

Carlos A Fernandes

List of Publications by Year in descending order

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150
papers

3,103
citations

159358

30
h-index

189595

50
g-index

152
all docs

152
docs citations

152
times ranked

2241
citing authors

#	ARTICLE	IF	CITATIONS
1	Electromagnetic Characterization of Textured Surfaces Formed by Metallic Pins. IEEE Transactions on Antennas and Propagation, 2008, 56, 405-415.	3.1	174
2	Dual-Band Dual-Linear-to-Circular Polarization Converter in Transmission Mode Application to $\frac{K}{Ka}$ -Band Satellite Communications. IEEE Transactions on Antennas and Propagation, 2018, 66, 7128-7137.	3.1	158
3	Circular Polarization Wide-Angle Beam Steering at Ka-Band by In-Plane Translation of a Plate Lens Antenna. IEEE Transactions on Antennas and Propagation, 2015, 63, 5443-5455.	3.1	149
4	Homogenization of 3-D-connected and nonconnected wire metamaterials. IEEE Transactions on Microwave Theory and Techniques, 2005, 53, 1418-1430.	2.9	127
5	High Gain Dual-Band Beam-Steering Transmit Array for Satcom Terminals at Ka-Band. IEEE Transactions on Antennas and Propagation, 2017, 65, 3528-3539.	3.1	106
6	Compact Beam-Steerable Lens Antenna for 60-GHz Wireless Communications. IEEE Transactions on Antennas and Propagation, 2009, 57, 2926-2933.	3.1	101
7	A Broadband Implantable and a Dual-Band On-Body Repeater Antenna: Design and Transmission Performance. IEEE Transactions on Antennas and Propagation, 2014, 62, 2899-2908.	3.1	83
8	Compact Ka-Band Lens Antennas for LEO Satellites. IEEE Transactions on Antennas and Propagation, 2008, 56, 1251-1258.	3.1	75
9	Hybrid UHF/UIWB Antenna for Passive Indoor Identification and Localization Systems. IEEE Transactions on Antennas and Propagation, 2013, 61, 354-361.	3.1	74
10	Additional boundary condition for a wire medium connected to a metallic surface. New Journal of Physics, 2008, 10, 053011.	1.2	68
11	Miniature Implantable Antennas for Biomedical Telemetry: From Simulation to Realization. IEEE Transactions on Biomedical Engineering, 2012, 59, 3140-3147.	2.5	64
12	RFID Reader Antennas for Tag Detection in Self-Confined Volumes at UHF. IEEE Antennas and Propagation Magazine, 2011, 53, 39-50.	1.2	63
13	Shaped dielectric lenses for wireless millimeter-wave communications. IEEE Antennas and Propagation Magazine, 1999, 41, 141-150.	1.2	61
14	RFID Smart Shelf With Confined Detection Volume at UHF. IEEE Antennas and Wireless Propagation Letters, 2008, 7, 773-776.	2.4	53
15	Complex permittivity and anisotropy measurement of 3D-printed PLA at microwaves and millimeter-waves. , 2016, , .		53
16	Evaluation of a New Wideband Slot Array for MIMO Performance Enhancement in Indoor WLANs. IEEE Transactions on Antennas and Propagation, 2011, 59, 1200-1206.	3.1	51
17	A new acceleration technique with exponential convergence rate to evaluate periodic Green functions. IEEE Transactions on Antennas and Propagation, 2005, 53, 347-355.	3.1	50
18	Performance of a Crossed Exponentially Tapered Slot Antenna for UWB Systems. IEEE Transactions on Antennas and Propagation, 2009, 57, 1345-1352.	3.1	48

