

William Weiss

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

114
papers

5,387
citations

44
h-index

69
g-index

116
ext. papers

6,359
ext. citations

5.9
avg, IF

6.09
L-index

#	Paper	IF	Citations
114	Volume change and cracking in internally cured mixtures made with saturated lightweight aggregate under sealed and unsealed conditions. <i>Cement and Concrete Composites</i> , 2009 , 31, 427-437	8.6	183
113	Assessing residual stress development and stress relaxation in restrained concrete ring specimens. <i>Cement and Concrete Composites</i> , 2004 , 26, 531-540	8.6	179
112	Characterizing Enhanced Porosity Concrete using electrical impedance to predict acoustic and hydraulic performance. <i>Cement and Concrete Research</i> , 2006 , 36, 2074-2085	10.3	170
111	Interactions between shrinkage reducing admixtures (SRA) and cement paste's pore solution. <i>Cement and Concrete Research</i> , 2008 , 38, 606-615	10.3	162
110	Water Absorption and Critical Degree of Saturation Relating to Freeze-Thaw Damage in Concrete Pavement Joints. <i>Journal of Materials in Civil Engineering</i> , 2012 , 24, 299-307	3	154
109	The influence of cellulose nanocrystal additions on the performance of cement paste. <i>Cement and Concrete Composites</i> , 2015 , 56, 73-83	8.6	147
108	Absorption and desorption properties of fine lightweight aggregate for application to internally cured concrete mixtures. <i>Cement and Concrete Composites</i> , 2011 , 33, 1001-1008	8.6	139
107	Fine limestone additions to regulate setting in high volume fly ash mixtures. <i>Cement and Concrete Composites</i> , 2012 , 34, 11-17	8.6	138
106	Effect of sample conditioning on the water absorption of concrete. <i>Cement and Concrete Composites</i> , 2011 , 33, 805-813	8.6	136
105	Effect of internal curing by using superabsorbent polymers (SAP) on autogenous shrinkage and other properties of a high-performance fine-grained concrete: results of a RILEM round-robin test. <i>Materials and Structures/Materiaux Et Constructions</i> , 2014 , 47, 541-562	3.4	128
104	Electrical conductivity of drying cement paste. <i>Materials and Structures/Materiaux Et Constructions</i> , 2007 , 40, 1143-1160	3.4	118
103	Water absorption in internally cured mortar made with water-filled lightweight aggregate. <i>Cement and Concrete Research</i> , 2009 , 39, 883-892	10.3	117
102	Multi-scale investigation of the performance of limestone in concrete. <i>Construction and Building Materials</i> , 2015 , 75, 1-10	6.7	110
101	The origin of early age expansions induced in cementitious materials containing shrinkage reducing admixtures. <i>Cement and Concrete Research</i> , 2011 , 41, 218-229	10.3	110
100	Application of internal curing for mixtures containing high volumes of fly ash. <i>Cement and Concrete Composites</i> , 2012 , 34, 1001-1008	8.6	94
99	Rheological properties of cement pastes: A discussion of structure formation and mechanical property development. <i>Cement and Concrete Research</i> , 2008 , 38, 1286-1296	10.3	93
98	Quantifying shrinkage cracking in fiber reinforced concrete using the ring test. <i>Materials and Structures/Materiaux Et Constructions</i> , 2006 , 39, 887-899	3.4	91

