

M Felipe Catedra

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Full-Wave Computation of Monostatic RCS Using Ray-Tracing and Adaptive Macro-Basis Functions. IEEE Transactions on Antennas and Propagation, 2021, 69, 3381-3388.	3.1	0
2	Fast Computation by MLFMM-FFT with NURBS in Large Volumetric Dielectric Structures. Electronics (Switzerland), 2021, 10, 1560.	1.8	5
3	Efficient Iterative Analysis Technique of Complex Radome Antennas Based on the Characteristic Basis Function Method. IEEE Transactions on Antennas and Propagation, 2021, 69, 5881-5891.	3.1	7
4	Fast Hybrid Computational Technique for the Analysis of Radome Structures Using Dual Domain Decomposition. Electronics (Switzerland), 2021, 10, 2196.	1.8	1
5	BICGSTAB-FFT Method of Moments with NURBS for Analysis of Planar Generic Layouts Embedded in Large Multilayer Structures. Electronics (Switzerland), 2020, 9, 1476.	1.8	3
6	Fast Preconditioner Computation for BICGSTAB-FFT Method of Moments with NURBS in Large Multilayer Structures. Electronics (Switzerland), 2020, 9, 1938.	1.8	1
7	EM Modelling of Monostatic RCS for Different Complex Targets in the Near-Field Range: Experimental Evaluation for Traffic Applications. Electronics (Switzerland), 2020, 9, 1890.	1.8	8
8	Comparison between Specialized Quadrature Rules for Method of Moments with NURBS Modelling Applied to Periodic Multilayer Structures. Electronics (Switzerland), 2020, 9, 2043.	1.8	1
9	Efficient Technique for the Analysis of Electromagnetic Problems Involving Antenna Trajectories in Complex Scenarios. IEEE Antennas and Wireless Propagation Letters, 2020, 19, 413-417.	2.4	0
10	Method of Moments Based on Equivalent Periodic Problem and FFT with NURBS Surfaces for Analysis of Multilayer Periodic Structures. Electronics (Switzerland), 2020, 9, 234.	1.8	3
11	Hybrid parallelisation scheme for the application of distributed near-field sparse approximate inverse preconditioners on high-performance computing clusters. IET Microwaves, Antennas and Propagation, 2020, 14, 320-328.	0.7	1
12	Efficient computation of the reduced matrix of MLFMA-CBFM for electrically large blocks. IET Microwaves, Antennas and Propagation, 2020, 14, 539-546.	0.7	2
13	Ray-Tracing-Based Dual-Domain Analysis Technique Using the Method of Moments and the Multilevel Fast Multipole Algorithm. IEEE Transactions on Antennas and Propagation, 2019, 67, 7496-7504.	3.1	3
14	Multi-Beam Circular Polarized Reflectarray on Parabolic Reflector by Variable Rotation Technique. Applied Sciences (Switzerland), 2019, 9, 2659.	1.3	2
15	Experimental Validation of Generating Two Spaced Beams With Reflectarrays by VRT. IEEE Transactions on Antennas and Propagation, 2019, 67, 4263-4268.	3.1	9
16	A Novel and Efficient Technique Based on the Characteristic Basis Functions Method for Solving Scattering Problems. IEEE Transactions on Antennas and Propagation, 2019, 67, 3241-3248.	3.1	5
17	Analyzing multilayer Radomes with arbitrary shape using a technique based on Characteristic Basis Function Method. , 2019, , .		1
18	Efficient strategy for parallelisation of multilevel fast multipole algorithm using CUDA. IET Microwaves, Antennas and Propagation, 2019, 13, 1554-1563.	0.7	4

