

Andrea Maria Cataldo

List of Publications by Year in descending order

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104
papers

1,867
citations

172207

29
h-index

301761

39
g-index

106
all docs

106
docs citations

106
times ranked

1274
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental Assessment of the Use of a Novel Superabsorbent polymer (SAP) for the Optimization of Water Consumption in Agricultural Irrigation Process. <i>Water (Switzerland)</i> , 2014, 6, 2056-2069.	1.2	87
2	A New Method for Detecting Leaks in Underground Water Pipelines. <i>IEEE Sensors Journal</i> , 2012, 12, 1660-1667.	2.4	85
3	Quality and anti-adulteration control of vegetable oils through microwave dielectric spectroscopy. Measurement: <i>Journal of the International Measurement Confederation</i> , 2010, 43, 1031-1039.	2.5	77
4	Time domain reflectometry, ground penetrating radar and electrical resistivity tomography: A comparative analysis of alternative approaches for leak detection in underground pipes. <i>NDT and E International</i> , 2014, 62, 14-28.	1.7	74
5	A critical analysis of the sustainability of mobile phone use. <i>Resources, Conservation and Recycling</i> , 2013, 73, 162-171.	5.3	62
6	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
7	A Comparative Analysis Between Customized and Commercial Systems for Complex Permittivity Measurements on Liquid Samples at Microwave Frequencies. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2013, 62, 1034-1046.	2.4	42
8	Microwave TDR for Real-Time Control of Intravenous Drip Infusions. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2012, 61, 1866-1873.	2.4	41
9	A TDR Method for Real-Time Monitoring of Liquids. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2007, 56, 1616-1625.	2.4	40
10	Broadband Reflectometry for Diagnostics and Monitoring Applications. <i>IEEE Sensors Journal</i> , 2011, 11, 451-459.	2.4	39
11	Leak detection through microwave reflectometry: From laboratory to practical implementation. Measurement: <i>Journal of the International Measurement Confederation</i> , 2014, 47, 963-970.	2.5	39
12	Simultaneous measurement of dielectric properties and levels of liquids using a TDR method. Measurement: <i>Journal of the International Measurement Confederation</i> , 2008, 41, 307-319.	2.5	38
13	Systematic errors and measurement uncertainty: An experimental approach. Measurement: <i>Journal of the International Measurement Confederation</i> , 2011, 44, 1781-1789.	2.5	38
14	Fully-Textile, Wearable Chipless Tags for Identification and Tracking Applications. <i>Sensors</i> , 2020, 20, 429.	2.1	38
15	TDR-Based Measurements of Water Content in Construction Materials for In-the-Field Use and Calibration. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2018, 67, 1230-1237.	2.4	37
16	Recent advances in the TDR-based leak detection system for pipeline inspection. Measurement: <i>Journal of the International Measurement Confederation</i> , 2017, 98, 347-354.	2.5	36
17	Classification and adulteration control of vegetable oils based on microwave reflectometry analysis. <i>Journal of Food Engineering</i> , 2012, 112, 338-345.	2.7	35
18	A TDR-based system for the localization of leaks in newly installed, underground pipes made of any material. <i>Measurement Science and Technology</i> , 2012, 23, 105010.	1.4	35

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19	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
20	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
21	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.	2.5	34
22	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
23	Embedded TDR wire-like sensing elements for monitoring applications. Measurement: Journal of the International Measurement Confederation, 2015, 68, 236-245.	2.5	33
24	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
25	A frequency-domain method for extending TDR performance in quality determination of fluids. Measurement Science and Technology, 2007, 18, 675-688.	1.4	32
26	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
27	Assessment of a TD-Based Method for Characterization of Antennas. IEEE Transactions on Instrumentation and Measurement, 2009, 58, 1412-1419.	2.4	31
28	An Improved Reflectometric Method for Soil Moisture Measurement Exploiting an Innovative Triple-Short Calibration. IEEE Transactions on Instrumentation and Measurement, 2010, 59, 2747-2754.	2.4	31
29	Criteria for Automated Estimation of Time of Flight in TDR Analysis. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 1215-1224.	2.4	30
30	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
31	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
32	Feasibility of a Wearable Reflectometric System for Sensing Skin Hydration. Sensors, 2020, 20, 2833.	2.1	28
33	A Combined TD-FD Method for Enhanced Reflectometry Measurements in Liquid Quality Monitoring. IEEE Transactions on Instrumentation and Measurement, 2009, 58, 3534-3543.	2.4	27
34	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
35	Broadband Reflectometry for Enhanced Diagnostics and Monitoring Applications. Lecture Notes in Electrical Engineering, 2011, , .	0.3	26
36	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

