		1
26	Some Notes on the Verification of the Exposure Limits in 5G Systems. , 2019, , .		5
27	A Minimum Rank Approach for Reduction of Environmental Noise in Near-Field Array Antenna Diagnosis. Journal of Imaging, 2019, 5, 51.	1.7	1
28	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
29	Efficient Evaluation of Slowly Converging Integrals Arising from MAP Application to a Spectral-Domain Integral Equation. Electronics (Switzerland), 2019, 8, 1500.	1.8	5
30	Compressive Processing for Phased Array Characterization and Direction Finding. , 2019, , .		0
31	A Novel Technique to Reduce Truncation Error in Near-Field Measurements. , 2019, , .		0
32	Horse (Electromagnetics) is More Important Than Horseman (Information) for Wireless Transmission. IEEE Transactions on Antennas and Propagation, 2019, 67, 2046-2055.	3.1	29
33	Fast nonâ€convex compressed sensing approach for diagnosis of defective array elements using planar nearâ€field measurements. IET Microwaves, Antennas and Propagation, 2019, 13, 1940-1947.	0.7	4
34	Iterative classification strategy for multiâ€resolution wireless sensing of passive targets. Electronics Letters, 2018, 54, 101-103.	0.5	16
35	An Effective Compressed-Sensing Inspired Deterministic Algorithm for Sparse Array Synthesis. IEEE Transactions on Antennas and Propagation, 2018, 66, 149-159.	3.1	54
36	Near Field Antenna Measurement Sampling Strategies: From Linear to Nonlinear Interpolation. Electronics (Switzerland), 2018, 7, 257.	1.8	13

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37	A Structured Deterministic Sampling Strategy for Array Diagnosis from Far-Field Measurements. , 2018, , .		0
38	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
39	An Electromagnetic Analysis of Noise-Based Intrinsically Secure Communication in Wireless Systems. Electronics (Switzerland), 2018, 7, 113.	1.8	2
40	Electrical Permittivity and Conductivity of a Graphene Nanoplatelet Contact in the Microwave Range. Materials, 2018, 11, 2519.	1.3	24
41	Field Measurement for Antenna Configuration Comparison in Challenging NLOS Locations. IEEE Transactions on Instrumentation and Measurement, 2018, 67, 2476-2486.	2.4	2
42	Antenna Measurements-by-Design for Antenna Qualification. IEEE Transactions on Antennas and Propagation, 2018, 66, 6300-6312.	3.1	16
43	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
44	Synthesis of Large Sparse Arrays Using IDEA (Inflating-Deflating Exploration Algorithm). IEEE Transactions on Antennas and Propagation, 2018, 66, 4658-4668.	3.1	43
45	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
46	A Simple and Effective Inverse Source Reconstruction With Minimum <italic>A Priori</italic> Information on the Source. IEEE Geoscience and Remote Sensing Letters, 2017, 14, 454-458.	1.4	3
47	Online failure detection in large massive MIMO linear arrays. , 2017, , .		2
48	Experimental and numerical evaluations on palm microwave heating for Red Palm Weevil pest control. Scientific Reports, 2017, 7, 45299.	1.6	19
49	A Novel Nonuniform Fast Fourier Transform Algorithm and Its Application to Aperiodic Arrays. IEEE Antennas and Wireless Propagation Letters, 2017, 16, 1472-1475.	2.4	10
50	Fast Antenna Far-Field Characterization via Sparse Spherical Harmonic Expansion. IEEE Transactions on Antennas and Propagation, 2017, 65, 5503-5510.	3.1	35
51	A novel approach for circular array testing. , 2017, , .		1
52	Failure identification and pattern correction in large isophoric sparse arrays. , 2017, , .		1
53	An accurate and efficient analysis of very large but narrow zero-thickness PEC annular rings. , 2017, , .		0
54	On the comparison and evaluation of sparse array synthesis methods. , 2017, , .		0

