

Arnaud Castel

List of Publications by Citations

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116
papers

3,300
citations

31
h-index

54
g-index

120
ext. papers

4,204
ext. citations

4.9
avg, IF

6.11
L-index

#	Paper	IF	Citations
116	Analyzing crack width to predict corrosion in reinforced concrete. <i>Cement and Concrete Research</i> , 2004 , 34, 165-174	10.3	309
115	Concrete cover cracking with reinforcement corrosion of RC beam during chloride-induced corrosion process. <i>Cement and Concrete Research</i> , 2010 , 40, 415-425	10.3	173
114	Corrosion process and structural performance of a 17 year old reinforced concrete beam stored in chloride environment. <i>Cement and Concrete Research</i> , 2007 , 37, 1551-1561	10.3	155
113	Hybrid life cycle assessment of greenhouse gas emissions from cement, concrete and geopolymer concrete in Australia. <i>Journal of Cleaner Production</i> , 2017 , 152, 312-320	10.3	144
112	Bond strength between blended slag and Class F fly ash geopolymer concrete with steel reinforcement. <i>Cement and Concrete Research</i> , 2015 , 72, 48-53	10.3	139
111	Strengthening of RC members with near-surface mounted CFRP rods. <i>Composite Structures</i> , 2009 , 91, 138-147	5.3	120
110	Compressive stress-strain model for low-calcium fly ash-based geopolymer and heat-cured Portland cement concrete. <i>Cement and Concrete Composites</i> , 2016 , 73, 136-146	8.6	96
109	Chloride-induced corrosion of reinforcement in low-calcium fly ash-based geopolymer concrete. <i>Cement and Concrete Research</i> , 2016 , 88, 96-107	10.3	91
108	The effect of heat-curing on transport properties of low-calcium fly ash-based geopolymer concrete. <i>Construction and Building Materials</i> , 2016 , 112, 464-477	6.7	87
107	Prediction of reinforcement corrosion using corrosion induced cracks width in corroded reinforced concrete beams. <i>Cement and Concrete Research</i> , 2014 , 56, 84-96	10.3	87
106	The corrosion pattern of reinforcement and its influence on serviceability of reinforced concrete members in chloride environment. <i>Cement and Concrete Research</i> , 2009 , 39, 1077-1086	10.3	82
105	Mechanical and flexural performance of synthetic fibre reinforced geopolymer concrete. <i>Construction and Building Materials</i> , 2018 , 186, 454-475	6.7	77
104	Artificial neural network model for steel-concrete bond prediction. <i>Engineering Structures</i> , 2009 , 31, 1724-1733	4.7	77
103	RC beams strengthened with NSM CFRP rods and modeling of peeling-off failure. <i>Composite Structures</i> , 2010 , 92, 1920-1930	5.3	73
102	Carbonation of a blended slag-fly ash geopolymer concrete in field conditions after 8 years. <i>Construction and Building Materials</i> , 2016 , 125, 661-669	6.7	73
101	Influence of steel-concrete interface quality on reinforcement corrosion induced by chlorides. <i>Magazine of Concrete Research</i> , 2003 , 55, 151-159	2	71
100	Chloride diffusion resistance and chloride binding capacity of fly ash-based geopolymer concrete. <i>Cement and Concrete Composites</i> , 2020 , 105, 103290	8.6	65

