

Andrea Maria Cataldo

List of Publications by Year in descending order

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104
papers

1,867
citations

172207

29
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301761

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106
all docs

106
docs citations

106
times ranked

1274
citing authors

#	ARTICLE	IF	CITATIONS
1	Portable Microwave Reflectometry System for Skin Sensing. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-8.	2.4	13
2	Permittivity-Based Water Content Calibration Measurement in Wood-Based Cultural Heritage: A Preliminary Study. Sensors, 2022, 22, 2148.	2.1	5
3	Proof of Concept of Biopolymer Based Hydrogels as Biomimetic Oviposition Substrate to Develop Tiger Mosquitoes (Aedes albopictus) Cost-Effective Lure and Kill Ovitrap. Bioengineering, 2022, 9, 267.	1.6	2
4	Assessment and Scientific Progresses in the Analysis of Olfactory Evoked Potentials. Bioengineering, 2022, 9, 252.	1.6	12
5	Neural Network-Based Prediction and Monitoring of Blood Glucose Response to Nutritional Factors in Type-1 Diabetes. , 2022, , .		3
6	A new measurement algorithm for TDR-based localization of large dielectric permittivity variations in long-distance cable systems. Measurement: Journal of the International Measurement Confederation, 2021, 174, 109066.	2.5	11
7	Microwave Wearable System for Sensing Skin Hydration. , 2021, , .		9
8	Measuring moisture content in building materials with Time-Domain Reflectometry: pros, cons and first results. , 2021, , .		0
9	Combined Punctual and Diffused Monitoring of Concrete Structures Based on Dielectric Measurements. Sensors, 2021, 21, 4872.	2.1	8
10	A Microwave Measuring System for Detecting and Localizing Anomalies in Metallic Pipelines. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-11.	2.4	16
11	Microwave reflectometric systems and monitoring apparatus for diffused-sensing applications. Acta IMEKO (2012), 2021, 10, 202.	0.4	3
12	Systems and Monitoring Apparata Based on Reflectometric Techniques for Enhanced Revealing. , 2021, , .		0
13	Low-cost System for Skin Sensing. , 2021, , .		1
14	Is the Time-Domain Reflectometry (TDR) Technique Suitable for Moisture Content Measurement in Low-Porosity Building Materials?. Sustainability, 2020, 12, 7855.	1.6	8
15	Time Domain Reflectometry (TDR) technique " A solution to monitor moisture content in construction materials. E3S Web of Conferences, 2020, 172, 17001.	0.2	2
16	Feasibility of a Wearable Reflectometric System for Sensing Skin Hydration. Sensors, 2020, 20, 2833.	2.1	28
17	A New Microwave Method for On-Site Integrity Monitoring of Pipelines. , 2020, , .		1
18	Fully-Textile, Wearable Chipless Tags for Identification and Tracking Applications. Sensors, 2020, 20, 429.	2.1	38

