Jorge A Ruiz-Cruz

List of Publications by Year
in descending order

142 papers	1,495 citations	394286 19 h-index	414303 32 g-index
142 all docs	142 docs citations	142 times ranked	1055 citing authors

#	Article	IF	Citations
1	Manufacturing Guidelines for W-Band Full-Metal Waveguide Devices: Selecting the most appropriate technology. IEEE Antennas and Propagation Magazine, 2023, 65, 48-62.	1.2	4
2	2-D FEM Formulation for Closed Waveguides With Magnetically Biased Graphene Sheets. IEEE Transactions on Terahertz Science and Technology, 2022, 12, 98-101.	2.0	1
3	Design of Ridge Waveguide Radial Combiners. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 895-906.	2.9	6
4	On the Use of Quadrilateral Meshes for Enhanced Analysis of Waveguide Devices with Manhattan-Type Geometry Cross-Sections. Mathematics, 2022, 10, 656.	1.1	1
5	A Finite Element formulation for waveguides with first and second order symmetries. , 2022, , .		2
6	Segmentation of a Complex Horn Antenna for Efficient Analysis and Optimization. , 2022, , .		0
7	Dual Circularly Polarized Array Antenna Based on Corporate Feeding Network in Square Waveguide Technology. IEEE Transactions on Antennas and Propagation, 2021, 69, 1763-1768.	3.1	8
8	Degeneracy-Discriminating Modal FEM Computation in Higher Order Rotationally Symmetric Waveguides. IEEE Transactions on Antennas and Propagation, 2021, 69, 8003-8008.	3.1	10
9	Triple-Radiation Pattern Monopulse Horn Feed With Compact Single-Layer Comparator Network. IEEE Transactions on Antennas and Propagation, 2021, 69, 2546-2559.	3.1	18
10	Additive manufacturing of a compact Ku-band orthomode transducer. AEU - International Journal of Electronics and Communications, 2021, 137, 153798.	1.7	7
11	Contribution of the Evanescent Modes to the Power Radiated by an Aperture. , 2021, , .		1
12	Waveguide Manufacturing Technologies for Next-Generation Millimeter-Wave Antennas. Micromachines, 2021, 12, 1565.	1.4	4
13	Bow-Tie-Shaped Radiating Element for Single and Dual Circular Polarization. IEEE Transactions on Antennas and Propagation, 2020, 68, 754-764.	3.1	8
14	Modal Field Synthesis of Monopulse Difference Patterns for Radiating Aperture. IEEE Transactions on Antennas and Propagation, 2020, 68, 8203-8208.	3.1	2
15	Mechanically Reconfigurable Linear Phased Array Antenna Based on Single-Block Waveguide Reflective Phase Shifters With Tuning Screws. IEEE Access, 2020, 8, 113487-113497.	2.6	10
16	Dual Circularly Polarized Waveguide Array Antenna Formed by Full-Metallic Bow-tie Radiating Cavities. , 2020, , .		1
17	Design of Gysel power combiners in E-plane rectangular waveguides. AEU - International Journal of Electronics and Communications, 2020, 127, 153449.	1.7	1
18	A New 4 Ã— 4 Rectangular Waveguide Short-Slot Coupler in 3D Printed Technology at Ku-Band. Electronics (Switzerland), 2020, 9, 610.	1.8	1

