

Luca Catarinucci

List of Publications by Year in descending order

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144
papers

3,085
citations

186265

28
h-index

189892

50
g-index

145
all docs

145
docs citations

145
times ranked

2640
citing authors

#	ARTICLE	IF	CITATIONS
1	An IoT-Aware Architecture for Smart Healthcare Systems. IEEE Internet of Things Journal, 2015, 2, 515-526.	8.7	850
2	RAMSES: RFID Augmented Module for Smart Environmental Sensing. IEEE Transactions on Instrumentation and Measurement, 2014, 63, 1701-1708.	4.7	108
3	Introduction to GPU Computing and CUDA Programming: A Case Study on FDTD [EM Programmer's Notebook. IEEE Antennas and Propagation Magazine, 2010, 52, 116-122.	1.4	85
4	A Battery-Assisted Sensor-Enhanced RFID Tag Enabling Heterogeneous Wireless Sensor Networks. IEEE Sensors Journal, 2014, 14, 1048-1055.	4.7	77
5	An UHF RFID Energy-Harvesting System Enhanced by a DC-DC Charge Pump in Silicon-on-Insulator Technology. IEEE Microwave and Wireless Components Letters, 2013, 23, 315-317.	3.2	72
6	A Cost-Effective SDR Platform for Performance Characterization of RFID Tags. IEEE Transactions on Instrumentation and Measurement, 2012, 61, 903-911.	4.7	63
7	Measurement Platform for Electromagnetic Characterization and Performance Evaluation of UHF RFID Tags. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 905-914.	4.7	53
8	Smart RFID Antenna System for Indoor Tracking and Behavior Analysis of Small Animals in Colony Cages. IEEE Sensors Journal, 2014, 14, 1198-1206.	4.7	52
9	Enhanced UHF RFID Sensor-Tag. IEEE Microwave and Wireless Components Letters, 2013, 23, 49-51.	3.2	51
10	SPARTACUS: Self-Powered Augmented RFID Tag for Autonomous Computing and Ubiquitous Sensing. IEEE Transactions on Antennas and Propagation, 2015, 63, 2272-2281.	5.1	48
11	Challenge. , 2010, , .		46
12	A Cost-Effective UHF RFID Tag for Transmission of Generic Sensor Data in Wireless Sensor Networks. IEEE Transactions on Microwave Theory and Techniques, 2009, 57, 1291-1296.	4.6	45
13	SMART PROTOTYPING TECHNIQUES FOR UHF RFID TAGS: ELECTROMAGNETIC CHARACTERIZATION AND COMPARISON WITH TRADITIONAL APPROACHES. Progress in Electromagnetics Research, 2012, 132, 91-111.	4.4	42
14	COMPACT MICROSTRIP ANTENNA FOR RFID APPLICATIONS. Progress in Electromagnetics Research Letters, 2009, 8, 191-199.	0.7	39
15	A Curved 3-D Printed Microstrip Patch Antenna Layout for Bandwidth Enhancement and Size Reduction. IEEE Antennas and Wireless Propagation Letters, 2020, 19, 1118-1122.	4.0	39
16	Human exposure to the near field of radiobase antennas - a full-wave solution using parallel FDTD. IEEE Transactions on Microwave Theory and Techniques, 2003, 51, 935-940.	4.6	35
17	Enhanced reflectometry measurements of permittivities and levels in layered petrochemical liquids using an in-situ coaxial probe. Measurement: Journal of the International Measurement Confederation, 2009, 42, 685-696.	5.0	34
18	Microwave characterisation of polylactic acid for 3D printed dielectrically controlled substrates. IET Microwaves, Antennas and Propagation, 2017, 11, 1970-1976.	1.4	34