#	ARTICLE	IF	CITATIONS
19	Reflectometric Measurements. Lecture Notes in Electrical Engineering, 2020, , 145-179.	0.3	0
20	Radio-frequency Identification Based on Textile, Wearable, Chipless Tags for IoT Applications. , 2019, , .		13
21	Time-domain reflectometry: Current uses and new possibilities. , 2019, , 59-96.		2
22	Dielectric permittivity diagnostics as a tool for cultural heritage preservation: Application on degradable globigerina limestone. Measurement: Journal of the International Measurement Confederation, 2018, 123, 270-274.	2.5	8
23	A comparative assessment of microwave-based methods for moisture content characterization in stone materials. Measurement: Journal of the International Measurement Confederation, 2018, 114, 493-500.	2.5	28
24	Microwave reflectometric methodologies for water content estimation in stone-made Cultural Heritage materials. Measurement: Journal of the International Measurement Confederation, 2018, 118, 275-281.	2.5	14
25	Compensating for Density Effect in Permittivity-Based Moisture Content Measurements on Historic Masonry Materials. , 2018, , .		0
26	Reflectometric System for Continuous and Automated Monitoring of Irrigation in Agriculture. Advances in Agriculture, 2018, 2018, 1-10.	0.3	1
27	TDR-Based Measurements of Water Content in Construction Materials for In-the-Field Use and Calibration. IEEE Transactions on Instrumentation and Measurement, 2018, 67, 1230-1237.	2.4	37
28	An improved noninvasive resonance method for water content characterization of Cultural Heritage stone materials. Measurement: Journal of the International Measurement Confederation, 2018, 125, 257-261.	2.5	10
29	Wearable antennas for applications in remote assistance to elderly people. , 2017, , .		13
30	Novel PHB/Olive mill wastewater residue composite based film: Thermal, mechanical and degradation properties. Journal of Environmental Chemical Engineering, 2017, 5, 6001-6007.	3.3	13
31	Controlling the irrigation process in agriculture through elongated TDR-sensing cables. , 2017, , .		1
32	Moisture content monitoring of construction materials: From in-line production through on-site applications. , 2017, , .		3
33	Transmission line simulator for TDR-based measurements. , 2017, , .		0
34	TDR application for moisture content estimation in agri-food materials. IEEE Instrumentation and Measurement Magazine, 2017, 20, 26-31.	1.2	8
35	TDR-based monitoring of rising damp through the embedding of wire-like sensing elements in building structures. Measurement: Journal of the International Measurement Confederation, 2017, 98, 355-360.	2.5	22
36	Recent advances in the TDR-based leak detection system for pipeline inspection. Measurement: Journal of the International Measurement Confederation, 2017, 98, 347-354.	2.5	36

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37	Enhancement of leak detection in pipelines through time-domain reflectometry/ground penetrating radar measurements. IET Science, Measurement and Technology, 2017, 11, 696-702.	0.9	19
38	Measurement System for Evaluating Dielectric Permittivity of Granular Materials in the 1.7-2.6-GHz Band. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 1051-1059.	2.4	24
39	Water Detection Using Bi-Wires as Sensing Elements: Comparison Between Capacimetry-Based and Time-of-Flight-Based Techniques. IEEE Sensors Journal, 2016, 16, 4309-4317.	2.4	18
40	Accuracy improvement in the TDR-based localization of water leaks. Results in Physics, 2016, 6, 594-598.	2.0	10
41	Criteria for Automated Estimation of Time of Flight in TDR Analysis. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 1215-1224.	2.4	30
42	Advances in Reflectometric Sensing for Industrial Applications. Synthesis Lectures on Emerging Engineering Technologies, 2016, 2, 1-96.	0.2	4
43	Innovative method for traceability of hides throughout the leather manufacturing process. International Journal of Advanced Manufacturing Technology, 2016, 86, 3563-3570.	1.5	6
44	Design, Realization, and Experimental Characterization of an Admittance Cell for Low-Frequency Dielectric Permittivity Measurements on Liquids. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 104-111.	2.4	7
45	Effect of the height of the observation line on the the diffraction curve in GPR prospecting. Near Surface Geophysics, 2015, 13, 243-252.	0.6	28
46	Design and characterization of a measurement system for dielectric spectroscopy investigations on granular materials in the 2.45 GHz ISM band. , 2015, , .		2
47	Embedded TDR wire-like sensing elements for monitoring applications. Measurement: Journal of the International Measurement Confederation, 2015, 68, 236-245.	2.5	33
48	Accuracy analysis in the estimation of ToF of TDR signals. , 2015, , .		5
49	Hydration Monitoring and Moisture Control of Cement-Based Samples Through Embedded Wire-Like Sensing Elements. IEEE Sensors Journal, 2015, 15, 1208-1215.	2.4	33
50	Experimental Assessment of the Use of a Novel Superabsorbent polymer (SAP) for the Optimization of Water Consumption in Agricultural Irrigation Process. Water (Switzerland), 2014, 6, 2056-2069.	1.2	87
51	Experimental Characterization and Performance Evaluation of Flexible Two-Wire Probes for TDR Monitoring of Liquid Level. IEEE Transactions on Instrumentation and Measurement, 2014, 63, 2779-2788.	2.4	35
52	Leak detection through microwave reflectometry: From laboratory to practical implementation. Measurement: Journal of the International Measurement Confederation, 2014, 47, 963-970.	2.5	39
53	Time domain reflectometry, ground penetrating radar and electrical resistivity tomography: A comparative analysis of alternative approaches for leak detection in underground pipes. NDT and E International, 2014, 62, 14-28.	1.7	74
54	Localization of leaks in buried pipes through microwave reflectometry: A practical test case. , 2013, , .		2

