

# 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	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
2	Systematic Analysis of Microwave Breast Imaging Detection of Different-Sized Malignant and Benign Tumors. , 2022, , .		3
3	Experimental Evaluation of Thin Bone Fracture Detection Using Microwave Imaging. , 2022, , .		4
4	Target Selection in Multistatic Microwave Breast Imaging Setup Using Dielectric Lens. , 2022, , .		0
5	Effect of Varying Prior Information in Axillary 2D Microwave Tomography. , 2022, , .		2
6	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
7	Preliminary Characterization of Microwave Backscattering of Floating Plastic. , 2021, , .		4
8	Experimental Setup for Radio Characterization of Fire at Microwave Frequencies. , 2021, , .		5
9	Comparison of Slot-based and Vivaldi Antennas for Breast Tumor Detection using Machine Learning and Microwave Imaging Algorithms. , 2021, , .		4
10	Numerical Assessment of Microwave Imaging for Axillary Lymph Nodes Screening Using Anthropomorphic Phantom. , 2021, , .		4
11	Optimisation of Artefact Removal Algorithm for Microwave Imaging of the Axillary Region Using Experimental Prototype Signals. , 2021, , .		2
12	A study on the sensitivity of microwave imaging for detecting small-width bone fractures. , 2021, , .		3
13	Evaluation of Refraction Effects in Dry Medical Microwave Imaging Setups. IEEE Antennas and Wireless Propagation Letters, 2021, 20, 617-621.	2.4	3
14	Development of MRI-based axillary numerical models and estimation of axillary lymph node dielectric properties for microwave imaging. Medical Physics, 2021, 48, 5974-5990.	1.6	7
15	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
16	Microwave Breast Imaging Using a Dry Setup. IEEE Transactions on Computational Imaging, 2020, 6, 167-180.	2.6	34
17	Development of a Transmission-Based Open-Ended Coaxial-Probe Suitable for Axillary Lymph Node Dielectric Measurements. , 2020, , .		3
18	Extracting Dielectric Properties for MRI-based Phantoms for Axillary Microwave Imaging Device. , 2020, , .		5

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19	Equivalent Dielectric Description of Transmit-arrays as an efficient and accurate method of analysis. , 2020, , .		0
20	Study of the Refraction Effects in Microwave Breast Imaging Using a Dry Setup. , 2020, 2020, 1787-1790.		2
21	Development of an Anthropomorphic Phantom of the Axillary Region for Microwave Imaging Assessment. Sensors, 2020, 20, 4968.	2.1	11
22	Bessel Beam Generation Using Dielectric Planar Lenses at Millimeter Frequencies. IEEE Access, 2020, 8, 216185-216196.	2.6	10
23	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
24	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
25	Reducing Beam Aberrations of Mechanical Scanning Transmit-array Antennas. , 2020, , .		1
26	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
27	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
28	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
29	Antenna Design and Near-Field Characterization for Medical Microwave Imaging Applications. IEEE Transactions on Antennas and Propagation, 2019, 67, 4811-4824.	3.1	45
30	Feasibility study of focal lens for multistatic microwave breast imaging. , 2019, , .		3
31	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
32	Phase-Delay Versus Phase-Rotation Cells for Circular Polarization Transmit Arraysâ€“Application to Satellite Ka-Band Beam Steering. IEEE Transactions on Antennas and Propagation, 2018, 66, 1236-1247.	3.1	43
33	Integrated Lens Antennas. Signals and Communication Technology, 2018, , 3-36.	0.4	7
34	Wide-angle mechanical scanning Transmit-arrays for Satellite Ka-band user terminals. , 2018, , .		4
35	Dual-Band Dual-Linear-to-Circular Polarization Converter in Transmission Mode Application to <math>\text{Ka}</math>-Band Satellite Communications. IEEE Transactions on Antennas and Propagation, 2018, 66, 7128-7137.	3.1	158
36	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