#	ARTICLE	IF	CITATIONS
19	Stereolithography-Based Antennas for Satellite Communications in Ka-Band. Proceedings of the IEEE, 2017, 105, 655-667.	16.4	46
20	Antenna Design and Near-Field Characterization for Medical Microwave Imaging Applications. IEEE Transactions on Antennas and Propagation, 2019, 67, 4811-4824.	3.1	45
21	Performance of lens antennas in wireless indoor millimeter-wave applications. IEEE Transactions on Microwave Theory and Techniques, 1999, 47, 732-737.	2.9	43
22	3D printed plastic 60 GHz lens: Enabling innovative millimeter wave antenna solution and system. , 2014, , .		43
23	Phase-Delay Versus Phase-Rotation Cells for Circular Polarization Transmit Arrays Application to Satellite Ka-Band Beam Steering. IEEE Transactions on Antennas and Propagation, 2018, 66, 1236-1247.	3.1	43
24	A Hybrid Method for the Efficient Calculation of the Band Structure of 3-D Metallic Crystals. IEEE Transactions on Microwave Theory and Techniques, 2004, 52, 889-902.	2.9	41
25	Broadband UHF RFID Passive Tag Antenna for Near-Body Applications. IEEE Antennas and Wireless Propagation Letters, 2013, 12, 136-139.	2.4	39
26	Wideband Slot Antenna for WLAN Access Points. IEEE Antennas and Wireless Propagation Letters, 2010, 9, 79-82.	2.4	38
27	Compact Tapered Slot UWB Antenna With WLAN Band Rejection. IEEE Antennas and Wireless Propagation Letters, 2009, 8, 661-664.	2.4	36
28	Ball Grid Array Module With Integrated Shaped Lens for 5G Backhaul/Fronthaul Communications in F-Band. IEEE Transactions on Antennas and Propagation, 2017, 65, 6380-6394.	3.1	36
29	Nonresonant structured material with extreme effective parameters. Physical Review B, 2008, 78, .	1.1	35
30	Microwave Breast Imaging Using a Dry Setup. IEEE Transactions on Computational Imaging, 2020, 6, 167-180.	2.6	34
31	Evaluation of a Double-Shell Integrated Scanning Lens Antenna. IEEE Antennas and Wireless Propagation Letters, 2008, 7, 781-784.	2.4	33
32	Experimental verification of broadband superlensing using a metamaterial with an extreme index of refraction. Physical Review B, 2010, 81, .	1.1	31
33	Broadband Integrated Lens for Illuminating Reflector Antenna With Constant Aperture Efficiency. IEEE Transactions on Antennas and Propagation, 2010, 58, 3805-3813.	3.1	31
34	Dual-Band Skin-Adhesive Repeater Antenna for Continuous Body Signals Monitoring. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2018, 2, 25-32.	2.3	31
35	Constant flux illumination of square cells for millimeter-wave wireless communications. IEEE Transactions on Microwave Theory and Techniques, 2001, 49, 2137-2141.	2.9	30
36	Passive UHF RFID Tag for Airport Suitcase Tracking and Identification. IEEE Antennas and Wireless Propagation Letters, 2011, 10, 123-126.	2.4	30

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37	Homogenization of metamaterial surfaces and slabs: the crossed wire mesh canonical problem. IEEE Transactions on Antennas and Propagation, 2005, 53, 59-69.	3.1	29
38	Mirror-Integrated Transparent Antenna for RFID Application. IEEE Antennas and Wireless Propagation Letters, 2011, 10, 776-779.	2.4	29
39	Superlens made of a metamaterial with extreme effective parameters. Physical Review B, 2008, 78, .	1.1	27
40	Wideband Implantable Antenna for Body-Area High Data Rate Impulse Radio Communication. IEEE Transactions on Antennas and Propagation, 2016, 64, 1932-1940.	3.1	26
41	Broadband Slot Feed for Integrated Lens Antennas. IEEE Antennas and Wireless Propagation Letters, 2007, 6, 396-400.	2.4	25
42	Dielectric Lens Antennas. , 2016, , 1001-1064.		25
43	Transverse-average field approach for the characterization of thin metamaterial slabs. Physical Review E, 2007, 75, 036613.	0.8	24
44	DUAL-BAND IMPLANTABLE ANTENNAS FOR MEDICAL TELEMETRY: A FAST DESIGN METHODOLOGY AND VALIDATION FOR INTRA-CRANIAL PRESSURE MONITORING. Progress in Electromagnetics Research, 2013, 141, 161-183.	1.6	23
45	The moniT Project: Electromagnetic Radiation Exposure Assessment in Mobile Communications. IEEE Antennas and Propagation Magazine, 2007, 49, 44-53.	1.2	22
46	17.8 A compact 130GHz fully packaged point-to-point wireless system with 3D-printed 26dBi lens antenna achieving 12.5Gb/s at 1.55pJ/b/m. , 2017, , .		22
47	Tx-Rx Lens-Based Satellite-on-the-Move Ka-Band Antenna. IEEE Antennas and Wireless Propagation Letters, 2015, 14, 1408-1411.	2.4	21
48	Equivalent Circuit Modeling to Design a Dual-Band Dual Linear-to-Circular Polarizer Surface. IEEE Transactions on Antennas and Propagation, 2020, 68, 5730-5735.	3.1	21
49	Ku-band dielectric-loaded SIW horn for vertically-polarized multi-sector antennas. , 2012, , .		19
50	Design and Ranging Performance of a Low-profile UWB Antenna for WBAN Localization Applications. IEEE Transactions on Antennas and Propagation, 2014, 62, 6420-6427.	3.1	19
51	Experimental verification of "waveguide"™ plasmonics. New Journal of Physics, 2017, 19, 123017.	1.2	19
52	Synthesis of Shaped-Beam Radiation Patterns at Millimeter-Waves Using Transmit Arrays. IEEE Transactions on Antennas and Propagation, 2018, 66, 4017-4024.	3.1	19
53	Dielectric Lens Antennas for Wireless Broadband Communications. Wireless Personal Communications, 1999, 10, 19-32.	1.8	17
54	Experimental demonstration of a structured material with extreme effective parameters at microwaves. Applied Physics Letters, 2008, 93, 174103.	1.5	17