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19	Evaluation of Additive Manufacturing Techniques Applied to a Waveguide Mode Transducer. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2020, 10, 887-894.	1.4	10
20	Development of a high-performance W-band duplexer for plasma diagnosis using a single band with dual circular polarization. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 947, 162712.	0.7	1
21	Reconfigurable Hâ€plane waveguide phase shifters prototyping with additive manufacturing at Kâ€band. International Journal of RF and Microwave Computer-Aided Engineering, 2019, 29, e21980.	0.8	4
22	Contra-Directional Ridge Waveguide Couplers: Design and Applications. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 4966-4975.	2.9	9
23	Additive Manufacturing of a High-Performance Q -Band Circular TE₀₁ Mode Flared-Type Transducer. IEEE Microwave and Wireless Components Letters, 2019, 29, 577-579.	2.0	13
24	Analytical Far-Zone Calculation of the Field Radiated From an Equilateral Triangular Aperture. IEEE Transactions on Antennas and Propagation, 2019, 67, 5668-5672.	3.1	0
25	Contra-Directional 3dB 90Â° Hybrid Coupler in Ridge Waveguides Using Even and Odd TE Modes. , 2019, , .		4
26	A 10-Way Power Divider Based on a Transducer and a Radial Junction Operating in the Circular TM₀₁ Mode. IEEE Access, 2019, 7, 127353-127361.	2.6	14
27	On the Theoretical Maximum Directivity of a Radiating Aperture From Modal Field Expansions. IEEE Transactions on Antennas and Propagation, 2019, 67, 2781-2786.	3.1	9
28	Higher-Order Mode Electromagnetic Analysis of a Material Sample between Two Flanged Coaxial Probes for Broadband Modelling of Dielectric Measurement Setups. Advances in Mathematical Physics, 2019, 2019, 1-17.	0.4	3
29	Design of a Ku-Band High-Purity Transducer for the TM₀₁ Circular Waveguide Mode by Means of T-Type Junctions. IEEE Access, 2019, 7, 450-456.	2.6	7
30	Ink-jet Implementation of Stacked-Patch Antenna for Wireless Applications. , 2019, , .		2
31	Analytical expressions of the Q â€factor for the complete resonant mode spectrum of the equilateral triangular waveguide cavity. Electronics Letters, 2019, 55, 944-947.	0.5	2
32	Folded W-Band Waveguide Filters with Resonant Coupling Apertures for the Generation of Additional Transmission Zeros. Frequenz, 2019, 73, 379-388.	0.6	1
33	Ku-Band Waveguide Filter with Multiple Transmission Zeros by Resonant Source to Load and Bypass Cross-Coupling. , 2019, , .		5
34	Compact Ridge Waveguide Gysel Combiners for High-Power Applications. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 968-977.	2.9	22
35	High-performance 16-way Ku-band radial power combiner based on the TE01-circular waveguide mode. Review of Scientific Instruments, 2018, 89, 034703.	0.6	13
36	Orthomode Transducers With Folded Double-Symmetry Junctions for Broadband and Compact Antenna Feeds. IEEE Transactions on Antennas and Propagation, 2018, 66, 1160-1168.	3.1	40

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37	Nested 2D finite-element function-spaces formulation for the mode-matching problem of arbitrary cross-section waveguide devices. Applied Mathematical Modelling, 2018, 60, 286-299.	2.2	7
38	Robust Calculation of the Modes in Parabolic Cylinder Metallic Waveguides by Means of a Root-Finding Method for Bivariate Functions. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 623-632.	2.9	3
39	CAD of Asymmetric Ortho-Mode Transducers for Single- and Dual-Band Linear Polarization with Simple Building-Blocks. , 2018, , .		0
40	A Compact Lenslet as an Alternative to Corrugated Horns for Astronomy Applications. , 2018, , .		0
41	Improved Fully Canonical Phase Equalized W-Band Waveguide Filter with Dispersive Coupling Inverter. , 2018, , .		6
42	Antenna Design by Means of the Fruit Fly Optimization Algorithm. Electronics (Switzerland), 2018, 7, 3.	1.8	12
43	5-way radial power combiner at W-band by stacked waveguide micromachining. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 905, 91-95.	0.7	17
44	Evaluation of Additive Manufacturing Techniques Applied to Ku-Band Multilayer Corporate Waveguide Antennas. IEEE Antennas and Wireless Propagation Letters, 2018, 17, 2114-2118.	2.4	18
45	Analysis of Waveguide Devices Involving Lateral and Transverse Perfect Magnetic Wall Boundary Conditions by the Modeâ€Matching Method. Radio Science, 2017, 52, 1223-1234.	0.8	5
46	Direct computation of parabolic waveguide modes via a bivariate root-finding algorithm. , 2017, , .		1
47	Efficient computation and orthonormalization of multiple TEM numerical modes arising from FEM for microwave computer-aided-design. , 2017, , .		0
48	Fruit fly optimization algorithm for passive waveguide devices. , 2017, , .		1
49	Compact Omnidirectional Conformal Array Antenna in Waveguide Technology. IEEE Antennas and Wireless Propagation Letters, 2017, 16, 1102-1105.	2.4	4
50	Dual-mode filters in equilateral triangular waveguides with wide spurious-free response. , 2017, , .		3
51	Design of a reconfigurable rectangular waveguide phase shifter with metallic posts. , 2017, , .		3
52	Design of a reconfigurable rectangular waveguide phase shifter with metallic posts. , 2017, , .		1
53	Electromagnetic Scattering at the Waveguide Step between Equilateral Triangular Waveguides. Advances in Mathematical Physics, 2016, 2016, 1-16.	0.4	10
54	Dual-band ridge waveguide filters for high-selectivity wireless base station applications. International Journal of RF and Microwave Computer-Aided Engineering, 2016, 26, 703-712.	0.8	3