97	The relationship between cellulose nanocrystal dispersion and strength. <i>Construction and Building Materials</i> , 2016 , 119, 71-79	6.7	90
96	The Influence of Calcium Chloride Deicing Salt on Phase Changes and Damage Development in Cementitious Materials. <i>Cement and Concrete Composites</i> , 2015 , 64, 1-15	8.6	88
95	Examining the pozzolanicity of supplementary cementitious materials using isothermal calorimetry and thermogravimetric analysis. <i>Cement and Concrete Composites</i> , 2017 , 83, 273-278	8.6	84
94	Modeling of the influence of transverse cracking on chloride penetration into concrete. <i>Cement and Concrete Composites</i> , 2013 , 38, 65-74	8.6	77
93	Estimating residual stress in the restrained ring test under circumferential drying. <i>Cement and Concrete Composites</i> , 2006 , 28, 486-496	8.6	74
92	Using a Saturation Function to Interpret the Electrical Properties of Partially Saturated Concrete. <i>Journal of Materials in Civil Engineering</i> , 2013 , 25, 1097-1106	3	72
91	The role of specimen geometry and boundary conditions on stress development and cracking in the restrained ring test. <i>Cement and Concrete Research</i> , 2006 , 36, 189-199	10.3	72
90	Acoustic emission waveform characterization of crack origin and mode in fractured and ASR damaged concrete. <i>Cement and Concrete Composites</i> , 2015 , 60, 135-145	8.6	70
89	The influence of the initial moisture content of lightweight aggregate on internal curing. <i>Construction and Building Materials</i> , 2012 , 35, 52-62	6.7	69
88	Factors that Influence Electrical Resistivity Measurements in Cementitious Systems. <i>Transportation Research Record</i> , 2013 , 2342, 90-98	1.7	69
87	Capillary porosity depercolation in cement-based materials: Measurement techniques and factors which influence their interpretation. <i>Cement and Concrete Research</i> , 2011 , 41, 854-864	10.3	69
86	Early-age acoustic emission measurements in hydrating cement paste: Evidence for cavitation during solidification due to self-desiccation. <i>Cement and Concrete Research</i> , 2009 , 39, 861-867	10.3	68
85	Early-Age Properties of Cement-Based Materials. I: Influence of Cement Fineness. <i>Journal of Materials in Civil Engineering</i> , 2008 , 20, 502-508	3	68
84	Shrinkage Mitigation Strategies in Cementitious Systems: A Closer Look at Differences in Sealed and Unsealed Behavior. <i>Transportation Research Record</i> , 2008 , 2070, 59-67	1.7	67
83	Damage development in cementitious materials exposed to magnesium chloride deicing salt. <i>Construction and Building Materials</i> , 2015 , 93, 384-392	6.7	66
82	Chloride binding of cement pastes with fly ash exposed to CaCl ₂ solutions at 5 and 23 °C. <i>Cement and Concrete Composites</i> , 2019 , 97, 43-53	8.6	64
81	Acoustic performance and damping behavior of cellulose/cement composites. <i>Cement and Concrete Composites</i> , 2004 , 26, 359-370	8.6	63
80	Cracking in cement paste induced by autogenous shrinkage. <i>Materials and Structures/Materiaux Et Constructions</i> , 2009 , 42, 1089-1099	3.4	60

79	Wetting and drying of concrete using aqueous solutions containing deicing salts. <i>Cement and Concrete Composites</i> , 2011 , 33, 535-542	8.6	60
78	Plastic shrinkage of mortars with shrinkage reducing admixture and lightweight aggregates studied by neutron tomography. <i>Cement and Concrete Research</i> , 2015 , 73, 238-245	10.3	57
77	Damage in cement pastes exposed to NaCl solutions. <i>Construction and Building Materials</i> , 2018 , 171, 120-127	6.7	57
76	The influence of cellulose nanocrystals on the microstructure of cement paste. <i>Cement and Concrete Composites</i> , 2016 , 74, 164-173	8.6	57
75	Electrical response of mortar with different degrees of saturation and deicing salt solutions during freezing and thawing. <i>Cement and Concrete Composites</i> , 2015 , 59, 49-59	8.6	51
74	New insights from reactivity testing of supplementary cementitious materials. <i>Cement and Concrete Composites</i> , 2019 , 103, 331-338	8.6	49
73	The influence of alkali content on the electrical resistivity and transport properties of cementitious materials. <i>Cement and Concrete Composites</i> , 2014 , 51, 49-58	8.6	46
72	Acoustic Emission and Low-Temperature Calorimetry Study of Freeze and Thaw Behavior in Cementitious Materials Exposed to Sodium Chloride Salt. <i>Transportation Research Record</i> , 2014 , 2441, 81-90	1.7	45
71	Fluid transport in high volume fly ash mixtures with and without internal curing. <i>Cement and Concrete Composites</i> , 2014 , 45, 102-110	8.6	44
70	Incorporating phase change materials in concrete pavement to melt snow and ice. <i>Cement and Concrete Composites</i> , 2017 , 84, 134-145	8.6	42
69	Reducing Set Retardation in High-Volume Fly Ash Mixtures with the Use of Limestone: Improving Constructability for Sustainability. <i>Transportation Research Record</i> , 2012 , 2290, 139-146	1.7	42
68	Influence of bundle coating on the tensile behavior, bonding, cracking and fluid transport of fabric cement-based composites. <i>Cement and Concrete Composites</i> , 2013 , 42, 9-19	8.6	40
67	Influence of Shrinkage-Reducing Admixtures on Moisture Absorption in Cementitious Materials at Early Ages. <i>Journal of Materials in Civil Engineering</i> , 2010 , 22, 277-286	3	39
66	Freeze-thaw crack determination in cementitious materials using 3D X-ray computed tomography and acoustic emission. <i>Cement and Concrete Composites</i> , 2018 , 89, 120-129	8.6	37
65	The Influence of Cellulose Nanocrystals on the Hydration and Flexural Strength of Portland Cement Pastes. <i>Polymers</i> , 2017 , 9,	4.5	37
64	Binary mixtures of fatty acid methyl esters as phase change materials for low temperature applications. <i>Applied Thermal Engineering</i> , 2016 , 96, 501-507	5.8	36
63	Procedure to Interpret Electrical Conductivity Measurements in Cover Concrete during Rewetting. <i>Journal of Materials in Civil Engineering</i> , 2005 , 17, 586-594	3	36
62	Evaluating the hydration of high volume fly ash mixtures using chemically inert fillers. <i>Construction and Building Materials</i> , 2018 , 161, 221-228	6.7	35

