

GÃ©raldine Villain

List of Publications by Year in descending order

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54
papers

1,733
citations

471509

17
h-index

330143

37
g-index

55
all docs

55
docs citations

55
times ranked

1567
citing authors

#	ARTICLE	IF	CITATIONS
1	Investigation of the carbonation front shape on cementitious materials: Effects of the chemical kinetics. <i>Cement and Concrete Research</i> , 2007, 37, 1047-1058.	11.0	465
2	Measurement methods of carbonation profiles in concrete: Thermogravimetry, chemical analysis and gammadensimetry. <i>Cement and Concrete Research</i> , 2007, 37, 1182-1192.	11.0	435
3	Gammadensimetry: A method to determine drying and carbonation profiles in concrete. <i>NDT and E International</i> , 2006, 39, 328-337.	3.7	66
4	Development of a multi-ring resistivity cell and multi-electrode resistivity probe for investigation of cover concrete condition. <i>NDT and E International</i> , 2013, 54, 27-36.	3.7	60
5	Acoustic techniques for concrete evaluation: Improvements, comparisons and consistency. <i>Construction and Building Materials</i> , 2013, 43, 598-613.	7.2	59
6	Non-contact, automated surface wave measurements for the mechanical characterisation of concrete. <i>Construction and Building Materials</i> , 2012, 37, 904-915.	7.2	57
7	Durability diagnosis of a concrete structure in a tidal zone by combining NDT methods: Laboratory tests and case study. <i>Construction and Building Materials</i> , 2012, 37, 893-903.	7.2	56
8	Electromagnetic non-destructive evaluation techniques for the monitoring of water and chloride ingress into concrete: a comparative study. <i>Materials and Structures/Materiaux Et Constructions</i> , 2015, 48, 369-386.	3.1	50
9	Analysis of coherent surface wave dispersion and attenuation for non-destructive testing of concrete. <i>Ultrasonics</i> , 2009, 49, 743-751.	3.9	46
10	Mechanical properties estimation of functionally graded materials using surface waves recorded with a laser interferometer. <i>NDT and E International</i> , 2011, 44, 169-177.	3.7	35
11	Complex Permittivity Frequency Variations From Multioffset GPR Data: Hydraulic Concrete Characterization. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2012, 61, 1636-1648.	4.7	29
12	Determining chloride content profiles in concrete using an electrical resistivity tomography device. <i>Cement and Concrete Composites</i> , 2018, 94, 315-326.	10.7	29
13	On Variants of the Frequency Power Law for the Electromagnetic Characterization of Hydraulic Concrete. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2011, 60, 3658-3668.	4.7	27
14	Use of electromagnetic non-destructive techniques for monitoring water and chloride ingress into concrete. <i>Near Surface Geophysics</i> , 2015, 13, 299-309.	1.2	26
15	Characterization of random fields from NDT measurements: A two stages procedure. <i>Engineering Structures</i> , 2016, 111, 312-322.	5.3	26
16	Development of a calibration methodology to improve the on-site non-destructive evaluation of concrete durability indicators. <i>Materials and Structures/Materiaux Et Constructions</i> , 2018, 51, 1.	3.1	23
17	Determining the permittivity profile inside reinforced concrete using capacitive probes. <i>NDT and E International</i> , 2016, 79, 150-161.	3.7	22
18	Determination of concrete water content by coupling electromagnetic methods: Coaxial/cylindrical transition line with capacitive probes. <i>NDT and E International</i> , 2017, 88, 59-70.	3.7	18