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55	Broadband and high-purity Ku-band circular TE<inf>01</inf>-mode converter. , 2016, , .		3
56	A virtual lossy dielectric model with composite boundary conditions for the analysis of substrate integrated waveguides. , 2016, , .		1
57	Analysis of waveguide discontinuities with lateral and transverse perfect magnetic wall boundary conditions. , 2016, , .		0
58	Conformal array antenna fed by radial-waveguide divider for omnidirectional coverage at Ku band. , 2016, , .		4
59	Generalized Scattering Matrix of the discontinuity between an equilateral triangular waveguide and a rectangular, circular or elliptical waveguide. , 2016, , .		1
60	Wideband Equivalent Circuit for Multi-Aperture Multi-Resonant Waveguide Irises. IEEE Transactions on Microwave Theory and Techniques, 2016, 64, 724-732.	2.9	13
61	Development of folded dual-polarization dividers for broadband ortho-mode transducers. , 2015, , .		3
62	Design of microwave waveguide devices for space and ground application implemented by additive manufacturing. , 2015, , .		26
63	Development of Radial Waveguide Dividers with Large Number of Ports. , 2015, , .		3
64	Single-pole multiple-throw waveguide switch for twelve output ports (SP12T). , 2014, , .		3
65	A Micromachined Dual-Band Orthomode Transducer. IEEE Transactions on Microwave Theory and Techniques, 2014, 62, 55-63.	2.9	37
66	Compact Duplexing for a 680-GHz Radar Using a Waveguide Orthomode Transducer. IEEE Transactions on Microwave Theory and Techniques, 2014, 62, 2833-2842.	2.9	18
67	Development of a Wideband Compact Orthomode Transducer for the 180â€“270 GHz Band. IEEE Transactions on Terahertz Science and Technology, 2014, 4, 634-636.	2.0	33
68	Novel dual-band single circular polarization antenna feeding network for satellite communications. , 2014, , .		5
69	A 225 GHz Circular Polarization Waveguide Duplexer Based on a Septum Orthomode Transducer Polarizer. IEEE Transactions on Terahertz Science and Technology, 2013, 3, 574-583.	2.0	58
70	Equivalent circuit of multi-aperture waveguide irises and its application in the design of compact filters. , 2013, , .		0
71	Modelling of dualâ€polarisation diplexers based on enhanced multiport turnstile junctions. IET Microwaves, Antennas and Propagation, 2013, 7, 485-492.	0.7	10
72	Experimental comparison of waveguide filters at W-band implemented by different machining processes and split-block. Journal of Electromagnetic Waves and Applications, 2013, 27, 2390-2394.	1.0	5

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73	Single-pole six-throw waveguide switch embedded in a seven port loaded junction. , 2013, , .		2
74	Silicon Micromachined Canonical ${hbox{E}}$-Plane and ${hbox{H}}$-Plane Bandpass Filters at the Terahertz Band. IEEE Microwave and Wireless Components Letters, 2013, 23, 288-290.	2.0	56
75	Development of low loss waveguide filters for radio-astronomy applications. Infrared Physics and Technology, 2013, 61, 224-229.	1.3	8
76	SIW 2D PLANAR ARRAY WITH FOUR CROSS SLOTS RADIATOR AND TUNING VIAS. Progress in Electromagnetics Research C, 2013, 40, 83-92.	0.6	1
77	Upper frequency limit of the power loss method for the estimation of ohmic losses in hollow metallic waveguides. , 2012, , .		0
78	A Pseudo-Elliptical Response Filter at W-Band Fabricated With Thick SU-8 Photo-Resist Technology. IEEE Microwave and Wireless Components Letters, 2012, 22, 105-107.	2.0	36
79	MEMS multiport switches and switch matrices for satellite applications. , 2012, , .		3
80	Symmetrical response filter design applying the Bartlett's theorem and using Riblet's couplers. , 2012, , .		0
81	Low-Loss Elliptical Response Filter at 100 GHz. IEEE Microwave and Wireless Components Letters, 2012, 22, 459-461.	2.0	38
82	Synthesis and design of waveguide band-stop filters without out-of-band spurious responses for plasma diagnosis. Fusion Engineering and Design, 2012, 87, 1662-1666.	1.0	4
83	Rigorous analysis of the parallel plate waveguide: From the transverse electromagnetic mode to the surface plasmon polariton. Radio Science, 2012, 47, .	0.8	7
84	Triple-Conductor Combline Resonators for Dual-Band Filters With Enhanced Guard-Band Selectivity. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 3969-3979.	2.9	49
85	Dual-resonance combline resonator for dual-band filters. , 2012, , .		5
86	Short-slot E- and H-plane waveguide couplers with an arbitrary power division ratio. International Journal of Electronics, 2011, 98, 11-24.	0.9	14
87	In-Line Pure ${m E}$-Plane Waveguide Band-Stop Filter With Wide Spurious-Free Response. IEEE Microwave and Wireless Components Letters, 2011, 21, 209-211.	2.0	12
88	Field Propagation in Circular Hollow Waveguides With Non-Ideal Metallic Conductors From Microwaves to Terahertz Frequencies. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 3013-3022.	2.9	8
89	Generalized Multiport Waveguide Switches Based on Multiple Short-Circuit Loads in Power-Divider Junctions. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 3347-3355.	2.9	19
90	Compact four-port rectangular waveguide switches based on simple short circuit loads. , 2011, , .		1