#	ARTICLE	IF	CITATIONS
19	Design Considerations on the Placement of a Wearable UHF-RFID PIFA on a Compact Ground Plane. IEEE Transactions on Antennas and Propagation, 2018, 66, 3142-3147.	5.1	34
20	Customized Ultra High Frequency Radio Frequency Identification Tags and Reader Antennas Enabling Reliable Mobile Robot Navigation. IEEE Sensors Journal, 2013, 13, 783-791.	4.7	33
21	An innovative IoT-oriented prototype platform for the management and valorisation of the organic fraction of municipal solid waste. Journal of Cleaner Production, 2020, 247, 119618.	9.3	33
22	A frequency-domain method for extending TDR performance in quality determination of fluids. Measurement Science and Technology, 2007, 18, 675-688.	2.6	32
23	RFID Sensor-Tags Feeding a Context-Aware Rule-Based Healthcare Monitoring System. Journal of Medical Systems, 2012, 36, 3435-3449.	3.6	32
24	Assessment of a TD-Based Method for Characterization of Antennas. IEEE Transactions on Instrumentation and Measurement, 2009, 58, 1412-1419.	4.7	31
25	SWITCHED-BEAM ANTENNA FOR WIRELESS SENSOR NETWORK NODES. Progress in Electromagnetics Research C, 2013, 39, 193-207.	0.9	31
26	Wearable UHF RFID Sensor-Tag Based on Customized 3D-Printed Antenna Substrates. IEEE Sensors Journal, 2018, 18, 8789-8795.	4.7	30
27	Permittivity-Customizable Ceramic-Doped Silicone Substrates Shaped With 3-D-Printed Molds to Design Flexible and Conformal Antennas. IEEE Transactions on Antennas and Propagation, 2020, 68, 4967-4972.	5.1	30
28	A framework for context-aware home-health monitoring. International Journal of Autonomous and Adaptive Communications Systems, 2010, 3, 75.	0.3	29
29	A Cross-Layer Approach to Minimize the Energy Consumption in Wireless Sensor Networks. International Journal of Distributed Sensor Networks, 2014, 10, 268284.	2.2	29
30	Enhanced UHF RFID Tags for Drug Tracing. Journal of Medical Systems, 2012, 36, 3451-3462.	3.6	28
31	Compact Switched-Beam Antennas Enabling Novel Power-Efficient Wireless Sensor Networks. IEEE Sensors Journal, 2014, 14, 3252-3259.	4.7	28
32	A Combined TD+FD Method for Enhanced Reflectometry Measurements in Liquid Quality Monitoring. IEEE Transactions on Instrumentation and Measurement, 2009, 58, 3534-3543.	4.7	27
33	IoT-Aware Waste Management System Based on Cloud Services and Ultra-Low-Power RFID Sensor-Tags. IEEE Sensors Journal, 2020, 20, 14873-14881.	4.7	26
34	Design, development, and performance evaluation of a compact and long-range passive UHF RFID tag. Microwave and Optical Technology Letters, 2012, 54, 1335-1339.	1.4	25
35	Design of UHF RFID Sensor-Tags for the Biomechanical Analysis of Human Body Movements. IEEE Sensors Journal, 2021, 21, 14090-14098.	4.7	25
36	Performance analysis of passive UHF RFID tags with GNU-radio. , 2011, , .		24

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37	Rfid-based traceability along the food-production chain [Wireless Corner]. IEEE Antennas and Propagation Magazine, 2014, 56, 196-207.	1.4	24
38	An animal tracking system for behavior analysis using radio frequency identification. Lab Animal, 2014, 43, 321-327.	0.4	24
39	Differential RCS and sensitivity calculation of RFID tags with Software-Defined Radio. , 2012, , .		23
40	Electromagnetic Performance Evaluation of UHF RFID Tags With Power Discretization Error Cancellation. IEEE Transactions on Antennas and Propagation, 2019, 67, 3545-3549.	5.1	22
41	Experimental Performance Evaluation of Passive UHF RFID Tags in Electromagnetically Critical Supply Chains. Journal of Communications Software and Systems, 2017, 7, 59.	0.8	22
42	Compact 3-D-Printed Circularly Polarized Antenna for Handheld UHF RFID Readers. IEEE Antennas and Wireless Propagation Letters, 2018, 17, 2021-2025.	4.0	21
43	A novel low-cost multisensor-tag for RFID applications in healthcare. Microwave and Optical Technology Letters, 2008, 50, 2877-2880.	1.4	20
44	Enabling self-powered autonomous wireless sensors with new-generation ²-C-RFID chips. , 2013, , .		20
45	An Energy-Efficient MAC Scheduler based on a Switched-Beam Antenna for Wireless Sensor Networks. Journal of Communications Software and Systems, 2017, 9, 117.	0.8	20
46	IoT-Ready Energy-Autonomous Parking Sensor Device. IEEE Internet of Things Journal, 2021, 8, 4830-4840.	8.7	20
47	PERFORMANCE ENHANCEMENT OF THE RFID EPC GEN2 PROTOCOL BY EXPLOITING COLLISION RECOVERY. Progress in Electromagnetics Research B, 2012, 43, 53-72.	1.0	19
48	Analysis of FDM and DLP 3D-Printing Technologies to Prototype Electromagnetic Devices for RFID Applications. Sensors, 2021, 21, 897.	3.8	19
49	Improving item-level tracing systems through Ad Hoc UHF RFID tags. , 2010, , .		18
50	Comparison of Fabrication Techniques for Flexible UHF RFID Tag Antennas [Wireless Corner]. IEEE Antennas and Propagation Magazine, 2017, 59, 159-168.	1.4	18
51	BROAD-BAND DIPOLE FOR RFID APPLICATIONS. Progress in Electromagnetics Research C, 2010, 12, 163-172.	0.9	17
52	Near Field UHF RFID Antenna System Enabling the Tracking of Small Laboratory Animals. International Journal of Antennas and Propagation, 2013, 2013, 1-10.	1.2	16
53	A Framework for Context-Aware Home-Health Monitoring. Lecture Notes in Computer Science, 2008, , 119-130.	1.3	16
54	Dielectric Resonators Antennas Potential Unleashed by 3D Printing Technology: A Practical Application in the IoT Framework. Electronics (Switzerland), 2022, 11, 64.	3.1	16

