Rafael Caldeirinha

List of Publications by Year
in descending order

129	1,130	567281 15	454955 30
papers	citations	h-index	g-index

133	133	133	1083
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Square Loop and Slot Frequency Selective Surfaces Study for Equivalent Circuit Model Optimization. IEEE Transactions on Antennas and Propagation, 2015, 63, 3947-3955.	5.1	149
2	Wearable Textile Antennas: Examining the effect of bending on their performance. IEEE Antennas and Propagation Magazine, 2017, 59, 54-59.	1.4	97
3	Review Paper on Transmitarray Antennas. IEEE Access, 2019, 7, 94171-94188.	4.2	93
4	Electronically Reconfigurable FSS-Inspired Transmitarray for 2-D Beamsteering. IEEE Transactions on Antennas and Propagation, 2017, 65, 4880-4885.	5.1	77
5	FSS-Inspired Transmitarray for Two-Dimensional Antenna Beamsteering. IEEE Transactions on Antennas and Propagation, 2016, 64, 2197-2206.	5.1	46
6	Hybrid FSS and Rectenna Design for Wireless Power Harvesting. IEEE Transactions on Antennas and Propagation, 2016, 64, 2038-2042.	5.1	43
7	Dualâ€band singleâ€layer quarter ring frequency selective surface for Wiâ€Fi applications. IET Microwaves, Antennas and Propagation, 2016, 10, 435-441.	1.4	40
8	3-D Mechanically Tunable Square Slot FSS. IEEE Transactions on Antennas and Propagation, 2017, 65, 242-250.	5.1	40
9	A review on the electromagnetic characterisation of building materials at micro- and millimetre wave frequencies. , 2014, , .		30
10	A 2D Ray-Tracing Based Model for Micro- and Millimeter-Wave Propagation Through Vegetation. IEEE Transactions on Antennas and Propagation, 2014, 62, 6443-6453.	5.1	28
11	A compact CPW-based dual-band filter using modified complementary split ring resonator. AEU - International Journal of Electronics and Communications, 2018, 89, 110-115.	2.9	28
12	A Discrete RET Model for Millimeter-Wave Propagation in Isolated Tree Formations. IEICE Transactions on Communications, 2005, E88-B, 2411-2418.	0.7	22
13	5G: performance and evaluation of FSâ€FBMC against OFDM for high data rate applications at 60ÂGHz. IET Signal Processing, 2018, 12, 620-628.	1.5	18
14	A Generic Narrowband Model for Radiowave Propagation through Vegetation. , 0, , .		15
15	Time-Variant Radio Channel Characterization and Modelling of Vegetation Media at Millimeter-Wave Frequency. IEEE Transactions on Antennas and Propagation, 2012, 60, 1557-1568.	5.1	15
16	A 2D Ray-Tracing Based Model for Wave Propagation Through Forests at Micro-and Millimeter Wave Frequencies. IEEE Access, 2018, 6, 32097-32108.	4.2	15
17	A Software-Defined Radio for Future Wireless Communication Systems at 60 GHz. Electronics (Switzerland), 2019, 8, 1490.	3.1	15
18	A Three-Dimensional Directive Antenna Pattern Interpolation Method. IEEE Antennas and Wireless Propagation Letters, 2016, 15, 881-884.	4.0	14