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37	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
38	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
39	Stereolithography-Based Antennas for Satellite Communications in Ka-Band. Proceedings of the IEEE, 2017, 105, 655-667.	16.4	46
40	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
41	Generic formulation for transmit-array dual-band unit-cell design. , 2017, , .		0
42	Link budget study and realization of time-domain measurement setup for implantable antennas. , 2017, , .		0
43	Experimental verification of waveguide™ plasmonics. New Journal of Physics, 2017, 19, 123017.	1.2	19
44	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
45	Low-cost plastic lens fabricated in FDM 3D-printing technology targeting high data rate wireless links above 200 GHz. , 2017, , .		0
46	Focal-Plane Multibeam Dual-Band Dielectric Lens for Ka-Band. IEEE Antennas and Wireless Propagation Letters, 2017, 16, 432-436.	2.4	7
47	Low-cost 60 GHz 3D printed lens fed by a planar source with WR15 transition integrated on FR4 PCB. , 2017, , .		2
48	Antenna-filter-antenna-based cell for linear-to-circular polarizer transmit-array. , 2017, , .		5
49	Miniaturized implantable patch antenna for near-field communication at ISM band. , 2017, , .		2
50	Transmit array as a viable 3D printing option for backhaul applications at V-band. , 2017, , .		2
51	Three-dimensional printed ABS plastic peanut lens with integrated ball grid array module for high data rate communications in F-band. IET Microwaves, Antennas and Propagation, 2017, 11, 2021-2026. <sup>0.7</sup>		1
52	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
53	Assessment of FETI DDM methodologies for the simulation of high gain Ka-band transmit arrays. , 2017, , .		1
54	Complex permittivity and anisotropy measurement of 3D-printed PLA at microwaves and millimeter-waves. , 2016, , .		53

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55	Low-profile wideband stick-on antenna for body-area communication. , 2016, , .		0
56	Prototype of a compact mechanically steered Ka-band antenna for satellite on-the-move. , 2016, , .		6
57	Dielectric Lens Antennas. , 2016, , 1001-1064.		25
58	Comparing liquid homogeneous and multilayer phantoms for human body implantable antennas. , 2016, , .		6
59	Design of a 40 dBi planar bifocal lens for mechanical beam steering at Ka-band. , 2016, , .		13
60	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
61	3D printing technology: Enabling innovative & cost effective industrial antenna solution. , 2016, , .		6
62	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
63	RFID-based Smart Blood Stock System [Education Column]. IEEE Antennas and Propagation Magazine, 2015, 57, 54-65.	1.2	12
64	Millimeter-wave antenna-in-package solutions for WiGig and backhaul applications. , 2015, , .		9
65	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
66	Tx-Rx Lens-Based Satellite-on-the-Move Ka-Band Antenna. IEEE Antennas and Wireless Propagation Letters, 2015, 14, 1408-1411.	2.4	21
67	Review of 20 Years of Research on Microwave and Millimeter-wave Lenses at "Instituto de Telecomunica�es". IEEE Antennas and Propagation Magazine, 2015, 57, 249-268.	1.2	16
68	A planar feed for SOTM Ka-band lens antennas. , 2015, , .		1
69	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
70	Dielectric Lens Antennas. , 2015, , 1-54.		7
71	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
72	A 120 GHz 3D-printed plastic elliptical lens antenna with an IPD patch antenna source. , 2014, , .		13

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73	Reversed rainbow with a nonlocal metamaterial. Applied Physics Letters, 2014, 105, .	1.5	8
74	Low profile UWB antenna for Wireless Body Area Networks. , 2014, , .		1
75	Design of a UWB stacked antenna for body area network applications. , 2014, , .		0
76	3D printed plastic 60 GHz lens: Enabling innovative millimeter wave antenna solution and system. , 2014, , .		43
77	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
78	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
79	Spatially Confined UHF RFID Detection With a Metamaterial Grid. IEEE Transactions on Antennas and Propagation, 2014, 62, 378-384.	3.1	9
80	Design and analysis of a Ka-band coaxial-to-quad-ridged circular waveguide transition. , 2014, , .		4
81	FSS design for dual-band and low profile Fabry-P&#x00E9;rot antenna at Ka-band. , 2014, , .		1
82	Comparizon of 3D printed Plastic and micromachined Teflon Lenses for WiGig modules. , 2014, , .		2
83	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
84	RFID chip characterization through S-parameter measurements and gene expression programming. , 2014, , .		1
85	Hybrid UHF/UWB Antenna for Passive Indoor Identification and Localization Systems. IEEE Transactions on Antennas and Propagation, 2013, 61, 354-361.	3.1	74
86	Broadband UHF RFID Passive Tag Antenna for Near-Body Applications. IEEE Antennas and Wireless Propagation Letters, 2013, 12, 136-139.	2.4	39
87	UWB Real Time Localization platform for fast system performance evaluation. , 2013, , .		2
88	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
89	DUAL-BAND IMPLANTABLE ANTENNAS FOR MEDICAL TELEMTRY: A FAST DESIGN METHODOLOGY AND VALIDATION FOR INTRA-CRANIAL PRESSURE MONITORING. Progress in Electromagnetics Research, 2013, 141, 161-183.	1.6	23
90	Ku-band dielectric-loaded SIW horn for vertically-polarized multi-sector antennas. , 2012, , .		19