99	Effect of surface pre-conditioning on bond of carbon fibre reinforced polymer rods to concrete. <i>Cement and Concrete Composites</i> , 2007 , 29, 677-689	8.6	64
98	Effect of stress corrosion cracking on stress-strain response of steel wires used in prestressed concrete beams. <i>Corrosion Science</i> , 2009 , 51, 1453-1459	6.8	61
97	Utilisation of steel furnace slag coarse aggregate in a low calcium fly ash geopolymer concrete. <i>Cement and Concrete Research</i> , 2016 , 89, 220-229	10.3	57
96	Tensile creep and early-age concrete cracking due to restrained shrinkage. <i>Construction and Building Materials</i> , 2017 , 149, 705-715	6.7	42
95	Corroded post-tensioned beams with bonded tendons and wire failure. <i>Engineering Structures</i> , 2009 , 31, 1687-1697	4.7	41
94	Effect of loading on carbonation penetration in reinforced concrete elements. <i>Cement and Concrete Research</i> , 1999 , 29, 561-565	10.3	40
93	Durability of calcium aluminate and sulphate resistant Portland cement based mortars in aggressive sewer environment and sulphuric acid. <i>Cement and Concrete Research</i> , 2019 , 124, 105852	10.3	35
92	Repairing corroded RC beam with near-surface mounted CFRP rods. <i>Materials and Structures/Materiaux Et Constructions</i> , 2011 , 44, 1205-1217	3.4	35
91	Anchorage and tension-stiffening effect between near-surface-mounted CFRP rods and concrete. <i>Cement and Concrete Composites</i> , 2011 , 33, 346-352	8.6	33
90	Influence of steel-concrete interface defects owing to the top-bar effect on the chloride-induced corrosion of reinforcement. <i>Magazine of Concrete Research</i> , 2011 , 63, 773-781	2	33
89	Passivity of embedded reinforcement in carbonated low-calcium fly ash-based geopolymer concrete. <i>Cement and Concrete Composites</i> , 2018 , 85, 32-43	8.6	32
88	Bond and cracking properties of self-consolidating concrete. <i>Construction and Building Materials</i> , 2010 , 24, 1222-1231	6.7	32
87	Risk of early age cracking in geopolymer concrete due to restrained shrinkage. <i>Construction and Building Materials</i> , 2019 , 229, 116840	6.7	31
86	Suitability of heat-cured low-calcium fly ash-based geopolymer concrete for precast applications. <i>Magazine of Concrete Research</i> , 2016 , 68, 163-177	2	31
85	Engineering Properties of Limestone Calcined Clay Concrete. <i>Journal of Advanced Concrete Technology</i> , 2018 , 16, 343-357	2.3	29
84	Reinforcement corrosion in limestone flash calcined clay cement-based concrete. <i>Cement and Concrete Research</i> , 2020 , 132, 106051	10.3	29
83	Corrosion investigation of fly ash based geopolymer mortar in natural sewer environment and sulphuric acid solution. <i>Corrosion Science</i> , 2020 , 168, 108586	6.8	28
82	Comparison on the properties of ITZs in fly ash-based geopolymer and Portland cement concretes with equivalent flowability. <i>Cement and Concrete Research</i> , 2021 , 143, 106392	10.3	28

81	Deterioration of alkali-activated mortars exposed to natural aggressive sewer environment. <i>Construction and Building Materials</i> , 2018 , 186, 577-597	6.7	26
80	Experimental and analytical study of corroded shear-critical reinforced concrete beams. <i>Materials and Structures/Materiaux Et Constructions</i> , 2014 , 47, 1467-1481	3.4	26
79	High temperature resistance of fly ash/GGBFS-based geopolymer mortar with load-induced damage. <i>Materials and Structures/Materiaux Et Constructions</i> , 2020 , 53, 1	3.4	26
78	Prediction of the steel-concrete bond strength from the compressive strength of Portland cement and geopolymer concretes. <i>Construction and Building Materials</i> , 2016 , 119, 329-342	6.7	26
77	RILEM TC 247-DTA round robin test: mix design and reproducibility of compressive strength of alkali-activated concretes. <i>Materials and Structures/Materiaux Et Constructions</i> , 2019 , 52, 1	3.4	25
76	RILEM TC 247-DTA round robin test: carbonation and chloride penetration testing of alkali-activated concretes. <i>Materials and Structures/Materiaux Et Constructions</i> , 2020 , 53, 1	3.4	24
75	Structural performance of a 26-year-old corroded reinforced concrete beam. <i>European Journal of Environmental and Civil Engineering</i> , 2012 , 16, 440-449	1.5	22
74	Durability and Microstructure Properties of Low-Carbon Concrete Incorporating Ferronickel Slag Sand and Fly Ash. <i>Journal of Materials in Civil Engineering</i> , 2019 , 31, 04019152	3	21
73	Performance-based criteria to assess the suitability of geopolymer concrete in marine environments using modified ASTM C1202 and ASTM C1556 methods. <i>Materials and Structures/Materiaux Et Constructions</i> , 2018 , 51, 1	3.4	21
72	Modeling the dynamic stiffness of cracked reinforced concrete beams under low-amplitude vibration loads. <i>Journal of Sound and Vibration</i> , 2016 , 368, 135-147	3.9	20
71	Finite-Element Modeling to Calculate the Overall Stiffness of Cracked Reinforced Concrete Beams. <i>Journal of Structural Engineering</i> , 2012 , 138, 889-898	3	20
70	A finite macro-element for corroded reinforced concrete. <i>Materials and Structures/Materiaux Et Constructions</i> , 2007 , 39, 571-584	3.4	20
69	Instantaneous Stiffness of Cracked Reinforced Concrete Including Steel-Concrete Interface Damage and Long-Term Effects. <i>Journal of Structural Engineering</i> , 2014 , 140, 04014021	3	18
68	Mitigation of alkali-silica reaction by limestone calcined clay cement (LC3). <i>Cement and Concrete Research</i> , 2020 , 137, 106176	10.3	17
67	Performance of fly ash concrete with ferronickel slag fine aggregate against alkali-silica reaction and chloride diffusion. <i>Cement and Concrete Research</i> , 2021 , 139, 106265	10.3	17
66	Reinforced Concrete Beams Strengthened with NSM CFRP Rods in Shear. <i>Advances in Structural Engineering</i> , 2015 , 18, 1563-1574	1.9	16
65	Study of the impact of localised cracks on the corrosion mechanism. <i>European Journal of Environmental and Civil Engineering</i> , 2012 , 16, 392-401	1.5	15
64	Modeling of steel and concrete strains between primary cracks for the prediction of cover-controlled cracking in RC-beams. <i>Engineering Structures</i> , 2011 , 33, 3668-3675	4.7	14