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37	TDR-based monitoring of rising damp through the embedding of wire-like sensing elements in building structures. <i>Measurement: Journal of the International Measurement Confederation</i> , 2017, 98, 355-360.	2.5	22
38	Enhancement of leak detection in pipelines through time-domain reflectometry/ground penetrating radar measurements. <i>IET Science, Measurement and Technology</i> , 2017, 11, 696-702.	0.9	19
39	Water Detection Using Bi-Wires as Sensing Elements: Comparison Between Capacimetry-Based and Time-of-Flight-Based Techniques. <i>IEEE Sensors Journal</i> , 2016, 16, 4309-4317.	2.4	18
40	Photodetectors based on heterostructures for opto-electronic applications. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2003, 51, 2063-2072.	2.9	17
41	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
42	A Microwave Measuring System for Detecting and Localizing Anomalies in Metallic Pipelines. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2021, 70, 1-11.	2.4	16
43	An evaluation of performance limits in continuous TDR monitoring of permittivity and levels of liquid materials. <i>Measurement: Journal of the International Measurement Confederation</i> , 2008, 41, 719-730.	2.5	15
44	Microwave reflectometric methodologies for water content estimation in stone-made Cultural Heritage materials. <i>Measurement: Journal of the International Measurement Confederation</i> , 2018, 118, 275-281.	2.5	14
45	Wearable antennas for applications in remote assistance to elderly people. , 2017, , .		13
46	Novel PHB/Olive mill wastewater residue composite based film: Thermal, mechanical and degradation properties. <i>Journal of Environmental Chemical Engineering</i> , 2017, 5, 6001-6007.	3.3	13
47	Radio-frequency Identification Based on Textile, Wearable, Chipless Tags for IoT Applications. , 2019, , .		13
48	Portable Microwave Reflectometry System for Skin Sensing. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2022, 71, 1-8.	2.4	13
49	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
50	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
51	Assessment and Scientific Progresses in the Analysis of Olfactory Evoked Potentials. <i>Bioengineering</i> , 2022, 9, 252.	1.6	12
52	Development of a remote system for real-time control of intravenous drip infusions. , 2011, , .		11
53	A new measurement algorithm for TDR-based localization of large dielectric permittivity variations in long-distance cable systems. <i>Measurement: Journal of the International Measurement Confederation</i> , 2021, 174, 109066.	2.5	11
54	Accuracy improvement in the TDR-based localization of water leaks. <i>Results in Physics</i> , 2016, 6, 594-598.	2.0	10

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55	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
56	Improvement and Metrological Validation of TDR Methods for the Estimation of Static Electrical Conductivity. IEEE Transactions on Instrumentation and Measurement, 2010, 59, 1207-1215.	2.4	9
57	Enhancement and Metrological Characterization of an Accurate and Low-Cost Method Based on Seismic Wave Propagation for Soil Moisture Evaluation. IEEE Transactions on Instrumentation and Measurement, 2010, 59, 1216-1223.	2.4	9
58	Microwave Wearable System for Sensing Skin Hydration. , 2021, , .		9
59	An alternative method for the industrial monitoring of osmotic solution during dehydration of fruit and vegetables: A test-case for tomatoes. Journal of Food Engineering, 2011, 105, 186-192.	2.7	8
60	TDR application for moisture content estimation in agri-food materials. IEEE Instrumentation and Measurement Magazine, 2017, 20, 26-31.	1.2	8
61	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
62	Is the Time-Domain Reflectometry (TDR) Technique Suitable for Moisture Content Measurement in Low-Porosity Building Materials?. Sustainability, 2020, 12, 7855.	1.6	8
63	Combined Punctual and Diffused Monitoring of Concrete Structures Based on Dielectric Measurements. Sensors, 2021, 21, 4872.	2.1	8
64	A Comparative Analysis of Reflectometry Methods for Characterization of Antennas. , 2008, , .		7
65	A Non-Invasive Approach for Moisture Measurements through Patch Antennas. , 2008, , .		7
66	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
67	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
68	Innovative method for traceability of hides throughout the leather manufacturing process. International Journal of Advanced Manufacturing Technology, 2016, 86, 3563-3570.	1.5	6
69	Performance evaluation of a TDR-based system for detection of leaks in buried pipes. , 2012, , .		5
70	Extending industrial applicability of TDR liquid level monitoring through flexible probes. , 2013, , .		5
71	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
72	Accuracy analysis in the estimation of ToF of TDR signals. , 2015, , .		5