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91	Feasibility study of suitcase identification and imaging Using a UWB tag. , 2012, , .		1
92	Broadband UHF RFID passive tag antenna for near-body operation. , 2012, , .		6
93	Design of a passive tag for indoor localization. , 2012, , .		2
94	Miniature Implantable Antennas for Biomedical Telemetry: From Simulation to Realization. IEEE Transactions on Biomedical Engineering, 2012, 59, 3140-3147.	2.5	64
95	Passive UHF RFID Tag for Airport Suitcase Tracking and Identification. IEEE Antennas and Wireless Propagation Letters, 2011, 10, 123-126.	2.4	30
96	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
97	Mirror-Integrated Transparent Antenna for RFID Application. IEEE Antennas and Wireless Propagation Letters, 2011, 10, 776-779.	2.4	29
98	RFID Reader Antennas for Tag Detection in Self-Confined Volumes at UHF. IEEE Antennas and Propagation Magazine, 2011, 53, 39-50.	1.2	63
99	Resolving subwavelength objects with a crossed wire mesh superlens operated in backscattering mode. New Journal of Physics, 2011, 13, 053004.	1.2	7
100	UHF RFID cabinet. , 2011, , .		1
101	Impact of a new wideband slot array on MIMO indoor system performance. , 2011, , .		0
102	Tapered waveguide feed for integrated dielectric lens antenna performance tests. , 2011, , .		5
103	Passive UHF RFID smart polling device. , 2010, , .		0
104	Broadband reflector fed by integrated lens antenna with frequency constant directivity. , 2010, , .		4
105	Development of an indoor Wireless Personal Area Network based on mechanically steered millimeter-wave lens antenna. , 2010, , .		5
106	Experimental verification of broadband superlensing using a metamaterial with an extreme index of refraction. Physical Review B, 2010, 81, .	1.1	31
107	Broadband Integrated Lens for Illuminating Reflector Antenna With Constant Aperture Efficiency. IEEE Transactions on Antennas and Propagation, 2010, 58, 3805-3813.	3.1	31
108	Antenna phase center determination from amplitude measurements using a focusing lens. , 2010, , .		11

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109	Broadband superlensing using a metamaterial with an extreme index of refraction: Salient features, physical principles and analytical modeling. , 2010, , .		0
110	Wideband Slot Antenna for WLAN Access Points. IEEE Antennas and Wireless Propagation Letters, 2010, 9, 79-82.	2.4	38
111	Low-cost mechanically steered millimeter-wave lens antenna system for indoor LANs. , 2010, , .		2
112	UHF RFID smart conveyor belt with confined detection range. , 2009, , .		10
113	Optimization of mechanically beam-steerable lens antenna profile for 60GHz wireless communications. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	1
114	Design of double material integrated scanning lens antennas. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	1
115	Compact Beam-Steerable Lens Antenna for 60-GHz Wireless Communications. IEEE Transactions on Antennas and Propagation, 2009, 57, 2926-2933.	3.1	101
116	Compact Tapered Slot UWB Antenna With WLAN Band Rejection. IEEE Antennas and Wireless Propagation Letters, 2009, 8, 661-664.	2.4	36
117	Performance of a Crossed Exponentially Tapered Slot Antenna for UWB Systems. IEEE Transactions on Antennas and Propagation, 2009, 57, 1345-1352.	3.1	48
118	UWB crossed exponentially tapered slot antenna with WLAN band rejection. , 2009, , .		1
119	MEMS reconfigurable stacked antenna for WLAN applications. , 2008, , .		4
120	Compact Ka-Band Lens Antennas for LEO Satellites. IEEE Transactions on Antennas and Propagation, 2008, 56, 1251-1258.	3.1	75
121	Electromagnetic Characterization of Textured Surfaces Formed by Metallic Pins. IEEE Transactions on Antennas and Propagation, 2008, 56, 405-415.	3.1	174
122	Crossed exponentially tapered slot antenna for UWB applications. , 2008, , .		1
123	Superlens made of a metamaterial with extreme effective parameters. Physical Review B, 2008, 78, .	1.1	27
124	Evaluation of a Double-Shell Integrated Scanning Lens Antenna. IEEE Antennas and Wireless Propagation Letters, 2008, 7, 781-784.	2.4	33
125	RFID Smart Shelf With Confined Detection Volume at UHF. IEEE Antennas and Wireless Propagation Letters, 2008, 7, 773-776.	2.4	53
126	ILASH - Software tool for the design of integrated lens antennas. , 2008, , .		16