61	Atomic force and lateral force microscopy (AFM and LFM) examinations of cement and cement hydration products. <i>Cement and Concrete Composites</i> , 2013 , 36, 48-55	8.6	33
60	Numerical Simulation of the Freeze-Thaw Behavior of Mortar Containing Deicing Salt Solution. <i>Materials and Structures/Materiaux Et Constructions</i> , 2017 , 50, 1	3.4	32
59	Service-life of concrete in freeze-thaw environments: Critical degree of saturation and calcium oxychloride formation. <i>Cement and Concrete Research</i> , 2019 , 122, 93-106	10.3	30
58	An inter lab comparison of gas transport testing procedures: Oxygen permeability and oxygen diffusivity. <i>Cement and Concrete Composites</i> , 2014 , 53, 357-366	8.6	30
57	Jet mill grinding of portland cement, limestone, and fly ash: Impact on particle size, hydration rate, and strength. <i>Cement and Concrete Composites</i> , 2013 , 44, 41-49	8.6	30
56	Reducing Joint Damage in Concrete Pavements: Quantifying Calcium Oxychloride Formation. <i>Transportation Research Record</i> , 2016 , 2577, 17-24	1.7	29
55	Flexural strength reduction of cement pastes exposed to CaCl ₂ solutions. <i>Cement and Concrete Composites</i> , 2018 , 86, 297-305	8.6	29
54	Detecting the time and location of cracks using electrically conductive surfaces. <i>Cement and Concrete Composites</i> , 2011 , 33, 116-123	8.6	28
53	Saturated Lightweight Aggregate for Internal Curing in Low w/c Mixtures: Monitoring Water Movement Using X-ray Absorption. <i>Strain</i> , 2011 , 47, e432-e441	1.7	26
52	Assessment of Localized Damage in Concrete under Compression Using Acoustic Emission. <i>Journal of Materials in Civil Engineering</i> , 2006 , 18, 325-333	3	26
51	The influence of mechanical activation by vibro-milling on the early-age hydration and strength development of cement. <i>Cement and Concrete Composites</i> , 2016 , 71, 53-62	8.6	25
50	Pozzolanicity of finely ground lightweight aggregates. <i>Cement and Concrete Composites</i> , 2018 , 88, 115-126	8.6	23
49	The design of an instrumented rebar for assessment of corrosion in cracked reinforced concrete. <i>Materials and Structures/Materiaux Et Constructions</i> , 2011 , 44, 1259-1271	3.4	23
48	Atomic Force Microscopy Examinations of Mortar Made by Using Water-Filled Lightweight Aggregate. <i>Transportation Research Record</i> , 2010 , 2141, 92-101	1.7	23
47	Experimental and Numerical Quantification of Plastic Settlement in Fresh Cementitious Systems. <i>Journal of Materials in Civil Engineering</i> , 2010 , 22, 951-966	3	23
46	Use of Fly Ash to Minimize Deicing Salt Damage in Concrete Pavements. <i>Transportation Research Record</i> , 2017 , 2629, 24-32	1.7	22
45	Water Absorption and Electrical Conductivity for Internally Cured Mortars with a W/C between 0.30 and 0.45. <i>Journal of Materials in Civil Engineering</i> , 2012 , 24, 223-231	3	22
44	Leaching of Conductive Species: Implications to Measurements of Electrical Resistivity. <i>Cement and Concrete Composites</i> , 2017 , 79, 94-105	8.6	20

