

Rafael Caldeirinha

List of Publications by Year in descending order

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129
papers

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567281

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133
times ranked

1083
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	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
3	RF-dc Converter Optimization using MIMO Antennas and OTA Multi-Sine Calibration Method. , 2021, , .		1
4	Timber Log Based Barrier for Electromagnetic Site Shielding. , 2021, , .		2
5	Proposed 5G Waveforms Performance Evaluation with Multiantenna MIMO System. , 2021, , .		1
6	Building Information Modelling Conversion for Radiowave Propagation Studies. , 2021, , .		1
7	Reconfigurable millimetre-wave RF front-end for radar and 5G applications. , 2021, , .		1
8	Radiowave Propagation Modelling of Dual Wildfire Front Spreading over Hilly Terrain at 700 MHz. , 2021, , .		3
9	Experimental Setup for Radio Characterization of Fire at Microwave Frequencies. , 2021, , .		5
10	High-Gain Wideband Parasitic Microstrip Antenna for 5G and IoT at 26 GHz. , 2021, , .		3
11	On the Practical Limitations of Scalable Electronic 2D Beamsteering Using Metamaterials at Micro and Millimetre-wave Frequencies. , 2021, , .		0
12	Active reflection coefficients characterization system for multiple input multiple output antennas. IET Microwaves, Antennas and Propagation, 2021, 15, 511-520.	1.4	0
13	Compact 3D-Printed reflector antenna for radar applications at Ká€band. IET Microwaves, Antennas and Propagation, 2021, 15, 843-854.	1.4	3
14	Analytical Studies of Refractive Index Variation in Pine Needles Media under Wildfire Conditions. , 2021, , .		2
15	A Survey on Over-The-Air Linearization Methods for MIMO Systems. Energies, 2021, 14, 2225.	3.1	3
16	High Performance Antennas for Early Fire Detection Wireless Sensor Networks at 2.4 GHz. , 2021, , .		4
17	A Physical Tuneable Wooden Pole Fence for Radio Transparency Control. , 2021, , .		0
18	Over-the-Air Calibration of Active Antenna Arrays Using Multisine. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 431-442.	4.6	6

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19	Dual-Band Single-Layer Fractal Frequency Selective Surface for 5G Applications. Electronics (Switzerland), 2021, 10, 2880.	3.1	7
20	Metamaterial-Inspired Flat Beamsteering Antenna for 5G Base Stations at 3.6 GHz. Sensors, 2021, 21, 8116.	3.8	5
21	Multi-Gigabit/s OFDM real-time based transceiver engine for emerging 5G MIMO systems. Physical Communication, 2020, 38, 100957.	2.1	10
22	Radiowave Propagation Modelling in the Presence of Wildfires: Initial Results. , 2020, , .		5
23	Analysis Of Radiowave Propagation In Forest Media Using The Parabolic Equation. , 2020, , .		4
24	3D Indoor Radio Coverage for 5G Planning: a Framework of Combining BIM with Ray-tracing. , 2020, , .		2
25	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
26	STDCC radar at 24 GHz: first measurement trials. , 2020, , .		0
27	Comparative Study of Computational Electromagnetics Applied to Radiowave Propagation in Wildfires. , 2020, , .		3
28	A Practical Deconvolution Antenna Method to Retrieve Scattering Profile in Complex Random Media - A Vegetation Case Study at 28 GHz. , 2020, , .		0
29	Metamaterial-inspired Flat-Antenna Design for 5G Small-cell Base-Stations Operating at 3.6 GHz. , 2020, , .		5
30	All-digital reconfigurable STDCC radar baseband implementation in FPGA. , 2020, , .		1
31	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
32	On the Practical Limitations of Electronic Beamsteering using Metamaterials at 28 GHz. , 2019, , .		3
33	Disruptive Future of Radar Based on All-Digital PN Signal Processing. , 2019, , .		2
34	Characterization of Electromagnetic Coupling Effects in MIMO Antenna Array Beamforming. , 2019, , .		4
35	Review Paper on Transmitarray Antennas. IEEE Access, 2019, 7, 94171-94188.	4.2	93
36	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