63	Performance of limestone calcined clay blended cement-based concrete against carbonation. <i>Advances in Cement Research</i> , 2020 , 32, 481-491	1.8	14
62	On the Reliability of Serviceability Calculations for Flexural Cracked Reinforced Concrete Beams. <i>Structures</i> , 2018 , 13, 201-212	3.4	13
61	Early-age tensile creep and shrinkage-induced cracking in internally restrained concrete members. <i>Magazine of Concrete Research</i> , 2019 , 71, 1167-1179	2	13
60	Impact of atmospheric marine environment on cementitious materials. <i>Corrosion Science</i> , 2019 , 148, 366-378	6.8	11
59	Influence of Calcined Clay Reactivity on the Mechanical Properties and Chloride Diffusion Resistance of Limestone Calcined Clay Cement (LC3) Concrete. <i>Journal of Marine Science and Engineering</i> , 2020 , 8, 301	2.4	11
58	Development of high-density geopolymer concrete with steel furnace slag aggregate for coastal protection structures. <i>Construction and Building Materials</i> , 2020 , 248, 118681	6.7	11
57	Failure modes and failure mechanisms of RC members strengthened by NSM CFRP composites □ Analysis of pull-out failure mode. <i>Composites Part B: Engineering</i> , 2012 , 43, 1893-1901	10	11
56	Modeling Steel Concrete Bond Strength Reduction Due to Corrosion. <i>ACI Structural Journal</i> , 2016 , 113,	1.7	11
55	Ageing coefficient for early age tensile creep of blended slag and low calcium fly ash geopolymer concrete. <i>Construction and Building Materials</i> , 2020 , 262, 119855	6.7	11
54	Effect of MgO and Na ₂ SiO ₃ on the carbonation resistance of alkali activated slag concrete. <i>Magazine of Concrete Research</i> , 2018 , 70, 685-692	2	11
53	Modelling steel corrosion under concrete non-uniformity and structural defects. <i>Cement and Concrete Research</i> , 2020 , 135, 106109	10.3	10
52	Time-dependent changes in the instantaneous stiffness of reinforced concrete beams. <i>Engineering Structures</i> , 2016 , 126, 641-651	4.7	10
51	Modeling the tensile steel reinforcement strain in RC-beams subjected to cycles of loading and unloading. <i>Engineering Structures</i> , 2016 , 126, 92-105	4.7	10
50	Calculation of the Overall Stiffness and Irreversible Deflection of Cracked Reinforced Concrete Beams. <i>Advances in Structural Engineering</i> , 2013 , 16, 2035-2042	1.9	10
49	Modelling non-isothermal chloride ingress in unsaturated cement-based materials. <i>Construction and Building Materials</i> , 2019 , 217, 441-455	6.7	9
48	Predictive Model of Setting Times and Compressive Strengths for Low-Alkali, Ambient-Cured, Fly Ash/Slag-Based Geopolymers. <i>Minerals (Basel, Switzerland)</i> , 2020 , 10, 920	2.4	9
47	Prediction of early-age creep and cracking age of concrete: a proposed modification for AS3600 provisions. <i>Australian Journal of Structural Engineering</i> , 2016 , 17, 151-166	1.4	9
46	Initial sequence for alkali-silica reaction: Transport barrier and spatial distribution of reaction products. <i>Cement and Concrete Composites</i> , 2019 , 104, 103378	8.6	9