43	Toward the prediction of pore volumes and freeze-thaw performance of concrete using thermodynamic modelling. <i>Cement and Concrete Research</i> , 2019 , 124, 105820	10.3	20
42	Damage in cement pastes exposed to MgCl ₂ solutions. <i>Materials and Structures/Materiaux Et Constructions</i> , 2018 , 51, 1	3.4	20
41	Evaluating the use of supplementary cementitious materials to mitigate damage in cementitious materials exposed to calcium chloride deicing salt. <i>Cement and Concrete Composites</i> , 2017 , 81, 77-86	8.6	19
40	The influence of carbonation on the formation of calcium oxychloride. <i>Cement and Concrete Composites</i> , 2016 , 73, 185-191	8.6	19
39	Using neutron radiography to assess water absorption in air entrained mortar. <i>Construction and Building Materials</i> , 2016 , 110, 98-105	6.7	19
38	Assessment of the Behavior of Buried Concrete Pipelines Subjected to Ground Rupture: Experimental Study. <i>Journal of Pipeline Systems Engineering and Practice</i> , 2012 , 3, 8-16	1.5	19
37	A preliminary numerical investigation on the influence of material variability in the early-age cracking behavior of restrained concrete. <i>Materials and Structures/Materiaux Et Constructions</i> , 2007 , 40, 375-386	3.4	19
36	Early age cracking behavior of internally cured mortar restrained by dual rings with different thickness. <i>Construction and Building Materials</i> , 2014 , 66, 146-153	6.7	18
35	Role of Lightweight Synthetic Particles on the Restrained Shrinkage Cracking Behavior of Mortar. <i>Journal of Materials in Civil Engineering</i> , 2011 , 23, 597-605	3	18
34	Rheological impact of using cellulose nanocrystals (CNC) in cement pastes. <i>Construction and Building Materials</i> , 2020 , 235, 117497	6.7	18
33	Wireless Crack Detection in Concrete Elements Using Conductive Surface Sensors and Radio Frequency Identification Technology. <i>Journal of Materials in Civil Engineering</i> , 2014 , 26, 923-929	3	17
32	Fluid Transport in Cracked Fabric-Reinforced-Cement-Based Composites. <i>Journal of Materials in Civil Engineering</i> , 2011 , 23, 1227-1238	3	17
31	Conventional Portland Cement and Carbonated Calcium Silicate Based Cement Systems: Performance During Freezing and Thawing in Presence of Calcium Chloride Deicing Salts. <i>Transportation Research Record</i> , 2015 , 2508, 48-54	1.7	16
30	Application of ultrasonic P-wave reflection to measure development of early-age cement-paste properties. <i>Materials and Structures/Materiaux Et Constructions</i> , 2013 , 46, 987-997	3.4	16
29	Experimental Methods to Detect and Quantify Damage in Restrained Concrete Ring Specimens. <i>Journal of Advanced Concrete Technology</i> , 2011 , 9, 251-260	2.3	16
28	An automated electrical monitoring system (AEMS) to assess property development in concrete. <i>Automation in Construction</i> , 2010 , 19, 485-490	9.6	16
27	Using X-ray computed tomography to investigate mortar subjected to freeze-thaw cycles. <i>Cement and Concrete Composites</i> , 2020 , 108, 103520	8.6	15
26	Using X-ray fluorescence to assess the chemical composition and resistivity of simulated cementitious pore solutions. <i>International Journal of Advances in Engineering Sciences and Applied Mathematics</i> , 2017 , 9, 136-143	0.6	14