#	Article	IF	Citations
19	Will COTS RF Front-Ends Really Cope With 5G Requirements at mmWave?. IEEE Access, 2018, 6, 38745-38769.	4.2	13
20	Shrub-blown time variability in attenuation and scattering at cellular frequencies. IET Microwaves, Antennas and Propagation, 2010, 4, 526.	1.4	12
21	Modeling and inferring the attenuation induced by vegetation barriers at 2G/3G/4G cellular bands using Artificial Neural Networks. Measurement: Journal of the International Measurement Confederation, 2017, 98, 262-275.	5.0	12
22	Multi-Semicircle-Based Single- and Dual-Band Frequency-Selective Surfaces: Achieving Narrower Bandwidth and Improved Oblique Incidence Angular Stability. IEEE Antennas and Propagation Magazine, 2019, 61, 32-39.	1.4	12
23	Tunable square slot FSS EC modelling and optimisation. IET Microwaves, Antennas and Propagation, 2017, 11, 737-742.	1.4	11
24	A Review of Manufacturing Materials and Production Methods for Frequency-Selective Structures [Wireless Corner]. IEEE Antennas and Propagation Magazine, 2018, 60, 110-119.	1.4	11
25	Low-profile, extremely wideband, dual-band-notched MIMO antenna for UWB applications. International Journal of Microwave and Wireless Technologies, 2019, 11, 719-728.	1.9	11
26	A 3-D Model for Millimeter-Wave Propagation Through Vegetation Media Using Ray-Tracing. IEEE Transactions on Antennas and Propagation, 2019, 67, 4313-4318.	5.1	10
27	Multi-Gigabit/s OFDM real-time based transceiver engine for emerging 5G MIMO systems. Physical Communication, 2020, 38, 100957.	2.1	10
28	Development and performance assessment of a real time high-resolution RF channel sounder. , 2011, , .		9
29	Performance and evaluation of OFDM and SC - FDE over an AWGN propagation channel under RF impairments using simulink at 60GHz. , 2014, , .		9
30	A Simple Model for Average Reradiation Patterns of Single Trees Based on Weighted Regression at 60 GHz. IEEE Transactions on Antennas and Propagation, 2015, 63, 5113-5118.	5.1	9
31	Realâ€time highâ€resolution radio frequency channel sounder based on the sliding correlation principle. IET Microwaves, Antennas and Propagation, 2015, 9, 837-846.	1.4	9
32	Microwave Propagation Modeling and Measurement of Scattering and Absorption Inside a Canopy Using the FDTD Technique. IEEE Transactions on Antennas and Propagation, 2015, 63, 280-293.	5.1	8
33	Hollow Clay Brick Wall Propagation Analysis and Modified Brick Design for Enhanced Wi-Fi Coverage. IEEE Transactions on Antennas and Propagation, 2018, 66, 331-339.	5.1	8
34	Estimation of dielectric concrete properties from power measurements at 18.7 and 60 GHz. , 2011, , .		7
35	Towards 5G: Performance evaluation of 60 GHz UWB OFDM communications under both channel and RF impairments. Physical Communication, 2017, 25, 527-538.	2.1	7
36	Dual-Band Single-Layer Fractal Frequency Selective Surface for 5G Applications. Electronics (Switzerland), 2021, 10, 2880.	3.1	7

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37	Phase function measurement for modelling radiowave attenuation and scatter in vegetation based on the theory of radiative energy transfer. , 0, , .		6
38	Over-the-Air Calibration of Active Antenna Arrays Using Multisine. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 431-442.	4.6	6
39	Traceme â€" indoor real-time location system. , 2009, , .		5
40	A Framework for the Analysis of Wildfire Effects in Emergency Communication Systems. , 2018, , .		5
41	Assessing Transparency Control of Southern European Building Wall Structures Using Frequency-Selective Surfaces [Wireless Corner]. IEEE Antennas and Propagation Magazine, 2018, 60, 137-153.	1.4	5
42	Radiowave Propagation Modelling in the Presence of Wildfires: Initial Results. , 2020, , .		5
43	Experimental Setup for Radio Characterization of Fire at Microwave Frequencies. , 2021, , .		5
44	Metamaterial-inspired Flat-Antenna Design for 5G Small-cell Base-Stations Operating at 3.6 GHz. , 2020, , .		5
45	Metamaterial-Inspired Flat Beamsteering Antenna for 5G Base Stations at 3.6 GHz. Sensors, 2021, 21, 8116.	3.8	5
46	Characterisation of depolarisation of radio signals by single trees at 20 GHz. , 0, , .		4
47	Wind Incidence Effects on Channel Dynamics in Vegetation Media at 40 GHz. , 2006, , .		4
48	Simplified RET model derived from path loss and directional spectrum measurements in vegetation media at 11.2 and 20 GHz. IET Microwaves, Antennas and Propagation, 2017, 11, 136-143.	1.4	4
49	Characterization of Electromagnetic Coupling Effects in MIMO Antenna Array Beamforming. , 2019, , .		4
50	Analysis Of Radiowave Propagation In Forest Media Using The Parabolic Equation. , 2020, , .		4
51	High Performance Antennas for Early Fire Detection Wireless Sensor Networks at 2.4 GHz. , 2021, , .		4
52	Co-polar and cross-polar measurements of the re-radiation signal at 20 GHz from a tree and their analysis in the region around the nulls. , 0, , .		3
53	A novel FDTD based model for prediction of bistatic RCS of single leaves and trees. , 2001, , .		3
54	Propagation modelling of bistatic scattering of isolated trees for micro- and millimeter wave urban microcells. , 0, , .		3