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19	Application of the Characteristic Basis Function Method Using Geometrically Optimized Function Sets. , 2019, , .		0
20	Combination of ray-tracing and the method of moments for electromagnetic radiation analysis using reduced meshes. Journal of Computational Physics, 2018, 361, 412-423.	1.9	7
21	Sparse Approximate Inverse Preconditioner With Parametric Sparsity Pattern Applied to the Macrobasis Function Methods. IEEE Antennas and Wireless Propagation Letters, 2018, 17, 849-852.	2.4	13
22	Efficient Generation of Macro Basis Functions for Radiation Problems Using Ray-Tracing Derived Dynamic Thresholds. IEEE Transactions on Antennas and Propagation, 2018, 66, 3231-3236.	3.1	5
23	Dynamic Threshold Selection Based on Radiation Pattern Characteristics for the Generation of Macro Basis Functions. IEEE Antennas and Wireless Propagation Letters, 2018, 17, 1812-1816.	2.4	2
24	Speeding-up the CBFMâ€“MLFMA approach for scattering analysis of very large electromagnetic problems. Computer Physics Communications, 2018, 232, 177-189.	3.0	2
25	Speed-up of the volumetric method of moments for the approximate RCS of large arbitrary-shaped dielectric targets. Computer Physics Communications, 2017, 217, 35-42.	3.0	1
26	Efficient combination of acceleration techniques applied to high frequency methods for solving radiation and scattering problems. Computer Physics Communications, 2017, 221, 28-41.	3.0	9
27	An efficient hybrid technique in RCS predictions of complex targets at high frequencies. Journal of Computational Physics, 2017, 345, 345-357.	1.9	10
28	Application of a Sparsity Pattern and Region Clustering for Near Field Sparse Approximate Inverse Preconditioners in Method of Moments Simulations. International Journal of Antennas and Propagation, 2017, 2017, 1-8.	0.7	3
29	Overview of some numerical techniques for the analysis of the electromagnetic scattering by wind turbines. , 2016, , .		0
30	Analysis of collision avoidance systems for automobile applications. , 2016, , .		3
31	AN OVERVIEW OF THE EVOLUTION OF METHOD OF MOMENTS TECHNIQUES IN MODERN EM SIMULATORS (Invited Paper). Progress in Electromagnetics Research, 2015, 150, 109-121.	1.6	8
32	Application of the Characteristic Basis Function Method Using CUDA. International Journal of Antennas and Propagation, 2014, 2014, 1-13.	0.7	1
33	A Hybrid Technique Based on the Combination of Multilevel Fast Multipole Algorithm and the Geometrical Theory of Diffraction. International Journal of Antennas and Propagation, 2014, 2014, 1-6.	0.7	0
34	Optimization Approach to Design Single Feed Symmetric and Asymmetric Multibeam Reflectarrays. Frequenz, 2014, 68, .	0.6	2
35	Application of EBG Structures to the Design of a Multibeam Reflector Feed. IEEE Antennas and Propagation Magazine, 2014, 56, 60-73.	1.2	4
36	Analysis of NURBS dielectric volumes by using the Method of Moments. , 2014, , .		1

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37	Metal-only Fresnel zone plate antenna for millimetre-wave frequency bands. IET Microwaves, Antennas and Propagation, 2014, 8, 445-450.	0.7	11
38	Characteristic Basis Function Method. , 2014, , 1-40.		0
39	Hybrid Iterative Approach Combined With Domain Decomposition for the Analysis of Large Electromagnetic Problems. Proceedings of the IEEE, 2013, 101, 320-331.	16.4	6
40	Broadband reflectarray antenna composed of single-layer concentric rings. Journal of Electromagnetic Waves and Applications, 2013, 27, 2166-2175.	1.0	6
41	Analysis and design of antenna radomes. , 2013, , .		5
42	A study of the efficiency of the parallelization of a high frequency electromagnetic approach for the computation of radiation and scattering considering multiple bounces. Computer Physics Communications, 2013, 184, 45-50.	3.0	5
43	Broadband design of a low-profile reflector antenna. IET Microwaves, Antennas and Propagation, 2013, 7, 630-634.	0.7	2
44	Cross-polarization Suppression in Monolayer Reflectarray Antennas. Frequenz, 2013, 67, .	0.6	1
45	Influence of the feed location on the performance of a conformed Fresnel zone reflector. IEEE Antennas and Wireless Propagation Letters, 2013, 12, 547-550.	2.4	4
46	Application of Asymptotic and Rigorous Techniques for the Characterization of Interferences Caused by a Wind Turbine in Its Neighborhood. International Journal of Antennas and Propagation, 2013, 2013, 1-10.	0.7	4
47	Analysis of Arbitrary Reflector Antennas Applying the Geometrical Theory of Diffraction Together with the Master Points Technique. International Journal of Antennas and Propagation, 2013, 2013, 1-13.	0.7	153
48	Dynamic Propagation Analysis in Urban Environments. Communications in Computer and Information Science, 2013, , 139-148.	0.4	0
49	Reducing complexity in electromagnetics problems. , 2012, , .		0
50	Efficient RCS analysis of complex targets on infinite ground plane. , 2012, , .		4
51	Useful techniques included in NEWFASANT tool for electromagnetic analysis and design. , 2012, , .		1
52	Ground-based reflector antennas observed with space-based Synthetic Aperture Radar. , 2012, , .		1
53	Efficient iterative solution of problems using characteristic basis function method combined with multilevel fast multipole algorithm. , 2012, , .		4
54	A comparison of the computational resources required by a Domain Decomposition approach and other efficient numerical techniques based on the moment method. , 2012, , .		5