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55	Extending industrial applicability of TDR liquid level monitoring through flexible probes. , 2013, , .		5
56	A critical analysis of the sustainability of mobile phone use. Resources, Conservation and Recycling, 2013, 73, 162-171.	5.3	62
57	A Comparative Analysis Between Customized and Commercial Systems for Complex Permittivity Measurements on Liquid Samples at Microwave Frequencies. IEEE Transactions on Instrumentation and Measurement, 2013, 62, 1034-1046.	2.4	42
58	An electromagnetic-based method for pinpointing leaks in buried pipes: a practical validation. Water Science and Technology: Water Supply, 2013, 13, 966-976.	1.0	5
59	Reproducibility analysis of a TDR-based monitoring system for intravenous drip infusions: Validation of a novel method for flow-rate measurement in IV infusion. , 2012, , .		12
60	Customized systems for complex permittivity measurements on liquid samples at microwave frequencies: A comparative analysis. , 2012, , .		1
61	Assessment of the uncertainty associated with systematic errors in digital instruments: an experimental study on offset errors. Measurement Science and Technology, 2012, 23, 035004.	1.4	6
62	Performance evaluation of a TDR-based system for detection of leaks in buried pipes. , 2012, , .		5
63	A New Method for Detecting Leaks in Underground Water Pipelines. IEEE Sensors Journal, 2012, 12, 1660-1667.	2.4	85
64	Integrated use of GPR and TDR for soil permittivity evaluation. , 2012, , .		0
65	Classification and adulteration control of vegetable oils based on microwave reflectometry analysis. Journal of Food Engineering, 2012, 112, 338-345.	2.7	35
66	A TDR-based system for the localization of leaks in newly installed, underground pipes made of any material. Measurement Science and Technology, 2012, 23, 105010.	1.4	35
67	EXPERIMENTAL VALIDATION OF A TDR-BASED SYSTEM FOR MEASURING LEAK DISTANCES IN BURIED METAL PIPES. Progress in Electromagnetics Research, 2012, 132, 71-90.	1.6	26
68	Microwave TDR for Real-Time Control of Intravenous Drip Infusions. IEEE Transactions on Instrumentation and Measurement, 2012, 61, 1866-1873.	2.4	41
69	Development of a remote system for real-time control of intravenous drip infusions. , 2011, , .		11
70	Customized system for vegetable oils quality control based on dielectric spectroscopy analysis. , 2011, , .		3
71	Qualitative Characterization of Granular Materials and Moisture Measurements. Lecture Notes in Electrical Engineering, 2011, , 85-131.	0.3	0
72	Systematic errors and measurement uncertainty: An experimental approach. Measurement: Journal of the International Measurement Confederation, 2011, 44, 1781-1789.	2.5	38