25	Hydrated cement paste constituents observed with Atomic Force and Lateral Force Microscopy. <i>Construction and Building Materials</i> , 2011 , 25, 4299-4302	6.7	14
24	Restrained Shrinkage Cracking in Concrete Elements: Role of Substrate Bond on Crack Development. <i>Journal of Materials in Civil Engineering</i> , 2011 , 23, 895-902	3	13
23	Characterizing Lightweight Aggregate Desorption at High Relative Humidities Using a Pressure Plate Apparatus. <i>Journal of Materials in Civil Engineering</i> , 2012 , 24, 961-969	3	13
22	Influence of high volumes of silica fume on the rheological behavior of oil well cement pastes. <i>Construction and Building Materials</i> , 2019 , 203, 401-407	6.7	12
21	An accelerated testing protocol for assessing microbially induced concrete deterioration during the bacterial attachment phase. <i>Cement and Concrete Composites</i> , 2019 , 104, 103339	8.6	11
20	Using accelerated pavement testing to examine traffic opening criteria for concrete pavements. <i>Construction and Building Materials</i> , 2015 , 96, 86-95	6.7	11
19	Examining Curing Efficiency using Neutron Radiography. <i>Transportation Research Record</i> , 2018 , 2672, 13-23	1.7	10
18	Assessing Performance of Glow-in-the-Dark Concrete. <i>Transportation Research Record</i> , 2015 , 2508, 31-38	1.7	10
17	Methodology for Determining the Timing of Saw Cutting in Concrete Pavements. <i>Transportation Research Record</i> , 2008 , 2081, 110-117	1.7	10
16	Can Soy Methyl Esters Reduce Fluid Transport and Improve Durability of Concrete?. <i>Transportation Research Record</i> , 2009 , 2113, 22-30	1.7	9
15	Performance of Portland Limestone Cements. <i>Transportation Research Record</i> , 2014 , 2441, 112-120	1.7	8
14	Can Soy Methyl Esters Improve Concrete Pavement Joint Durability?. <i>Transportation Research Record</i> , 2012 , 2290, 60-68	1.7	8
13	Quantifying fluid filling of the air voids in air entrained concrete using neutron radiography. <i>Cement and Concrete Composites</i> , 2019 , 104, 103407	8.6	7
12	A two-step multiscale model to predict early age strength development of cementitious composites considering competing fracture mechanisms. <i>Construction and Building Materials</i> , 2019 , 208, 577-600	6.7	7
11	Influence of Slag Aggregate Production on Its Potential for Use in Internal Curing. <i>Transportation Research Record</i> , 2014 , 2441, 105-111	1.7	7
10	NEUTRON RADIOGRAPHY MEASUREMENT OF SALT SOLUTION ABSORPTION IN MORTAR. <i>ACI Materials Journal</i> , 2017 , 114, 149-159	0.9	6
9	Monitoring sulfide-oxidizing biofilm activity on cement surfaces using non-invasive self-referencing microsensors. <i>Water Research</i> , 2016 , 89, 321-9	12.5	5
8	Use of borosilicate glass powder in cementitious materials: Pozzolanic reactivity and neutron shielding properties. <i>Cement and Concrete Composites</i> , 2020 , 112, 103640	8.6	4

7	The influence of accelerated curing on the properties used in the prediction of chloride ingress in concrete using a Nernst-Planck approach. <i>Construction and Building Materials</i> , 2014 , 66, 752-759	6.7	4
6	Toward the Development of a Performance-Related Specification for Concrete Shrinkage. <i>Journal of Materials in Civil Engineering</i> , 2012 , 24, 64-71	3	4
5	Internal Curing for Concrete Bridge Decks: Integration of a Social Cost Analysis in Evaluation of Long-Term Benefit. <i>Transportation Research Record</i> , 2016 , 2577, 25-34	1.7	4
4	The influence of deicing salt exposure on the gas transport in cementitious materials. <i>Construction and Building Materials</i> , 2014 , 67, 108-114	6.7	3
3	Evaluating the efficacy of antimicrobial additives against biogenic acidification in simulated wastewater exposure solutions. <i>RILEM Technical Letters</i> , 2014 , 4, 49-56		3
2	Determining the freeze-thaw performance of mortar samples using length change measurements during freezing. <i>Cement and Concrete Composites</i> , 2021 , 116, 103869	8.6	3
1	Performance and damage evolution of plain and fibre-reinforced segmental concrete pipelines subjected to transverse permanent ground displacement. <i>Structure and Infrastructure Engineering</i> , 2018 , 14, 232-246	2.9	2