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55	Ball Grid Array-Module With Integrated Shaped Lens for WiGig Applications in Eyewear Devices. IEEE Transactions on Antennas and Propagation, 2016, 64, 872-882.	3.1	17
56	Effective Permittivity of Metallic Crystals: A Periodic Green's Function Formulation. Electromagnetics, 2003, 23, 647-663.	0.3	16
57	ILASH - Software tool for the design of integrated lens antennas. , 2008, , .		16
58	Review of 20 Years of Research on Microwave and Millimeter-wave Lenses at "Instituto de Telecomunicaçōes". IEEE Antennas and Propagation Magazine, 2015, 57, 249-268.	1.2	16
59	Efficient calculation of the band structure of artificial materials with cylindrical metallic inclusions. IEEE Transactions on Microwave Theory and Techniques, 2003, 51, 1460-1466.	2.9	14
60	A 120 GHz 3D-printed plastic elliptical lens antenna with an IPD patch antenna source. , 2014, , .		13
61	Design of a 40 dBi planar bifocal lens for mechanical beam steering at Ka-band. , 2016, , .		13
62	A method to overcome the limitations of G.O. in axis-symmetric dielectric lens shaping. Journal of Infrared, Millimeter and Terahertz Waves, 1996, 17, 1377-1390.	0.6	12
63	RFID-based Smart Blood Stock System [Education Column]. IEEE Antennas and Propagation Magazine, 2015, 57, 54-65.	1.2	12
64	Experimental Evaluation of an Axillary Microwave Imaging System to Aid Breast Cancer Staging. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2022, 6, 68-76.	2.3	12
65	Antenna phase center determination from amplitude measurements using a focusing lens. , 2010, , .		11
66	Low-cost 3D-printed 240 GHz plastic lens fed by integrated antenna in organic substrate targeting sub-THz high data rate wireless links. , 2017, , .		11
67	Development of an Anthropomorphic Phantom of the Axillary Region for Microwave Imaging Assessment. Sensors, 2020, 20, 4968.	2.1	11
68	UHF RFID smart conveyor belt with confined detection range. , 2009, , .		10
69	Bessel Beam Generation Using Dielectric Planar Lenses at Millimeter Frequencies. IEEE Access, 2020, 8, 216185-216196.	2.6	10
70	Spatially Confined UHF RFID Detection With a Metamaterial Grid. IEEE Transactions on Antennas and Propagation, 2014, 62, 378-384.	3.1	9
71	Millimeter-wave antenna-in-package solutions for WiGig and backhaul applications. , 2015, , .		9
72	Benchmark of lens antennas for KA-band global earth observation from leo satellites. , 2006, , .		8