#	ARTICLE	IF	CITATIONS
19	Development of an ultrasonic experimental device to characterise concrete for structural repair. <i>Construction and Building Materials</i> , 2012, 37, 934-942.	7.2	17
20	Effect of water and chloride contents and carbonation on the electromagnetic characterization of concretes on the GPR frequency band through designs of experiment. <i>NDT and E International</i> , 2017, 92, 187-198.	3.7	17
21	Design and validation of a multi-electrode embedded sensor to monitor resistivity profiles over depth in concrete. <i>Construction and Building Materials</i> , 2019, 223, 310-321.	7.2	17
22	Accounting for steel rebar effect on resistivity profiles in view of reinforced concrete structure survey. <i>Construction and Building Materials</i> , 2019, 223, 898-909.	7.2	17
23	Development of a multi-linear quadratic experimental design for the EM characterization of concretes in the radar frequency-band. <i>Construction and Building Materials</i> , 2017, 136, 237-245.	7.2	16
24	Evaluation of concrete water content and other durability indicators by electromagnetic measurements. , 2010, , .		13
25	Near-Field Full-Waveform Inversion of Ground-Penetrating Radar Data to Monitor the Water Front in Limestone. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2017, 10, 4328-4336.	4.9	13
26	Determination of the bulk elastic moduli of various concretes by resonance frequency analysis of slabs submitted to impact echo. <i>European Journal of Environmental and Civil Engineering</i> , 2011, 15, 601-617.	2.1	9
27	Use of electromagnetic two-layer wave-guided propagation in the GPR frequency range to characterize water transfer in concrete. <i>NDT and E International</i> , 2017, 86, 164-174.	3.7	9
28	Using machine learning algorithms to link volumetric water content to complex dielectric permittivity in a wide (33â€”2000 MHz) frequency band for hydraulic concretes. <i>Near Surface Geophysics</i> , 2016, 14, 527-536.	1.2	8
29	Non-destructive measurements for the evaluation of the air permeability of concrete structures. <i>Measurement: Journal of the International Measurement Confederation</i> , 2022, 196, 111204.	5.0	7
30	Use of frequency power law to link the results of two EM testing methods for the characterization of humid concretes. , 2011, , .		5
31	Temperature influence on electromagnetic measurements of concrete moisture. <i>European Journal of Environmental and Civil Engineering</i> , 2015, 19, 482-495.	2.1	5
32	Joint inversion of electromagnetic measurements for the determination of water saturation profiles in concrete structures. <i>Cement and Concrete Research</i> , 2021, 147, 106500.	11.0	5
33	Influence of Concrete Carbonation on Electromagnetic Permittivity Measured by GPR and Capacitive Techniques. <i>Journal of Environmental and Engineering Geophysics</i> , 2018, 23, 443-456.	0.5	4
34	Monitoring water transfers in limestone building materials with water retention curve and Ground Penetrating Radar: A comparative study. <i>NDT and E International</i> , 2018, 100, 31-39.	3.7	4
35	Linking Degree of Saturation With the Complex Dielectric Permittivity of Limestone in a GPR Frequency Band Using SVR. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2021, 70, 1-9.	4.7	4
36	Blind comparison of saturation ratio profiles on large RC structures by means of NDT and SFEâ€”Application to the VeRCoRs mock-up. <i>Engineering Structures</i> , 2022, 258, 114057.	5.3	4

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37	Experimental study of the evolution of heat and moisture transfer parameters of a concrete slab. Magazine of Concrete Research, 2007, 59, 377-386.	2.0	3
38	The effect of coupling on the determination of time zero for radar antennae. , 2010, , .		3
39	Electromagnetic dispersion estimated from multi-offset, ground-penetrating radar. , 2010, , .		3
40	On the variants of Jonscher's model for the electromagnetic characterization of concrete. , 2010, , .		3
41	Electrical Methods. , 2018, , 139-172.		3
42	Parametric study on processing GPR signals to get a dispersion curve. , 2014, , .		2
43	Recent developments of EM non-destructive testing in the radar frequency-band for the evaluation of cover concretes. , 2015, , .		2
44	Modeling of stepped-frequency radar wave propagation through partially wet limestone. , 2016, , .		2
45	Construction of Conversion Models of Observables into Indicators. , 2018, , 231-257.		2
46	Use of electromagnetic non-destructive techniques for monitoring the chloride ingress into concrete. , 2013, , .		1
47	GPR characterization of water transfers in Tuffeau walls. , 2013, , .		1
48	Use of electromagnetic waves propagating in multilayer waveguide to characterize water transfer in concrete. , 2015, , .		1
49	EM characterization of concretes focused on water and chloride contents in the frame of multi-linear experimental designs. , 2016, , .		1
50	Effect of concrete carbonation on GPR and capacitive measurements. , 2017, , .		1
51	Optimized retrieval of 1D-resistivity profiles in cover concrete by electrical sounding measurements. Journal of Applied Geophysics, 2021, 193, 104413.	2.1	1
52	Extraction of the frequency variation of the complex permittivity using GPR. , 2011, , .		0
53	Homogenisation of concrete in a batch plant: the influence of mixing time and method on the introduction of mineral admixtures. Magazine of Concrete Research, 2003, 55, 105-116.	2.0	0
54	Effect of Steel Reinforcement on Electrical Measurements on Concrete. IABSE Symposium Report, 2018, , .	0.0	0