45	Influence of time-dependent effects on the crack spacing in reinforced concrete beams. <i>Structural Concrete</i> , 2014 , 15, 373-379	2.6	9
44	Assessing external sulfate attack on thin-shell artificial reef structures under uncertainty. <i>Ocean Engineering</i> , 2020 , 207, 107397	3.9	9
43	On the competitive antagonism effect in combined chloride-sulfate attack: A numerical exploration. <i>Cement and Concrete Research</i> , 2021 , 144, 106406	10.3	8
42	Spacing of Cracks in Reinforced Concrete Based on a Variable Transfer Length Model. <i>Journal of Structural Engineering</i> , 2018 , 144, 04018090	3	6
41	Creep and shrinkage of synthetic fibre-reinforced geopolymer concrete. <i>Magazine of Concrete Research</i> , 2019 , 71, 1070-1082	2	6
40	Mitigating the Risk of Early Age Cracking in Fly Ash Blended Cement-Based Concrete Using Ferronickel Slag Sand. <i>Journal of Advanced Concrete Technology</i> , 2019 , 17, 295-308	2.3	6
39	Modèle de comportement mécanique du béton armé corrodé. <i>Comptes Rendus - Mécanique</i> , 2002 , 330, 45-50	2.1	6
38	An integrated framework for modelling time-dependent corrosion propagation in offshore concrete structures. <i>Engineering Structures</i> , 2021 , 228, 111482	4.7	6
37	Influence of steel-concrete bond damage on the dynamic stiffness of cracked reinforced concrete beams. <i>Advances in Structural Engineering</i> , 2018 , 21, 1977-1989	1.9	5
36	Microcell versus galvanic corrosion currents in carbonated concrete. <i>Magazine of Concrete Research</i> , 2014 , 66, 697-707	2	5
35	Effect of Various Supplementary Cementitious Materials on Early-Age Concrete Cracking. <i>Journal of Materials in Civil Engineering</i> , 2020 , 32, 04020049	3	4
34	Assessing Immediate and Time-Dependent Instantaneous Stiffness of Cracked Reinforced Concrete Beams Using Residual Cracks. <i>Journal of Structural Engineering</i> , 2018 , 144, 04018022	3	4
33	Overall Stiffness Reduction of Cracked Reinforced Concrete Beams Due to Long Term Effects 2013 ,		4
32	Modelling the response of prestressed beams with corroded reinforcement. <i>European Journal of Environmental and Civil Engineering</i> , 2009 , 13, 653-669	1.5	4
31	Effects of Fly Ash on Early-Age Properties and Cracking of Concrete. <i>ACI Materials Journal</i> , 2017 , 114,	0.9	4
30	Modélisation par macro-éléments. <i>Revue Européenne De Génie Civil</i> , 2007 , 11, 141-161		4
29	Development and Characterization of Lightweight Geopolymer Composite Reinforced with Hybrid Carbon and Steel Fibers. <i>Materials</i> , 2021 , 14,	3.5	4
28	Experimental and Analytical Study of Creep and Shrinkage in Early-Age Concrete 2015 ,		3