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37	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
38	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
39	A Software-Defined Radio for Future Wireless Communication Systems at 60 GHz. Electronics (Switzerland), 2019, 8, 1490.	3.1	15
40	Performance Evaluation of OFDM Data Transmission Using a 2D Beamsteering Transmitarray. International Journal on Communications Antenna and Propagation, 2019, 9, 117.	0.3	0
41	Benchmark of radio propagation path loss models applied to line-of-trees at 10, 36 and 60 GHz. , 2019, , .		0
42	A novel MIMO-OFDM Alamouti architecture for 5G systems at 26 GHz. , 2019, , .		1
43	A Framework for the inclusion of RF transparency parameters into BIM databases. , 2019, , .		1
44	A Discrete RET Model for Millimeter-Wave Propagation Through Vegetation. IEEE Transactions on Antennas and Propagation, 2018, 66, 1985-1998.	5.1	2
45	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
46	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
47	Using artificial neural networks to scale and infer vegetation media phase functions. Neural Computing and Applications, 2018, 29, 1563-1574.	5.6	1
48	A Framework for the Analysis of Wildfire Effects in Emergency Communication Systems. , 2018, , .		5
49	Measurements and Modelling of Spatial Diversity using 2D Transmitarray. , 2018, , .		0
50	Shielding Effectiveness of Log Barriers for Radio Exclusion Zones. , 2018, , .		3
51	A Multilayer EM Simulation Tool to Assess RF Transparency Control of Building Wall Structures. , 2018, , .		1
52	Electronic Reconfigurable Beam-redirecting Metasurfaces for Outdoor-indoor Radio Coverage Enhancement at 5.2 GHz. , 2018, , .		0
53	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
54	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

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55	A mm Wave solution to provide wireless Augmented Reality in classrooms. , 2018, , .		2
56	5G: performance and evaluation of FS–FBMC against OFDM for high data rate applications at 60–GHz. IET Signal Processing, 2018, 12, 620-628.	1.5	18
57	Will COTS RF Front-Ends Really Cope With 5G Requirements at mmWave?. IEEE Access, 2018, 6, 38745-38769.	4.2	13
58	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
59	Fractal-based 3D model for propagation in vegetation at millimeter-wave frequencies. , 2018, , .		1
60	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
61	Wearable Textile Antennas: Examining the effect of bending on their performance. IEEE Antennas and Propagation Magazine, 2017, 59, 54-59.	1.4	97
62	Tunable square slot FSS EC modelling and optimisation. IET Microwaves, Antennas and Propagation, 2017, 11, 737-742.	1.4	11
63	Characterization of wireless propagation through traditional Iberian brick walls. , 2017, , .		2
64	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
65	Enabling spatial diversity and beamsteering with reduced RF-chains using reconfigurable transmitarrays. , 2017, , .		3
66	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
67	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
68	Depolarisation studies of single trees at 20 GHz. IET Microwaves, Antennas and Propagation, 2017, 11, 1227-1233.	1.4	0
69	Electronically Reconfigurable FSS-Inspired Transmitarray for 2-D Beamsteering. IEEE Transactions on Antennas and Propagation, 2017, 65, 4880-4885.	5.1	77
70	3-D Mechanically Tunable Square Slot FSS. IEEE Transactions on Antennas and Propagation, 2017, 65, 242-250.	5.1	40
71	Input parameter extraction method for point scatterer formulation in vegetation media at millimetre–wave frequencies. IET Microwaves, Antennas and Propagation, 2017, 11, 165-170.	1.4	0
72	Cross–polarisation discrimination studies of single trees at 20 and 62.4 GHz. IET Microwaves, Antennas and Propagation, 2017, 11, 695-704.	1.4	0

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73	A feasibility study on the extension of the point scatterer formulation to include wind induced dynamics. , 2017, , .		0
74	60 GHz channel characterisation and key performance evaluation of HD video transmission. IET Microwaves, Antennas and Propagation, 2016, 10, 1298-1303.	1.4	2
75	A feasibility study on the extension of the point scatterer formulation to raised canopy forests. , 2016, , .		0
76	A dual-band sine-square FSS design. , 2016, , .		1
77	A Three-Dimensional Directive Antenna Pattern Interpolation Method. IEEE Antennas and Wireless Propagation Letters, 2016, 15, 881-884.	4.0	14
78	Retrieving Vegetation Reradiation Patterns by Means of Artificial Neural Networks. IEEE Antennas and Wireless Propagation Letters, 2016, 15, 1097-1100.	4.0	1
79	FSS-Inspired Transmitarray for Two-Dimensional Antenna Beamsteering. IEEE Transactions on Antennas and Propagation, 2016, 64, 2197-2206.	5.1	46
80	Dual-band single-layer quarter ring frequency selective surface for Wi-Fi applications. IET Microwaves, Antennas and Propagation, 2016, 10, 435-441.	1.4	40
81	Hybrid FSS and Rectenna Design for Wireless Power Harvesting. IEEE Transactions on Antennas and Propagation, 2016, 64, 2038-2042.	5.1	43
82	Extension of the dRET Model to Forests of Thin Cylinders. IEEE Transactions on Antennas and Propagation, 2015, 63, 4049-4056.	5.1	3
83	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
84	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
85	Real-time high-resolution radio frequency channel sounder based on the sliding correlation principle. IET Microwaves, Antennas and Propagation, 2015, 9, 837-846.	1.4	9
86	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
87	Two-dimensional transmitarray beamsteering using stacked tunable metamaterials. , 2014, , .		1
88	Passive phase conjugating array using FR4. , 2014, , .		1
89	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
90	Performance and evaluation of OFDM and SC - FDE over an AWGN propagation channel under RF impairments using simulink at 60GHz. , 2014, , .		9