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73	Integrated imaging lens antenna with broadband feeds. , 2007, , .		8
74	Reversed rainbow with a nonlocal metamaterial. Applied Physics Letters, 2014, 105, .	1.5	8
75	A Graphical Aid for the Complex Permittivity Measurement at Microwave and Millimeter Wavelengths. IEEE Microwave and Wireless Components Letters, 2014, 24, 421-423.	2.0	8
76	Noncollimating MMW Polyethylene Lens Mitigating Dual-Source Offset From a Tx/Rx WiGig Module. IEEE Transactions on Antennas and Propagation, 2015, 63, 5908-5913.	3.1	8
77	Multiple-Beam Focal-Plane Dual-Band Fabryâ€“PÃ©rot Cavity Antenna With Reduced Beam Degradation. IEEE Transactions on Antennas and Propagation, 2019, 67, 4348-4356.	3.1	8
78	3D-Printed transmit-array antenna for broadband backhaul 5G links at V band. IEEE Antennas and Wireless Propagation Letters, 2020, , 1-1.	2.4	8
79	Resolving subwavelength objects with a crossed wire mesh superlens operated in backscattering mode. New Journal of Physics, 2011, 13, 053004.	1.2	7
80	Focal-Plane Multibeam Dual-Band Dielectric Lens for Ka-Band. IEEE Antennas and Wireless Propagation Letters, 2017, 16, 432-436.	2.4	7
81	Integrated Lens Antennas. Signals and Communication Technology, 2018, , 3-36.	0.4	7
82	Development of MRIâ€“based axillary numerical models and estimation of axillary lymph node dielectric properties for microwave imaging. Medical Physics, 2021, 48, 5974-5990.	1.6	7
83	Dielectric Lens Antennas. , 2015, , 1-54.		7
84	Broadband UHF RFID passive tag antenna for near-body operation. , 2012, , .		6
85	Viability of wallâ€“embedded tag antenna for ultraâ€“wideband realâ€“time suitcase localisation. IET Microwaves, Antennas and Propagation, 2014, 8, 423-428.	0.7	6
86	Prototype of a compact mechanically steered Ka-band antenna for satellite on-the-move. , 2016, , .		6
87	Comparing liquid homogeneous and multilayer phantoms for human body implantable antennas. , 2016, , .		6
88	3D printing technology: Enabling innovative & cost effective industrial antenna solution. , 2016, , .		6
89	Development of an indoor Wireless Personal Area Network based on mechanically steered millimeter-wave lens antenna. , 2010, , .		5
90	Tapered waveguide feed for integrated dielectric lens antenna performance tests. , 2011, , .		5

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91	Antenna-filter-antenna-based cell for linear-to-circular polarizer transmit-array. , 2017, , .		5
92	Extracting Dielectric Properties for MRI-based Phantoms for Axillary Microwave Imaging Device. , 2020, , .		5
93	Experimental Setup for Radio Characterization of Fire at Microwave Frequencies. , 2021, , .		5
94	Applying Massively Parallel Computing to Multiscale Ka Dual-Band Transmit-Array Analysis Using FETI-2LM. IEEE Journal on Multiscale and Multiphysics Computational Techniques, 2020, 5, 235-244.	1.4	5
95	Design of a shaped double-shell lens feed for a quasi-optical reflector system. , 2007, , .		4
96	MEMS reconfigurable stacked antenna for WLAN applications. , 2008, , .		4
97	Broadband reflector fed by integrated lens antenna with frequency constant directivity. , 2010, , .		4
98	Design and analysis of a Ka-band coaxial-to-quad-ridged circular waveguide transition. , 2014, , .		4
99	Wide-angle mechanical scanning Transmit-arrays for Satellite Ka-band user terminals. , 2018, , .		4
100	Preliminary Characterization of Microwave Backscattering of Floating Plastic. , 2021, , .		4
101	Comparison of Slot-based and Vivaldi Antennas for Breast Tumor Detection using Machine Learning and Microwave Imaging Algorithms. , 2021, , .		4
102	Numerical Assessment of Microwave Imaging for Axillary Lymph Nodes Screening Using Anthropomorphic Phantom. , 2021, , .		4
103	Study of Freezing and Defrosting Effects on Complex Permittivity of Biological Tissues. IEEE Antennas and Wireless Propagation Letters, 2021, 20, 2210-2214.	2.4	4
104	Experimental Evaluation of Thin Bone Fracture Detection Using Microwave Imaging. , 2022, , .		4
105	Double-shell axial-symmetric imaging lens antenna for space applications. , 0, , .		3
106	Guest Editorial for the Special Issue on Antennas and Propagation at mm- and Sub mm-Waves. IEEE Transactions on Antennas and Propagation, 2013, 61, 1502-1507.	3.1	3
107	Wideband and High-Selectivity Dual-Band Filter for Ka-Band Satellite Antennas. IEEE Antennas and Wireless Propagation Letters, 2017, 16, 1627-1630.	2.4	3
108	Efficient Evaluation of Gradient Transmit-Arrays Through an Equivalent Dispersive Dielectric Description. IEEE Transactions on Antennas and Propagation, 2019, 67, 5997-6007.	3.1	3