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55	Placement and simulation of antennas attached to large platforms modeled with parametric surfaces. , 2012, , .		0
56	Computer tool for designing reflectarray antennas. , 2012, , .		1
57	Application of GPU computing to the Characteristic Basis Function Method. , 2012, , .		0
58	Optimization of a Dual-Band Helical Antenna for TTC Applications at S Band. IEEE Antennas and Propagation Magazine, 2012, 54, 63-77.	1.2	22
59	Electromagnetic simulations for aeronautical satellite communications channel model. , 2012, , .		6
60	Efficient computer tool for the analysis and design of antenna radome system using an hybrid PO-MoM method. , 2012, , .		1
61	Analysis of a Reflectarray by Using an Iterative Domain Decomposition Technique. International Journal of Antennas and Propagation, 2012, 2012, 1-8.	0.7	1
62	Design and Optimization of an EBG Antenna with an Efficient Electromagnetic Solver. International Journal of Antennas and Propagation, 2012, 2012, 1-8.	0.7	7
63	Analyzing large reflectors antennas built with complex knitted meshes. , 2011, , .		2
64	REDESIGN AND OPTIMIZATION OF THE PAVING ALGORITHM APPLIED TO ELECTROMAGNETIC TOOLS (Invited) Tj ETQ, 0 0 0 rgBT /Overlo	0.7	9
65	AN EFFICIENT HYBRID-SCHEME COMBINING THE CHARACTERISTIC BASIS FUNCTION METHOD AND THE MULTILEVEL FAST MULTIPOLE ALGORITHM FOR SOLVING BISTATIC RCS AND RADIATION PROBLEMS. Progress in Electromagnetics Research B, 2011, 34, 327-343.	0.7	9
66	Analysis of the parameters of an approach that combines the characteristic basis function method and the multilevel fast multipole. IET Microwaves, Antennas and Propagation, 2011, 5, 419.	0.7	5
67	Radio Emitters Location through the Use of Matrix-Pencil Super-Resolution Algorithm. Advances in Intelligent and Soft Computing, 2011, , 111-120.	0.2	0
68	Acceleration algorithm based on master point technique to compute the radiation pattern of reflector structures. , 2010, , .		0
69	Speeding up pre-processing time in the CBFM when using very large blocks. , 2010, , .		0
70	Numerical approach for the fast analysis of radiation patterns of antennas in complex environments. , 2010, , .		2
71	FASANT: A Versatile Tool to Analyze Radio Localization System at Indoor or Outdoor Environments. Advances in Intelligent and Soft Computing, 2010, , 259-266.	0.2	2
72	New moment method tool combining FMLMP, CBF and MPI. , 2009, , .		0