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73	Permittivity-Based Water Content Calibration Measurement in Wood-Based Cultural Heritage: A Preliminary Study. <i>Sensors</i> , 2022, 22, 2148.	2.1	5
74	Remote sensing of liquid characteristics using time domain reflectometry. , 2002, , .		4
75	Advances in Reflectometric Sensing for Industrial Applications. <i>Synthesis Lectures on Emerging Engineering Technologies</i> , 2016, 2, 1-96.	0.2	4
76	Customized system for vegetable oils quality control based on dielectric spectroscopy analysis. , 2011, , .		3
77	Moisture content monitoring of construction materials: From in-line production through on-site applications. , 2017, , .		3
78	Microwave reflectometric systems and monitoring apparatus for diffused-sensing applications. <i>Acta IMEKO</i> (2012), 2021, 10, 202.	0.4	3
79	Neural Network-Based Prediction and Monitoring of Blood Glucose Response to Nutritional Factors in Type-1 Diabetes. , 2022, , .		3
80	Localization of leaks in buried pipes through microwave reflectometry: A practical test case. , 2013, , .		2
81	Design and characterization of a measurement system for dielectric spectroscopy investigations on granular materials in the 2.45 GHz ISM band. , 2015, , .		2
82	Time-domain reflectometry: Current uses and new possibilities. , 2019, , 59-96.		2
83	Time Domain Reflectometry (TDR) technique â€“ A solution to monitor moisture content in construction materials. <i>E3S Web of Conferences</i> , 2020, 172, 17001.	0.2	2
84	Proof of Concept of Biopolymer Based Hydrogels as Biomimetic Oviposition Substrate to Develop Tiger Mosquitoes (<i>Aedes albopictus</i>) Cost-Effective Lure and Kill Ovitrap. <i>Bioengineering</i> , 2022, 9, 267.	1.6	2
85	Soil moisture measurements through a seismic wave-based system: Experimental and metrological validation. , 2009, , .		1
86	An innovative method for TDR measurement of static electrical conductivity in granular materials. , 2009, , .		1
87	Customized systems for complex permittivity measurements on liquid samples at microwave frequencies: A comparative analysis. , 2012, , .		1
88	Controlling the irrigation process in agriculture through elongated TDR-sensing cables. , 2017, , .		1
89	Reflectometric System for Continuous and Automated Monitoring of Irrigation in Agriculture. <i>Advances in Agriculture</i> , 2018, 2018, 1-10.	0.3	1
90	A New Microwave Method for On-Site Integrity Monitoring of Pipelines. , 2020, , .		1

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91	Noise extraction for Raman lidar signal processing. , 2003, , .		1
92	Low-cost System for Skin Sensing. , 2021, , .		1
93	Photodetector with Internal Aiding Field Based-on GaAs/AlGaAs Heterostructures. , 2002, , .		0
94	Photodetectors based on heterostructures for optoelectronic applications. , 2002, 4919, 306.		0
95	Qualitative Characterization of Granular Materials and Moisture Measurements. Lecture Notes in Electrical Engineering, 2011, , 85-131.	0.3	0
96	Integrated use of GPR and TDR for soil permittivity evaluation. , 2012, , .		0
97	Transmission line simulator for TDR-based measurements. , 2017, , .		0
98	Compensating for Density Effect in Permittivity-Based Moisture Content Measurements on Historic Masonry Materials. , 2018, , .		0
99	Measuring moisture content in building materials with Time-Domain Reflectometry: pros, cons and first results. , 2021, , .		0
100	Broadband Reflectometry: Theoretical Background. Lecture Notes in Electrical Engineering, 2011, , 25-49.	0.3	0
101	BMR Characterization of Antennas through the Combined TD/FD Approach. Lecture Notes in Electrical Engineering, 2011, , 133-148.	0.3	0
102	Basic Physical Principles. Lecture Notes in Electrical Engineering, 2011, , 11-24.	0.3	0
103	Reflectometric Measurements. Lecture Notes in Electrical Engineering, 2020, , 145-179.	0.3	0
104	Systems and Monitoring Apparata Based on Reflectometric Techniques for Enhanced Revealing. , 2021, , .		0