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91	Rigorous analysis of the parallel-plate waveguide by the hybrid mode formulation: From the TEM mode to the Surface Plasmon Polariton. , 2011, , .		0
92	Waveguide Antenna Feeders With Integrated Reconfigurable Dual Circular Polarization. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 3365-3374.	2.9	59
93	Optimal configurations for integrated antenna feeders with linear dual-polarisation and multiple frequency bands. IET Microwaves, Antennas and Propagation, 2011, 5, 1016.	0.7	16
94	Recent results on compact broad-band and multi-band low-temperature co-fired ceramic components for radio frequency front-ends. IET Microwaves, Antennas and Propagation, 2011, 5, 870.	0.7	1
95	Recent advances in filter topologies and realizations for satellite communications. Journal of Communications and Networks, 2011, 13, 625-632.	1.8	2
96	Compact reconfigurable waveguide circular polarizer. , 2011, , .		12
97	Study of Extraordinary Transmission in a Circular Waveguide System. IEEE Transactions on Microwave Theory and Techniques, 2010, 58, 1532-1542.	2.9	19
98	Impact of Ultra Wide Band emission on WiMAX systems at 2.5 and 3.5GHz. Computer Networks, 2010, 54, 1573-1583.	3.2	5
99	Efficient Design of Contiguous-Band Elliptic-Response Manifold Output Multiplexers with Single-Terminated Filters. Electromagnetics, 2010, 30, 644-659.	0.3	2
100	Compact wide-band ridge waveguide dual-band filters. , 2010, , .		2
101	A Waveguide to Microstrip Inline Transition With Very Simple Modular Assembly. IEEE Microwave and Wireless Components Letters, 2010, 20, 480-482.	2.0	43
102	Multi-Section Bow-Tie Steps for Full-Band Waveguide Polarization Rotation. IEEE Microwave and Wireless Components Letters, 2010, 20, 375-377.	2.0	23
103	Experimental verification of extraordinary transmission without surface plasmons. Applied Physics Letters, 2009, 95, .	1.5	34
104	High power analysis and design of dual-mode channel filters. , 2009, , .		2
105	Inline and canonical stripline filters with ridge coupling sections for LTCC applications. International Journal of RF and Microwave Computer-Aided Engineering, 2009, 19, 354-363.	0.8	1
106	Synthesis of symmetric and asymmetric singly terminated elliptic ladder filters for multiplexing applications. International Journal of RF and Microwave Computer-Aided Engineering, 2009, 19, 443-452.	0.8	1
107	Compact ridge waveguide filters using non-resonating nodes. , 2009, , .		7
108	Compact Ridge Waveguide Filters With Arbitrarily Placed Transmission Zeros Using Nonresonating Nodes. IEEE Transactions on Microwave Theory and Techniques, 2009, 57, 3354-3361.	2.9	13