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55	A sparse forcing conformal array synthesis method. , 2017, , .		2
56	An investigation on an interference filtering technique for array diagnosis using sparsity. , 2017, , .		0
57	GAUSSIAN BEAM ELECTROMAGNETIC SCATTERING FROM PEC POLYGONAL CROSS-SECTION CYLINDERS. Progress in Electromagnetics Research C, 2017, 79, 101-113.	0.6	0
58	Device-free human monitoring using channel state information. , 2017, , .		0
59	Antenna measurements by design: A novel paradigm for antenna testing. , 2017, , .		4
60	Experimental Characterization of a Dual-Polarised Parasitic Patch Antenna. Electronics (Switzerland), 2017, 6, 108.	1.8	5
61	A Compressive-Sensing Inspired Alternate Projection Algorithm for Sparse Array Synthesis. Electronics (Switzerland), 2017, 6, 3.	1.8	19
62	MIMO Channel-State Estimation in the Presence of Partial Data and/or Intermittent Measurements. Electronics (Switzerland), 2017, 6, 33.	1.8	2
63	Antenna Arrays for Line-of-Sight Massive MIMO: Half Wavelength Is Not Enough. Electronics (Switzerland), 2017, 6, 57.	1.8	31
64	Multiobjective Optimization of a Rotman Lens through the QLWS Minimization. International Journal of Antennas and Propagation, 2017, 2017, 1-6.	0.7	1
65	The minimum trace regularization approach in electromagnetics: Theory and perspectives. , 2017, , .		1
66	Development of the measurement method for challenging NLOS conditions in mobile networks. , 2017, , .		4
67	On the Interpolation of Electromagnetic Near Field Without Prior Knowledge of the Radiating Source. IEEE Transactions on Antennas and Propagation, 2017, 65, 3568-3574.	3.1	13
68	A LEXICOGRAPHIC APPROACH FOR MULTI-OBJECTIVE OPTIMIZATION IN ANTENNA ARRAY DESIGN. Progress in Electromagnetics Research M, 2017, 59, 85-102.	0.5	10
69	COMPARISON GUIDELINES AND BENCHMARK PROCEDURE FOR SPARSE ARRAY SYNTHESIS. Progress in Electromagnetics Research M, 2016, 52, 129-139.	0.5	14
70	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
71	Compressed Sensing: Applications in Radar and Communications. Scientific World Journal, The, 2016, 2016, 1-2.	0.8	5
72	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

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73	Minimum Trace Norm Regularization (MTNR) in Electromagnetic Inverse Problems. IEEE Transactions on Antennas and Propagation, 2016, 64, 630-639.	3.1	18
74	Effectively Exploiting Parasitic Arrays for Secret Key Sharing. IEEE Transactions on Vehicular Technology, 2016, 65, 123-131.	3.9	5
75	Evaluation of the effects of UHF electromagnetic fields on a blood bag. , 2015, , .		0
76	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
77	Sampling of sparse information in electromagnetism. , 2015, , .		1
78	High power microwave applications of Phoenix canariensis palms for red palm weevil pest control. , 2015, , .		0
79	Comparison of methods for reflectarray diagnostic from far field measurements. , 2015, , .		3
80	Compressed sensing approach for reflectarray diagnostic from far field measurements. , 2015, , .		3
81	Experimental results on the effectiveness of microwave treatment of phoenix canariensis palm infested by Rhynchophorus ferrugineus. , 2015, , .		2
82	Influence of Microwave Exposure on the Developmnent of Phaseolus vulgaris L. Plants. , 2015, , .		2
83	On the Sampling of the Electromagnetic Field Radiated by Sparse Sources. IEEE Transactions on Antennas and Propagation, 2015, 63, 553-564.	3.1	38
84	The Information Carried by Scattered Waves: Near-Field and Nonasymptotic Regimes. IEEE Transactions on Antennas and Propagation, 2015, 63, 3144-3157.	3.1	17
85	The linear sampling method for GPR surveys in humanitarian demining: A feasibility assessment towards experimental on-site demonstration. , 2015, , .		0
86	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
87	Secret key sharing by means of reconfigurable antenna systems. , 2014, , .		0
88	Effective sparse array synthesis using a generalized alternate projection algorithm. , 2014, , .		3
89	Array diagnosis from far field data via ℓ<inf>1</inf> minimizations. , 2014, , .		1
90	A Virtual Subarray Architecture for Imaging Radar. IEEE Transactions on Antennas and Propagation, 2014, 62, 5171-5179.	3.1	7