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55	Fully 3D-Printed RFID Tags based on Printable Metallic Filament: Performance Comparison with other Fabrication Techniques. , 2019, , .		15
56	Proof of Presence: Novel Vehicle Detection System. IEEE Wireless Communications, 2019, 26, 44-49.	9.0	15
57	High added-value em shielding by using metal-foams: experimental and numerical characterization. , 2006, , .		14
58	Performance Evaluation of a Novel Animals Tracking System based on UHF RFID Technology. Journal of Communications Software and Systems, 2017, 9, 4.	0.8	14
59	An IoT-Aware Smart System Exploiting the Electromagnetic Behavior of UHF-RFID Tags to Improve Worker Safety in Outdoor Environments. Electronics (Switzerland), 2022, 11, 717.	3.1	14
60	PLATFORM-ROBUST PASSIVE UHF RFID TAGS: A CASE-STUDY IN ROBOTICS. Progress in Electromagnetics Research C, 2012, 30, 27-39.	0.9	13
61	Customizing 3D-Printing for Electromagnetics to Design Enhanced RFID Antennas. IEEE Journal of Radio Frequency Identification, 2020, 4, 452-460.	2.3	13
62	Sensor data transmission through passive RFID tags to feed wireless sensor networks. , 2010, , .		12
63	METAL FOAMS FOR ELECTROMAGNETICS: EXPERIMENTAL, NUMERICAL AND ANALYTICAL CHARACTERIZATION. Progress in Electromagnetics Research B, 2012, 45, 1-18.	1.0	11
64	High-Sensitivity CMOS RF-DC Converter in HF RFID Band. IEEE Microwave and Wireless Components Letters, 2016, 26, 732-734.	3.2	11
65	Laser-Induced Graphene, Fused Filament Fabrication, and Aerosol Jet Printing for Realizing Conductive Elements of UHF RFID Antennas. IEEE Journal of Radio Frequency Identification, 2022, 6, 601-609.	2.3	11
66	New materials for electromagnetic shielding: Metal foams with plasma properties. Microwave and Optical Technology Letters, 2010, 52, 1700-1705.	1.4	10
67	Design and applications of a Software-Defined listener for UHF RFID systems. , 2011, , .		10
68	Integration of UHF RFID and WSN technologies in healthcare systems. , 2014, , .		10
69	Sensor data transmission through passive RFID tags to feed wireless sensor networks. , 2010, , .		9
70	On the use of UHF RFID antenna systems customized for robotic applications. , 2012, , .		9
71	Fully-passive devices for RFID smart sensing. , 2013, , .		9
72	Pattern-Reconfigurable Antennas and Smart Wake-Up Circuits to Decrease Power Consumption in WSN Nodes. IEEE Sensors Journal, 2014, 14, 4323-4324.	4.7	9