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127	Additional boundary condition for a wire medium connected to a metallic surface. <i>New Journal of Physics</i> , 2008, 10, 053011.	1.2	68
128	Nonresonant structured material with extreme effective parameters. <i>Physical Review B</i> , 2008, 78, .	1.1	35
129	Experimental demonstration of a structured material with extreme effective parameters at microwaves. <i>Applied Physics Letters</i> , 2008, 93, 174103.	1.5	17
130	Design of a shaped double-shell lens feed for a quasi-optical reflector system. , 2007, , .		4
131	Realization of low profile high-impedance surfaces using an array of densely packed crossed metallic wires. , 2007, , .		0
132	The moniT Project: Electromagnetic Radiation Exposure Assessment in Mobile Communications. <i>IEEE Antennas and Propagation Magazine</i> , 2007, 49, 44-53.	1.2	22
133	Broadband Slot Feed for Integrated Lens Antennas. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2007, 6, 396-400.	2.4	25
134	Transverse-average field approach for the characterization of thin metamaterial slabs. <i>Physical Review E</i> , 2007, 75, 036613.	0.8	24
135	Integrated imaging lens antenna with broadband feeds. , 2007, , .		8
136	Computation of the Electromagnetic Modes in Two-Dimensional Photonic Crystals: A Technique to Improve the Convergence Rate of the Plane Wave Method. <i>Electromagnetics</i> , 2006, 26, 175-187.	0.3	2
137	Benchmark of lens antennas for KA-band global earth observation from leo satellites. , 2006, , .		8
138	Homogenization of metamaterial surfaces and slabs: the crossed wire mesh canonical problem. <i>IEEE Transactions on Antennas and Propagation</i> , 2005, 53, 59-69.	3.1	29
139	A new acceleration technique with exponential convergence rate to evaluate periodic Green functions. <i>IEEE Transactions on Antennas and Propagation</i> , 2005, 53, 347-355.	3.1	50
140	Homogenization of 3-D-connected and nonconnected wire metamaterials. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2005, 53, 1418-1430.	2.9	127
141	A Hybrid Method for the Efficient Calculation of the Band Structure of 3-D Metallic Crystals. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2004, 52, 889-902.	2.9	41
142	Efficient calculation of the band structure of artificial materials with cylindrical metallic inclusions. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2003, 51, 1460-1466.	2.9	14
143	Effective Permittivity of Metallic Crystals: A Periodic Green's Function Formulation. <i>Electromagnetics</i> , 2003, 23, 647-663.	0.3	16
144	Constant flux illumination of square cells for millimeter-wave wireless communications. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2001, 49, 2137-2141.	2.9	30

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145	Dielectric Lens Antennas for Wireless Broadband Communications. Wireless Personal Communications, 1999, 10, 19-32.	1.8	17
146	Performance of lens antennas in wireless indoor millimeter-wave applications. IEEE Transactions on Microwave Theory and Techniques, 1999, 47, 732-737.	2.9	43
147	Shaped dielectric lenses for wireless millimeter-wave communications. IEEE Antennas and Propagation Magazine, 1999, 41, 141-150.	1.2	61
148	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
149	Scalar network analysis using a PC and a standard microwave lab bench. , 1995, , .		0
150	Double-shell axial-symmetric imaging lens antenna for space applications. , 0, , .		3