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91	Failures identification in a linear slot array using a sparse recovery technique. , 2014, , .		2
92	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
93	Wide Band Permittivity Measurementsof Palm(Phoenix Canariensis)andRhynchophorus ferrugineus (Coleoptera Curculionidae)for RF Pest Control. Journal of Microwave Power and Electromagnetic Energy, 2014, 48, 158-169.	0.4	15
94	An Ultra Wide Permittivity Antenna (UWPA) for Reliable Through-Wall Communications. IEEE Transactions on Antennas and Propagation, 2013, 61, 957-960.	3.1	5
95	Plane-Wave Generators: Design Guidelines, Achievable Performances and Effective Synthesis. IEEE Transactions on Antennas and Propagation, 2013, 61, 2005-2018.	3.1	72
96	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
97	A simple procedure for effective secret key sharing from wireless channel estimation. , 2013, , .		3
98	Accurate array diagnosis from near-field measurements using ℓ<inf>1</inf> reweighted minimization. , 2013, , .		6
99	A MIMO RADAR design procedure from an antenna perspective. , 2013, , .		0
100	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
101	On the synthesis of plane wave generators: Performance limits, design paradigms and effective algorithms. , 2012, , .		4
102	Synthesis of Nonuniform MIMO Arrays Through Combinatorial Sets. IEEE Antennas and Wireless Propagation Letters, 2012, 11, 728-731.	2.4	20
103	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
104	An effective algorithm for the synthesis of a plane wave generator for linear array testing. , 2012, , .		8
105	Phase-transition behavior in array diagnosis using sparse recovery techniques. , 2012, , .		1
106	Exploiting ADS-arrays for the synthesis of MIMO systems. , 2012, , .		0
107	A Low-Cost MIMO Channel Sounder Architecture Without Phase Synchronization. IEEE Transactions on Antennas and Propagation, 2012, 60, 548-556.	3.1	9
108	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

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109	Microwave treatment for pest control: the case of Rhynchophorus ferrugineus in Phoenix canariensis. EPPO Bulletin, 2011, 41, 128-135.	0.6	19
110	The Degrees of Freedom of Wireless NetworksVia Cut-Set Integrals. IEEE Transactions on Information Theory, 2011, 57, 3067-3079.	1.5	21
111	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
112	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
113	Degrees of freedom of the field in unconditionally secure wireless communications. , 2010, , .		0
114	Degrees of freedom of large planar wireless networks embedded in a 3D domain. , 2010, , .		0
115	The degrees of freedom of wireless networks. , 2009, , .		2
116	The Capacity of Wireless Networks: Information-Theoretic and Physical Limits. IEEE Transactions on Information Theory, 2009, 55, 3413-3424.	1.5	165
117	A Simple and Effective Procedure for Connector Deembedding in Antenna Arrays. IEEE Antennas and Wireless Propagation Letters, 2009, 8, 534-537.	2.4	4
118	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
119	Experimental Analysis of a Wideband Adaptive-MIMO Antenna. IEEE Transactions on Antennas and Propagation, 2008, 56, 908-913.	3.1	22
120	An Investigation on UWB-MIMO Communication Systems Based on an Experimental Channel Characterization. IEEE Transactions on Antennas and Propagation, 2008, 56, 3081-3083.	3.1	15
121	Energy and information in antenna synthesis. , 2008, , .		1
122	The degrees of freedom of wireless networks: information-theoretic and physical limits. , 2008, , .		7
123	Experimental channel characterization of a MIMO-UWB communication system. , 2008, , .		0
124	Outer bound to the capacity scaling of three dimensional wireless networks. , 2008, , .		0
125	An informational theoretic approach to the microwave tomography. , 2008, , .		1
126	On Electromagnetics and Information Theory. IEEE Transactions on Antennas and Propagation, 2008, 56, 3188-3200.	3.1	91

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127	The MIMO antenna as a communication channel. , 2007, , .		3
128	MIMO Antennas Explained Using the Woodward-Lawson Synthesis Method [Wireless Corner]. IEEE Antennas and Propagation Magazine, 2007, 49, 175-182.	1.2	13
129	Improving Channel Capacity Using Adaptive MIMO Antennas. IEEE Transactions on Antennas and Propagation, 2006, 54, 3481-3489.	3.1	58
130	An intuitive electromagnetic approach to MIMO communication systems [Wireless Corner]. IEEE Antennas and Propagation Magazine, 2006, 48, 128-137.	1.2	27
131	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
132	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
133	A new strategy to reduce the truncation error in near-field/far-field transformations. Radio Science, 2000, 35, 3-17.	0.8	28