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73	Design of a 3D-printed circularly polarized antenna for portable UHF RFID readers. , 2017, , .		9
74	Wearable UHF RFID Sensor Tag in 3D-Printing Technology for Body Temperature Monitoring. , 2018, , .		9
75	Ultralong-Range RFID-Based Wake-Up Radios for Wireless Sensor Networks. IEEE Sensors Journal, 2014, 14, 4016-4017.	4.7	8
76	Improved RFID tag characterization system: Use case in the IoT arena. , 2016, , .		8
77	RFID-Based Indoor Positioning Using Edge Machine Learning. IEEE Journal of Radio Frequency Identification, 2022, 6, 573-582.	2.3	8
78	A TD-FD Combined Method for Enhancing Reflectometry Measurements in Liquid Quality Monitoring. Conference Record - IEEE Instrumentation and Measurement Technology Conference, 2007, , .	0.0	7
79	A Comparative Analysis of Reflectometry Methods for Characterization of Antennas. , 2008, , .		7
80	An IoT-aware Architecture to improve Safety in Sports Environments. Journal of Communications Software and Systems, 2017, 13, 44.	0.8	7
81	IoT-oriented Waste Management System based on new RFID-Sensing Devices and Cloud Technologies. , 2019, , .		7
82	A novel and low-cost multisensor-integrated RFID tag for biomedical applications. , 2008, , .		6
83	A context-aware smart infrastructure based on RFID sensor-tags and its application to the health-care domain. , 2009, , .		6
84	Integration of RFID and sensors for remote healthcare. , 2010, , .		6
85	Prototyping flexible UHF RFID tags through rapid and effective unconventional techniques: Validation on label-type sensor-tag. , 2012, , .		6
86	Laser-Fabricated Antennas for RFID Applications. , 2021, , .		6
87	A parallel FDTD tool for the solution of large dosimetric problems: an application to the interaction between humans and radiobase antennas. , 0, , .		5
88	On the use of numerical phantoms in the study of the human-antenna interaction problem. IEEE Antennas and Wireless Propagation Letters, 2003, 2, 43-45.	4.0	5
89	An RFID tracking system supporting the behavior analysis of colonial laboratory animals. International Journal of RF Technologies: Research and Applications, 2013, 5, 63-80.	0.7	5
90	Sensors-based treatment system of the organic waste with RFID identification and on-cloud traceability. , 2019, , .		5

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91	On the Use of Additive Manufacturing 3D-Printing Technology in RFID Antenna Design. , 2019, , .		5
92	3D-Printed Barcodes as RFID Tags. , 2020, , .		5
93	Experimental validation of a plasma model for electromagnetic metal foam shields. , 2009, , .		4
94	NEW ALGORITHMS FOR THE SPECIFIC ABSORPTION RATE NUMERICAL EVALUATION BASED ON SPHERICAL AVERAGING VOLUMES. Progress in Electromagnetics Research B, 2012, 44, 427-445.	1.0	4
95	Switched-Beam Antenna for WSN Nodes Enabling Hardware-driven Power Saving. , 0, , .		4
96	Improved Battery-Less Augmented RFID Tag: Application on Ambient Sensing and Control. IEEE Sensors Journal, 2016, 16, 3484-3485.	4.7	4
97	Yagi-Uda Antenna with Fully 3D-Printed Bow-Tie Elements. , 2020, , .		4
98	Smart IoT system empowered by customized energy-aware wireless sensors integrated in graphene-based tissues to improve workers thermal comfort. Journal of Cleaner Production, 2022, 360, 132132.	9.3	4
99	A Parallel-Grid-Enabled Variable-Mesh FDTD Approach for the Analysis of Slabs of Double-Negative Metamaterials. , 0, , .		3
100	A Parallel Graded-Mesh FDTD Algorithm for Human-€Antenna Interaction Problems. International Journal of Occupational Safety and Ergonomics, 2009, 15, 45-52.	1.9	3
101	Optimized antennas for enhanced RFID sensor tags. , 2011, , .		3
102	A LONG-RANGE COMPUTATIONAL RFID TAG FOR TEMPERATURE AND ACCELERATION SENSING APPLICATIONS. Progress in Electromagnetics Research C, 2013, 45, 223-235.	0.9	3
103	Advances in the design of smart, multi-function, RFID-enabled devices. , 2014, , .		3
104	Programming UHF RFID Systems for the Internet of Things [EM Programmer's Notebook]. IEEE Antennas and Propagation Magazine, 2016, 58, 109-119.	1.4	3
105	Evaluating the suitability of specific RFID tags for IoT applications through a new characterization platform. , 2016, , .		3
106	Measurement system for over-the-air evaluation of UHF RFID tags quality. Wireless Power Transfer, 2017, 4, 33-41.	1.1	3
107	Electromagnetic Design of UHF RFID Tags Enabling a Novel Method to Retrieve Sensor Data. IEEE Journal of Radio Frequency Identification, 2018, 2, 23-30.	2.3	3
108	Specific Absorption Rate (SAR) Numerical Evaluation: a Critical Discussion. IEEE MTT-S International Microwave Symposium Digest IEEE MTT-S International Microwave Symposium, 2007, , .	0.0	2