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55	A discrete model for radiowave scattering in vegetation screens at millimetric wave frequencies. , 0, , .		3
56	Extension of the dRET Model to Include Scattering from Tree Trunks in Microcell Urban Mobile Scenarios. , 2010, , .		3
57	Extension of the dRET Model to Forests of Thin Cylinders. IEEE Transactions on Antennas and Propagation, 2015, 63, 4049-4056.	5.1	3
58	A Two-Dimensional Ray-Tracing-Based Model for Propagation Through Vegetation: A practical assessment using ornamental plants at 60 GHz. [Wireless Corner]. IEEE Antennas and Propagation Magazine, 2017, 59, 145-150.	1.4	3
59	Enabling spatial diversity and beamsteering with reduced RF-chains using reconfigurable transmitarrays. , 2017, , .		3
60	Shielding Effectiveness of Log Barriers for Radio Exclusion Zones. , 2018, , .		3
61	On the Practical Limitations of Electronic Beamsteering using Metamaterials at 28 GHz. , 2019, , .		3
62	Radiowave Propagation Modelling of Dual Wildfire Front Spreading over Hilly Terrain at 700 MHz. , 2021, , .		3
63	High-Gain Wideband Parasitic Microstrip Antenna for 5G and IoT at 26 GHz. , 2021, , .		3
64	Compact 3Dâ€printed reflector antenna for radar applications at Kâ€band. IET Microwaves, Antennas and Propagation, 2021, 15, 843-854.	1.4	3
65	A Survey on Over-The-Air Linearization Methods for MIMO Systems. Energies, 2021, 14, 2225.	3.1	3
66	Comparative Study of Computational Electromagnetics Applied to Radiowave Propagation in Wildfires. , 2020, , .		3
67	Radiative energy transfer prediction of excess attenuation of microwave radio signals in a regularly planted orchard. , 0, , .		2
68	Modelling of directional spectra in vegetation media using RET theory. , 0, , .		2
69	Radiative Energy Transfer Based Model for Radiowave Propagation in Inhomogeneous Forests. , 2006, , .		2
70	Wind effect on the scattering from vegetation at cellular phone frequencies. , 2007, , .		2
71	Restoration of the RET Phase Function Using Deconvolution. , 2008, , .		2
72	60 GHz channel characterisation and key performance evaluation of HD video transmission. IET Microwaves, Antennas and Propagation, 2016, 10, 1298-1303.	1.4	2

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73	Characterization of wireless propagation through traditional Iberian brick walls. , 2017, , .		2
74	A Discrete RET Model for Millimeter-Wave Propagation Through Vegetation. IEEE Transactions on Antennas and Propagation, 2018, 66, 1985-1998.	5.1	2
75	A mm Wave solution to provide wireless Augmented Reality in classrooms. , 2018, , .		2
76	Disruptive Future of Radar Based on All-Digital PN Signal Processing. , 2019, , .		2
77	3D Indoor Radio Coverage for 5G Planning: a Framework of Combining BIM with Ray-tracing. , 2020, , .		2
78	Timber Log Based Barrier for Electromagnetic Site Shielding. , 2021, , .		2
79	Analytical Studies of Refractive Index Variation in Pine Needles Media under Wildfire Conditions. , 2021, , .		2
80	Site-Specific Radio Propagation Model for Macrocell Coverage at Sub-6 GHz Frequencies. IEEE Transactions on Antennas and Propagation, 2022, 70, 9706-9715.	5.1	2
81	RET Scattering Function Optimisation in Vegetation Media using Inverse Convolution. , 2006, , .		1
82	E-Business and Telecommunication Networks. Communications in Computer and Information Science, 2008, , .	0.5	1
83	A deconvolution method to remove distortion caused by antenna radiation pattern from measurement. , 2010, , .		1
84	Development and performance analysis of a real time high-resolution channel sounder — IF stage. , 2011, , .		1
85	Investigation of a time-variant dRET model in vegetation: XXIXth URSI general assembly to be held in Chicago, IL, USA, August 7â€“16, 2008. , 2011, , .		1
86	Development and Implementation of a Real Time High-Resolution Channel Sounder - IF Stage. , 2011, , .		1
87	Two-dimensional transmitarray beamsteering using stacked tunable metamaterials. , 2014, , .		1
88	Passive phase conjugating array using FR4. , 2014, , .		1
89	A dual-band sine-square FSS design. , 2016, , .		1
90	Retrieving Vegetation Reradiation Patterns by Means of Artificial Neural Networks. IEEE Antennas and Wireless Propagation Letters, 2016, 15, 1097-1100.	4.0	1