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109	C-band orthomode transducer for compact and broadband antenna feeders. Electronics Letters, 2009, 45, 813.	0.5	17
110	Full-wave modeling and optimization of BÃ¸ifot junction ortho-mode transducers. International Journal of RF and Microwave Computer-Aided Engineering, 2008, 18, 303-313.	0.8	9
111	E and H-plane wide-band ridge waveguide couplers. International Journal of RF and Microwave Computer-Aided Engineering, 2008, 18, 348-358.	0.8	10
112	Longitudinal dual-mode filters in rectangular waveguide. , 2008, , .		7
113	COMPACT FULL KU-BAND TRIPLEXER WITH IMPROVED E-PLANE POWER DIVIDER. Progress in Electromagnetics Research, 2008, 86, 39-51.	1.6	22
114	Multilayer Multi-Section Broadband LTCC Stripline Directional Couplers. IEEE MTT-S International Microwave Symposium Digest IEEE MTT-S International Microwave Symposium, 2007, , .	0.0	8
115	Design of Riblet-type couplers for Ka band applications. , 2007, , .		2
116	Ultra-Wideband LTCC Ridge Waveguide Filters. IEEE Microwave and Wireless Components Letters, 2007, 17, 115-117.	2.0	37
117	TEM Mode-Matching Analysis of Multi-coupled Strip-line Filters. IEEE MTT-S International Microwave Symposium Digest IEEE MTT-S International Microwave Symposium, 2007, , .	0.0	3
118	Analytical Synthesis of Generalized Multi-band Microwave Filters. IEEE MTT-S International Microwave Symposium Digest IEEE MTT-S International Microwave Symposium, 2007, , .	0.0	48
119	Waveguide filters with elliptical function response: Overview and results of different implementations. International Journal of RF and Microwave Computer-Aided Engineering, 2007, 17, 63-69.	0.8	5
120	Ridge Waveguide Elliptic Filters in Narrow-Wall Canonical Configuration. , 2006, , .		6
121	Ridge Waveguide Divider Junctions for Wide-Band Multiplexer Applications. , 2006, , .		4
122	Ridge Waveguide Coupled Stripline Resonator Filters and Multiplexers. , 2006, , .		2
123	Computer Aided Design of Wideband Orthomode Transducers based on the BÃ¸ifot Junction. , 2006, , .		10
124	Design of Self-Equalised Elliptic Filter Channels in Ka-Band Implemented in Rectangular H-Plane Waveguide. , 2006, , .		0
125	Very compact ortho-mode transducers with double septum configuration. Microwave and Optical Technology Letters, 2006, 48, 765-767.	0.9	61
126	Canonical ridge waveguide filters in LTCC or metallic resonators. IEEE Transactions on Microwave Theory and Techniques, 2005, 53, 174-182.	2.9	64

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127	Synthesis and design of in-line N-order filters with N real transmission zeros by means of extracted poles implemented in low-cost rectangular H-plane waveguide. IEEE Transactions on Microwave Theory and Techniques, 2005, 53, 1636-1642.	2.9	41
128	Full-wave design of H-plane contiguous manifold output multiplexers using the fictitious reactive load concept. IEEE Transactions on Microwave Theory and Techniques, 2005, 53, 2628-2632.	2.9	15
129	Eigenmodes of waveguides using a boundary contour mode-matching method with an FFT scheme. International Journal of RF and Microwave Computer-Aided Engineering, 2005, 15, 286-295.	0.8	7
130	Ridge waveguide branch-line directional couplers for wideband applications and LTCC technology. , 2005, , .		4
131	LTCC Wide-Band Canonical Ridge Waveguide Filters. , 2005, , .		2
132	Mode-matching analysis of a coaxial-to-stripline discontinuity applied to the modeling of a coaxial probe. , 2004, , .		2
133	Efficient boundary contour mode-matching method of H- and E-plane junctions by fast Fourier transform algorithm. IET Microwaves Antennas and Propagation, 2003, 150, 332.	1.2	10
134	Characterisation of waveguide discontinuities with finite wall conductivity. , 0, , .		1
135	BCMM analysis of short-slot waveguide couplers with an FFT algorithm. , 0, , .		1
136	Full-wave design of canonical ridge waveguide filters. , 0, , .		3
137	An extremely wideband ridge waveguide filter. , 0, , .		11
138	Dual Mode Bandpass Filter with Asymmetric Transfer Function. , 0, , .		0
139	Rectangular Waveguide Elliptic Filters with Capacitive and Inductive Irises and Integrated Coaxial Excitation. , 0, , .		5
140	Computer Aided Design of Waveguide Devices by Mode-Matching Methods. , 0, , .		7
141	Additive Manufacturing of 3D Printed Microwave Passive Components. , 0, , .		5
142	Design of Radial Power Combiners Based on TE 01 Circular Waveguide Mode. , 0, , .		0