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91	A square loop frequency selective surface parametric study for EC model optimisation. , 2014, , .		0
92	A review on the electromagnetic characterisation of building materials at micro- and millimetre wave frequencies. , 2014, , .		30
93	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
94	Investigation of a Radio Propagation Model for Vegetation Scatter Dynamic Channels at BFWA Frequencies. , 2012, , .		1
95	Development and performance assessment of a real time high-resolution RF channel sounder. , 2011, , .		9
96	Development and performance analysis of a real time high-resolution channel sounder — IF stage. , 2011, , .		1
97	A simple scattering model for tree trunks. , 2011, , .		0
98	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
99	Development and Implementation of a Real Time High-Resolution Channel Sounder - IF Stage. , 2011, , .		1
100	Modelling and measurements of the directional spectra of scatter signals inside a formation of tree trunks. , 2011, , .		0
101	Analysis of the dRET input parameters under varying wind conditions at 20 GHz. , 2011, , .		0
102	Estimation of dielectric concrete properties from power measurements at 18.7 and 60 GHz. , 2011, , .		7
103	Shrub-blown time variability in attenuation and scattering at cellular frequencies. IET Microwaves, Antennas and Propagation, 2010, 4, 526.	1.4	12
104	Extension of the dRET Model to Include Scattering from Tree Trunks in Microcell Urban Mobile Scenarios. , 2010, , .		3
105	A deconvolution method to remove distortion caused by antenna radiation pattern from measurement. , 2010, , .		1
106	Traceme â€™ indoor real-time location system. , 2009, , .		5
107	Restoration of the RET Phase Function Using Deconvolution. , 2008, , .		2
108	E-Business and Telecommunication Networks. Communications in Computer and Information Science, 2008, , .	0.5	1

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109	Wind effect on the scattering from vegetation at cellular phone frequencies. , 2007, , .		2
110	A reduced Markov channel modelling of vegetation in the forward scattering region at 40 GHz. , 2007, , .		0
111	Modelling radio wave propagation through vegetation media: a comparison between RET and dRET models. , 2007, , .		1
112	RET Scattering Function Optimisation in Vegetation Media using Inverse Convolution. , 2006, , .		1
113	Wind Incidence Effects on Channel Dynamics in Vegetation Media at 40 GHz. , 2006, , .		4
114	Radiative Energy Transfer Based Model for Radiowave Propagation in Inhomogeneous Forests. , 2006, , .		2
115	A B-LEARNING APPROACH FOR ELECTRICAL ENGINEERING BASED ON WIRELESS ACCESS TO PEDAGOGICAL E-CONTENT. , 2006, , .		0
116	DIRECTIONAL SPECTRUM MODELLING IN INHOMOGENEOUS FORESTS AT 20 AND 62.4 GHZ. , 2006, , .		0
117	Directional Spectrum Modelling in Inhomogeneous Forests at 20 and 62.4 GHz. Communications in Computer and Information Science, 2006, , 322-333.	0.5	0
118	A Discrete RET Model for Millimeter-Wave Propagation in Isolated Tree Formations. IEICE Transactions on Communications, 2005, E88-B, 2411-2418.	0.7	22
119	Indoor radio WLAN performance in multimedia communications. , 2004, , .		0
120	A novel FDTD based model for prediction of bistatic RCS of single leaves and trees. , 2001, , .		3
121	Modelling of the re-radiation functions of single trees based on wideband measurements at L-band. , 2001, , .		0
122	Characterisation of depolarisation of radio signals by single trees at 20 GHz. , 0, , .		4
123	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
124	Radiative energy transfer prediction of excess attenuation of microwave radio signals in a regularly planted orchard. , 0, , .		2
125	Phase function measurement for modelling radiowave attenuation and scatter in vegetation based on the theory of radiative energy transfer. , 0, , .		6
126	Propagation modelling of bistatic scattering of isolated trees for micro- and millimeter wave urban microcells. , 0, , .		3

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127	A discrete model for radiowave scattering in vegetation screens at millimetric wave frequencies. , 0, , .		3
128	A Generic Narrowband Model for Radiowave Propagation through Vegetation. , 0, , .		15
129	Modelling of directional spectra in vegetation media using RET theory. , 0, , .		2