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91	Using artificial neural networks to scale and infer vegetation media phase functions. Neural Computing and Applications, 2018, 29, 1563-1574.	5.6	1
92	A Multilayer EM Simulation Tool to Assess RF Transparency Control of Building Wall Structures. , 2018, , .		1
93	RF-dc Converter Optimization using MIMO Antennas and OTA Multi-Sine Calibration Method. , 2021, , .		1
94	Proposed 5G Waveforms Performance Evaluation with Multiantenna MIMO System. , 2021, , .		1
95	Building Information Modelling Conversion for Radiowave Propagation Studies. , 2021, , .		1
96	Reconfigurable millimetre-wave RF front-end for radar and 5G applications. , 2021, , .		1
97	Modelling radio wave propagation through vegetation media: a comparison between RET and dRET models. , 2007, , .		1
98	Investigation of a Radio Propagation Model for Vegetation Scatter Dynamic Channels at BFWA Frequencies. , 2012, , .		1
99	Fractal-based 3D model for propagation in vegetation at millimeter-wave frequencies. , 2018, , .		1
100	A novel MIMO-OFDM Alamouti architecture for 5G systems at 26 GHz. , 2019, , .		1
101	A Framework for the inclusion of RF transparency parameters into BIM databases. , 2019, , .		1
102	All-digital reconfigurable STDCC radar baseband implementation in FPGA. , 2020, , .		1
103	Modelling of the re-radiation functions of single trees based on wideband measurements at L-band. , 2001, , .		0
104	Indoor radio WLAN performance in multimedia communications. , 2004, , .		0
105	A simple scattering model for tree trunks. , 2011, , .		0
106	Modelling and measurements of the directional spectra of scatter signals inside a formation of tree trunks. , 2011, , .		0
107	Analysis of the dRET input parameters under varying wind conditions at 20 GHz. , 2011, , .		0
108	A square loop frequency selective surface parametric study for EC model optimisation. , 2014, , .		0

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109	A feasibility study on the extension of the point scatterer formulation to raised canopy forests. , 2016, , .		0
110	Depolarisation studies of single trees at 20 GHz. IET Microwaves, Antennas and Propagation, 2017, 11, 1227-1233.	1.4	0
111	Input parameter extraction method for point scatterer formulation in vegetation media at millimetreâ€wave frequencies. IET Microwaves, Antennas and Propagation, 2017, 11, 165-170.	1.4	0
112	Crossâ€polarisation discrimination studies of single trees at 20 and 62.4 GHz. IET Microwaves, Antennas and Propagation, 2017, 11, 695-704.	1.4	0
113	A feasibility study on the extension of the point scatterer formulation to include wind induced dynamics. , 2017, , .		0
114	Measurements and Modelling of Spatial Diversity using 2D Transmitarray. , 2018, , .		0
115	Electronic Reconfigurable Beam-redirecting Metasurfaces for Outdoor-indoor Radio Coverage Enhancement at 5.2 GHz. , 2018, , .		0
116	Performance Evaluation of a Dual-Mode OFDM and SC-FDE System at mmWave Enabling Joint Radar and 5G Multi-Gigabit/s Wireless Communications. , 2019, , .		0
117	On the Practical Limitations of Scalable Electronic 2D Beamsteering Using Metamaterials at Micro and Millimetre-wave Frequencies. , 2021, , .		0
118	Active reflection coefficients characterization system for multiple input multiple output antennas. IET Microwaves, Antennas and Propagation, 2021, 15, 511-520.	1.4	0
119	A Physical Tuneable Wooden Pole Fence for Radio Transparency Control. , 2021, , .		0
120	A B-LEARNING APPROACH FOR ELECTRICAL ENGINEERING BASED ON WIRELESS ACCESS TO PEDAGOGICAL E-CONTENT. , 2006, , .		0
121	DIRECTIONAL SPECTRUM MODELLING IN INHOMOGENEOUS FORESTS AT 20 AND 62.4 GHZ. , 2006, , .		0
122	A reduced Markov channel modelling of vegetation in the forward scattering region at 40 GHz. , 2007, , .		0
123	Real Time Multiuser-MIMO Beamforming/Steering Using NI-2922 Universal Software Radio Peripheral. Lecture Notes in Networks and Systems, 2020, , 28-50.	0.7	0
124	Performance Evaluation of OFDM Data Transmission Using a 2D Beamsteering Transmitarray. International Journal on Communications Antenna and Propagation, 2019, 9, 117.	0.3	0
125	Benchmark of radio propagation path loss models applied to line-of-trees at 10, 36 and 60 GHz. , 2019, , .		0
126	STDCC radar at 24 GHz: first measurement trials. , 2020, , .		0

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127	A Practical Deconvolution Antenna Method to Retrieve Scattering Profile in Complex Random Media - A Vegetation Case Study at 28 GHz. , 2020, , .		0
128	Directional Spectrum Modelling in Inhomogeneous Forests at 20 and 62.4 GHz. Communications in Computer and Information Science, 2006, , 322-333.	0.5	0
129	A Combined ITM and LITU-R Model for Enhanced Radio Coverage Predictions of Mission-Critical Communications in Mountainous Vegetated Terrains. IEEE Antennas and Wireless Propagation Letters, 2022, 21, 1777-1781.	4.0	0