27	Autogenous and total shrinkage of limestone calcined clay cement (LC3) concretes. <i>Construction and Building Materials</i> , 2022 , 314, 125720	6.7	3
26	Mechanical Behavior of Long-Term Corroded Reinforced Concrete Beam 2011 , 243-258		3
25	High-density geopolymer concrete for Port Kembla breakwater upgrade. <i>Construction and Building Materials</i> , 2020 , 262, 120920	6.7	3
24	Precision of cement hydration heat models in capturing the effects of SCMs and retarders. <i>Magazine of Concrete Research</i> , 2018 , 70, 1217-1231	2	3
23	Effects of mixing duration on engineering properties of geopolymer concrete. <i>Construction and Building Materials</i> , 2021 , 303, 124449	6.7	3
22	Response of corroded prestressed beams with bonded strands. <i>Proceedings of the Institution of Civil Engineers: Structures and Buildings</i> , 2012 , 165, 233-244	0.9	2
21	Modélisation par macro-éléments. <i>Revue Européenne De Génie Civil</i> , 2007 , 11, 141-161		2
20	Modèle de comportement mécanique des poutres en béton armé après fissuration. <i>Revue Européenne De Génie Civil</i> , 2001 , 5, 527-551		2
19	Continuous Monitoring of the Early-Age Properties of Activated GGBFS with Alkaline Solutions of Different Concentrations. <i>Journal of Materials in Civil Engineering</i> , 2021 , 33,	3	2
18	Assessing alkali-activated concrete performance in chloride environments using NT Build 492. <i>Materials and Structures/Materiaux Et Constructions</i> , 2021 , 54, 1	3.4	2
17	Minimising risk of early-age thermal cracking and delayed ettringite formation in concrete via hybrid numerical simulation and genetic algorithm mix optimisation approach. <i>Construction and Building Materials</i> , 2021 , 299, 124280	6.7	2
16	Modelling of flexural behaviour of RC beams strengthened with NSM CFRP rods including serviceability. <i>European Journal of Environmental and Civil Engineering</i> , 2013 , 17, 532-553	1.5	1
15	Characterization of Steel/Concrete Interface for a Long-Term Corroded Beam Stored in Chloride Environment. <i>Advanced Materials Research</i> , 2010 , 163-167, 3415-3420	0.5	1
14	Modelling the Stiffness Reduction of Corroded Reinforced Concrete Beams after Cracking 2011 , 219-230		1
13	Numerical simulation of risk mitigation strategies for early-age thermal cracking and DEF in concrete. <i>Construction and Building Materials</i> , 2022 , 322, 126478	6.7	1
12	A New Approach to Modeling Tension Stiffening in Reinforced Concrete. <i>ACI Structural Journal</i> , 2017 , 115,	1.7	1
11	Mitigation of Alkali-Silica Reaction in Limestone Calcined Clay Cement-Based Mortar. <i>RILEM Bookseries</i> , 2020 , 665-672	0.5	1
10	New service limit state criteria for reinforced concrete in chloride environments. <i>Corrosion Reviews</i> , 2019 , 37, 21-29	3.2	1

9	Performance of cementitious and alkali-activated mortars exposed to laboratory simulated microbially induced corrosion test. <i>Cement and Concrete Composites</i> , 2022 , 128, 104445	8.6	1
8	Detection of Top-Bar Effect in Reinforced Concrete Using Guided Ultrasonic Waves. <i>Journal of Structural Engineering</i> , 2021 , 147, 04021032	3	0
7	Development of Low-Alkali, Fly Ash/Slag Geopolymers: Predictive Strength Modelling and Analyses of Impact of Curing Temperatures. <i>Minerals (Basel, Switzerland)</i> , 2021 , 11, 60	2.4	0
6	Analytical model predicting the concrete tensile stress development in the restrained shrinkage ring test. <i>Construction and Building Materials</i> , 2021 , 307, 124930	6.7	0
5	Capturing the early-age physicochemical transformations of alkali-activated fly ash and slag using ultrasonic pulse velocity technique. <i>Cement and Concrete Composites</i> , 2022 , 104529	8.6	0
4	Steel Reinforcement Corrosion in a Low Calcium Fly Ash Geopolymer Concrete. <i>Key Engineering Materials</i> , 2016 , 711, 943-949	0.4	
3	Closure to Instantaneous Stiffness of Cracked Reinforced Concrete Including Steel-Concrete Interface Damage and Long-Term Effects by Arnaud Castel, Raymond Ian Gilbert, and Gianluca Ranzi. <i>Journal of Structural Engineering</i> , 2015 , 141, 07015006	3	
2	Evaluation de l'État de corrosion et du comportement mécanique résiduel d'Éléments en béton armé méthode RESTOR. <i>Revue Européenne De Génie Civil</i> , 2003 , 7, 179-193		
1	Tensile Creep of Cement and Concrete Composites: Monitoring by Means of 2D-Digital Image Correlation. <i>Applied Sciences (Switzerland)</i> , 2021 , 11, 8334	2.6	