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109	GPU-based acceleration of computational electromagnetics codes. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2013, 26, 309-323.	1.9	2
110	On the use of passive UHF RFID tags in the pharmaceutical supply chain: a novel enhanced tag versus high-performance commercial tags. International Journal of Radio Frequency Identification Technology and Applications, 2013, 4, 122.	0.5	2
111	A UHF-RFID power management circuit for body sensor networks. , 2015, , .		2
112	Cost-effective electromagnetic characterization system for radiation pattern and sensitivity estimation of UHF RFID tags. , 2015, , .		2
113	RF-DC converter for HF RFID sensing applications powered by a near-field loop antenna. Radio Science, 2016, 51, 942-950.	1.6	2
114	UHF front-end feeding RFID-based body sensor networks by exploiting the reader signal. Radio Science, 2016, 51, 481-489.	1.6	2
115	Adding RFID Capabilities to IoT Technologies: Proof-of-Concept on Microwave Doppler Sensors. , 2019, , .		2
116	X-Band RFID System Exploiting Doppler-Based Microwave Motion Sensors. IEEE Transactions on Antennas and Propagation, 2019, 67, 6602-6611.	5.1	2
117	A 3D-Printed Wideband Antenna for UHF RFID. , 2019, , .		2
118	Opportunity to Analyze Laboratory Mice Behavior by Tracking Systems based on UHF RFID Technology: pros and cons. , 2019, , .		2
119	Fully 3D-printed UHF RFID Antennas: Technological Comparison to Realize Conductive Elements. , 2021, , .		2
120	Parallel FD-TD Simulation of Radiobase Antennae. Radiation Protection Dosimetry, 2001, 97, 409-413.	0.8	1
121	A Parallel Variable-Mesh FDTD Algorithm for the Solution of Large Electromagnetic Problems. , 0, , .		1
122	Traceability of Goods by Radio Systems: Proposals, Techniques, and Applications. International Journal of Antennas and Propagation, 2013, 2013, 1-2.	1.2	1
123	EM design of a passive RFID-based device with sensing and reasoning capabilities. , 2015, , .		1
124	A ~ 19 dBm sensitivity integrated RF-DC converter with regulated output voltage for powering UHF wireless sensors. , 2015, , .		1
125	Passive RFID tag with sensing and reasoning capabilities for building automation. , 2016, , .		1
126	Single-Chip Gen2-Compliant UHF RFID Sensor Tags Based on Novel Pseudo-BAP Mode. , 2018, , .		1

#	ARTICLE	IF	CITATIONS
127	3D printed wearable sensor tag based on UHF RFID ICs implementing a novel interrogation modality. , 2018, , .		1
128	RFID Sensing System Based on UHF Platform-Tolerant Antenna for Harsh Industrial Environments. , 2019, , .		1
129	Considerations on Rigorous UHF RFID Tag Electromagnetic Performance Evaluation in Non-Anechoic Environments. , 2020, , .		1
130	Circularly Polarized Antenna in 3D Printing Technology to Feed a Wearable Fully-Integrated WiFi-RFID Reader for Biomedical Applications. , 2020, , .		1
131	The Promising Role of 3D-printed Dielectric Resonator Antennas in the IoT Framework. , 2021, , .		1
132	On the use of numerical phantoms in the study of the human-antenna interaction problem. IEEE Antennas and Wireless Propagation Letters, 2003, 2, 43-45.	4.0	1
133	A triple band dual-polarized multi-slotted antenna array for base station applications. Wireless Networks, 2022, 28, 1475-1487.	3.0	1
134	A Novel Design for Flexible and Conformable 3D-Printed Dielectric Resonator Antennas for WiFi and IoT Applications. , 2022, , .		1
135	On the use of advanced numerical models for the evaluation of dosimetric parameters and the verification of exposure limits at workplaces. Radiation Protection Dosimetry, 2009, 137, 218-222.	0.8	0
136	3D patch antenna using a cardboard substrate for RFID reader applications. , 2012, , .		0
137	Novel fully-passive multifunction RFID-enabled devices. , 2014, , .		0
138	A HF-RFID, -19 dBm sensitivity fully integrated RF-DC voltage multiplier. , 2015, , .		0
139	Exploiting 3D-printing in passive UHF RFID electromagnetic projects. , 2017, , .		0
140	Conformal Circularly-Polarized Shoe-Integrated Antenna based on Leather Substrate and Conductive Fabric for Bluetooth Low Energy Body-Centric Links. , 2020, , .		0
141	Smart Data Collection and Management in Heterogeneous Ubiquitous Healthcare. , 0, , .		0
142	3D-Printed Tunable UHF RFID PIFA Realized with BaTiO3 Enhanced PLA for Multipurpose Applications. , 2020, , .		0
143	Recent Activities in Rfid Applications Empowered by 3D Printing at UniSalento. , 2021, , .		0
144	Customized UHF RFID Sensor Tags to Feed Biomechanical Models. , 2021, , .		0