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73	An alternative method for the industrial monitoring of osmotic solution during dehydration of fruit and vegetables: A test-case for tomatoes. <i>Journal of Food Engineering</i> , 2011, 105, 186-192.	2.7	8
74	Broadband Reflectometry for Diagnostics and Monitoring Applications. <i>IEEE Sensors Journal</i> , 2011, 11, 451-459.	2.4	39
75	Broadband Reflectometry for Enhanced Diagnostics and Monitoring Applications. <i>Lecture Notes in Electrical Engineering</i> , 2011, , .	0.3	26
76	Broadband Reflectometry: Theoretical Background. <i>Lecture Notes in Electrical Engineering</i> , 2011, , 25-49.	0.3	0
77	BMR Characterization of Antennas through the Combined TD/FD Approach. <i>Lecture Notes in Electrical Engineering</i> , 2011, , 133-148.	0.3	0
78	Basic Physical Principles. <i>Lecture Notes in Electrical Engineering</i> , 2011, , 11-24.	0.3	0
79	Quality and anti-adulteration control of vegetable oils through microwave dielectric spectroscopy. <i>Measurement: Journal of the International Measurement Confederation</i> , 2010, 43, 1031-1039.	2.5	77
80	Improvement and Metrological Validation of TDR Methods for the Estimation of Static Electrical Conductivity. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2010, 59, 1207-1215.	2.4	9
81	Enhancement and Metrological Characterization of an Accurate and Low-Cost Method Based on Seismic Wave Propagation for Soil Moisture Evaluation. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2010, 59, 1216-1223.	2.4	9
82	An Improved Reflectometric Method for Soil Moisture Measurement Exploiting an Innovative Triple-Short Calibration. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2010, 59, 2747-2754.	2.4	31
83	TDR moisture measurements in granular materials: From the siliceous sand test case to the applications for agro-food industrial monitoring. <i>Computer Standards and Interfaces</i> , 2010, 32, 86-95.	3.8	12
84	Soil moisture measurements through a seismic wave-based system: Experimental and metrological validation. , 2009, , .		1
85	An innovative method for TDR measurement of static electrical conductivity in granular materials. , 2009, , .		1
86	Assessment of a TD-Based Method for Characterization of Antennas. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2009, 58, 1412-1419.	2.4	31
87	A Noninvasive Resonance-Based Method for Moisture Content Evaluation Through Microstrip Antennas. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2009, 58, 1420-1426.	2.4	48
88	TDR Moisture Estimation for Granular Materials: An Application in Agro-Food Industrial Monitoring. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2009, 58, 2597-2605.	2.4	16
89	A Combined TD-FD Method for Enhanced Reflectometry Measurements in Liquid Quality Monitoring. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2009, 58, 3534-3543.	2.4	27
90	Enhanced reflectometry measurements of permittivities and levels in layered petrochemical liquids using an in-situ coaxial probe. <i>Measurement: Journal of the International Measurement Confederation</i> , 2009, 42, 685-696.	2.5	34

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91	Metrological assessment of TDR performance for moisture evaluation in granular materials. Measurement: Journal of the International Measurement Confederation, 2009, 42, 254-263.	2.5	32
92	Dielectric Spectroscopy of Liquids Through a Combined Approach: Evaluation of the Metrological Performance and Feasibility Study on Vegetable Oils. IEEE Sensors Journal, 2009, 9, 1226-1233.	2.4	33
93	Simultaneous measurement of dielectric properties and levels of liquids using a TDR method. Measurement: Journal of the International Measurement Confederation, 2008, 41, 307-319.	2.5	38
94	An evaluation of performance limits in continuous TDR monitoring of permittivity and levels of liquid materials. Measurement: Journal of the International Measurement Confederation, 2008, 41, 719-730.	2.5	15
95	Uncertainty Estimation in Simultaneous Measurements of Levels and Permittivities of Liquids Using TDR Technique. IEEE Transactions on Instrumentation and Measurement, 2008, 57, 454-466.	2.4	34
96	A Comparative Analysis of Reflectometry Methods for Characterization of Antennas. , 2008, , .		7
97	A Non-Invasive Approach for Moisture Measurements through Patch Antennas. , 2008, , .		7
98	A frequency-domain method for extending TDR performance in quality determination of fluids. Measurement Science and Technology, 2007, 18, 675-688.	1.4	32
99	A TDR Method for Real-Time Monitoring of Liquids. IEEE Transactions on Instrumentation and Measurement, 2007, 56, 1616-1625.	2.4	40
100	Photodetectors based on heterostructures for opto-electronic applications. IEEE Transactions on Microwave Theory and Techniques, 2003, 51, 2063-2072.	2.9	17
101	Noise extraction for Raman lidar signal processing. , 2003, , .		1
102	Photodetector with Internal Aiding Field Based-on GaAs/AlGaAs Heterostructures. , 2002, , .		0
103	Remote sensing of liquid characteristics using time domain reflectometry. , 2002, , .		4
104	Photodetectors based on heterostructures for optoelectronic applications. , 2002, 4919, 306.		0