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73	New algorithm to speed-up the computation of the radiation pattern of antennas on board complex structures. , 2009, , .		1
74	New formulations of the characteristic basis function method for the analysis of metamaterials. , 2009, , .		0
75	An Effective Technique for System-Level Prediction of the Radiated Emissions of Unknown Sources Inside Low- Q Cavities Using Unit-Level Measurements. IEEE Transactions on Electromagnetic Compatibility, 2009, 51, 181-191.	1.4	8
76	Efficient method for the analysis and design of complex antennas. , 2009, , .		0
77	Generation of Characteristic Basis Functions Defined Over Large Surfaces by Using a Multilevel Approach. IEEE Transactions on Antennas and Propagation, 2009, 57, 1299-1301.	3.1	20
78	Efficient Multilevel Approach for the Generation of Characteristic Basis Functions for Large Scatters. IEEE Transactions on Antennas and Propagation, 2008, 56, 2134-2137.	3.1	36
79	Application of the Characteristic Basis Function Method Utilizing a Class of Basis and Testing Functions Defined on NURBS Patches. IEEE Transactions on Antennas and Propagation, 2008, 56, 784-791.	3.1	57
80	An Iterative Solution for Electrically Large Problems Combining the Characteristic Basis Function Method and the Multilevel Fast Multipole Algorithm. IEEE Transactions on Antennas and Propagation, 2008, 56, 2363-2371.	3.1	67
81	Evaluation of Particle Swarm Optimization Applied to Single Snapshot Direction of Arrival Estimation. Journal of Electromagnetic Waves and Applications, 2008, 22, 2251-2258.	1.0	3
82	Accurate Representation of the Edge Behavior of Current When Using PO-Derived Characteristic Basis Functions. IEEE Antennas and Wireless Propagation Letters, 2008, 7, 43-45.	2.4	18
83	Fast ray-tracing for computing n-bounces between curved surfaces. , 2008, , .		7
84	Design of an electromagnetic bandgap antenna. , 2008, , .		0
85	Depth-limited search applied to compute n-order reflections in the analysis of the RCS in large and complex targets. , 2008, , .		0
86	Efficient approach for the analysis of large antennas by using windowed macro-basis functions. , 2008, , .		0
87	Application of the Multilevel Fast Multipole Method to the analysis of holographic antennas. , 2008, , .		1
88	Hierarchical scheme for the application of the Characteristic Basis Function Method based on a multilevel approach. , 2008, , .		1
89	New Physical Optics Approach for an Efficient Treatment of Multiple Bounces in Curved Bodies Defined by an Impedance Boundary Condition. IEEE Transactions on Antennas and Propagation, 2008, 56, 728-736.	3.1	24
90	Efficient parallelization of a CBFM-MLFMA scheme for the computation of complex electromagnetic problems. , 2008, , .		2

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91	Computer code for the efficient calculation of the RCS of complex target considering multiple bounces. , 2008, , .		0
92	Mobile Location Using Super-resolution Algorithms. , 2007, , .		0
93	A numerically efficient technique for orthogonalizing the basis functions arising in the solution of electromagnetic scattering problems using the CBFM. , 2007, , .		1
94	Application of the multilevel fast multipole method to the analysis of conformed multilayered periodic structures. , 2007, , .		2
95	Analytical Field Calculation Involving Current Modes and Quadratic Phase Expressions. IEEE Transactions on Antennas and Propagation, 2007, 55, 233-240.	3.1	30
96	Combining the Characteristic Basis Function Method with rooftops and razor-blade testing functions over NURBS patches. , 2006, , .		5
97	Alternative current expressions for overcoming shadowing treatment arising in the Physical Optics approach. , 2006, , .		2
98	A comparison between two high-frequency techniques applied to the analysis of on-board antennas. Microwave and Optical Technology Letters, 2003, 36, 415-417.	0.9	0
99	Propagation model based on ray tracing for the design of personal communication systems in indoor environments. IEEE Transactions on Vehicular Technology, 2000, 49, 2105-2112.	3.9	108
100	FASANT: past computer tool for the analysis of on-board antennas. IEEE Antennas and Propagation Magazine, 1999, 41, 94-98.	1.2	20
101	A quasi-static tool for the EMI/EMC analysis of analog circuits: parasitic extractor tool and simulator of EMI parameters (PET+SEP). IEEE Transactions on Electromagnetic Compatibility, 1998, 40, 127-138.	1.4	4
102	Efficient ray-tracing techniques for three-dimensional analyses of propagation in mobile communications: application to picocell and microcell scenarios. IEEE Antennas and Propagation Magazine, 1998, 40, 15-28.	1.2	166
103	Asymptotic evaluation of physical optics for the analysis of on-board antennas. Electronics Letters, 1998, 34, 418.	0.5	0