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109	Feasibility study of focal lens for multistatic microwave breast imaging. , 2019, , .		3
110	Development of a Transmission-Based Open-Ended Coaxial-Probe Suitable for Axillary Lymph Node Dielectric Measurements. , 2020, , .		3
111	Evaluation of a Dielectric-Only Transmitarray for Generating Multi-Focusing Near-Field Spots Using a Cluster of Feeds in the Ka-Band. Sensors, 2021, 21, 422.	2.1	3
112	A study on the sensitivity of microwave imaging for detecting small-width bone fractures. , 2021, , .		3
113	Evaluation of Refraction Effects in Dry Medical Microwave Imaging Setups. IEEE Antennas and Wireless Propagation Letters, 2021, 20, 617-621.	2.4	3
114	Systematic Analysis of Microwave Breast Imaging Detection of Different-Sized Malignant and Benign Tumors. , 2022, , .		3
115	Computation of the Electromagnetic Modes in Two-Dimensional Photonic Crystals: A Technique to Improve the Convergence Rate of the Plane Wave Method. Electromagnetics, 2006, 26, 175-187.	0.3	2
116	Low-cost mechanically steered millimeter-wave lens antenna system for indoor LANs. , 2010, , .		2
117	Design of a passive tag for indoor localization. , 2012, , .		2
118	UWB Real Time Localization platform for fast system performance evaluation. , 2013, , .		2
119	Comparizon of 3D printed Plastic and micromachined Teflon Lenses for WiGig modules. , 2014, , .		2
120	Low-cost 60 GHz 3D printed lens fed by a planar source with WR15 transition integrated on FR4 PCB. , 2017, , .		2
121	Miniaturized implantable patch antenna for near-field communication at ISM band. , 2017, , .		2
122	Transmit array as a viable 3D printing option for backhaul applications at V-band. , 2017, , .		2
123	Study of the Refraction Effects in Microwave Breast Imaging Using a Dry Setup. , 2020, 2020, 1787-1790.		2
124	Optimisation of Artefact Removal Algorithm for Microwave Imaging of the Axillary Region Using Experimental Prototype Signals. , 2021, , .		2
125	Effect of Varying Prior Information in Axillary 2D Microwave Tomography. , 2022, , .		2
126	Crossed exponentially tapered slot antenna for UWB applications. , 2008, , .		1

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127	Optimization of mechanically beam-steerable lens antenna profile for 60GHz wireless communications. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	1
128	Design of double material integrated scanning lens antennas. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	1
129	UWB crossed exponentially tapered slot antenna with WLAN band rejection. , 2009, , .		1
130	UHF RFID cabinet. , 2011, , .		1
131	Feasibility study of suitcase identification and imaging Using a UWB tag. , 2012, , .		1
132	Low profile UWB antenna for Wireless Body Area Networks. , 2014, , .		1
133	FSS design for dual-band and low profile Fabry-Pérot antenna at Ka-band. , 2014, , .		1
134	RFID chip characterization through S-parameter measurements and gene expression programming. , 2014, , .		1
135	A planar feed for SOTM Ka-band lens antennas. , 2015, , .		1
136	Three-dimensional printed ABS plastic peanut-shaped lens with integrated ball grid array module for high-rate communications in Féband. IET Microwaves, Antennas and Propagation, 2017, 11, 2021-2026. 0.7		1
137	Assessment of FETI DDM methodologies for the simulation of high gain Ka-band transmit arrays. , 2017, , .		1
138	Reducing Beam Aberrations of Mechanical Scanning Transmit-array Antennas. , 2020, , .		1
139	Scalar network analysis using a PC and a standard microwave lab bench. , 1995, , .		0
140	Realization of low profile high-impedance surfaces using an array of densely packed crossed metallic wires. , 2007, , .		0
141	Passive UHF RFID smart polling device. , 2010, , .		0
142	Broadband superlensing using a metamaterial with an extreme index of refraction: Salient features, physical principles and analytical modeling. , 2010, , .		0
143	Impact of a new wideband slot array on MIMO indoor system performance. , 2011, , .		0
144	Design of a UWB stacked antenna for body area network applications. , 2014, , .		0

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145	Low-profile wideband stick-on antenna for body-area communication. , 2016, , .		0
146	Generic formulation for transmit-array dual-band unit-cell design. , 2017, , .		0
147	Link budget study and realization of time-domain measurement setup for implantable antennas. , 2017, , .		0
148	Low-cost plastic lens fabricated in FDM 3D-printing technology targeting high data rate wireless links above 200 GHz. , 2017, , .		0
149	Equivalent Dielectric Description of Transmit-arrays as an efficient and accurate method of analysis. , 2020, , .		0
150	Target Selection in Multistatic Microwave Breast Imaging Setup Using Dielectric Lens. , 2022, , .		0