

Raoul Francois

List of Publications by Year in descending order

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121
papers

5,826
citations

71004

43
h-index

90395

73
g-index

123
all docs

123
docs citations

123
times ranked

2755
citing authors

#	ARTICLE	IF	CITATIONS
1	Methods for characterising the steel-concrete interface to enhance understanding of reinforcement corrosion: a critical review by RILEM TC 262-SCI. Materials and Structures/Materiaux Et Constructions, 2022, 55, 1.	1.3	7
2	Evaluating the chloride permeability of steel-concrete interface based on concretes of different stability. Structural Concrete, 2021, 22, 2636-2649.	1.5	4
3	Corrosion behavior of stirrups in corroded concrete beams exposed to chloride environment under sustained loading. Construction and Building Materials, 2021, 274, 121987.	3.2	12
4	Macrocell corrosion of steel in concrete: Characterization of anodic behavior in relation to the chloride content. Materials and Corrosion - Werkstoffe Und Korrosion, 2020, 71, 1424-1441.	0.8	12
5	Effect of Cathode-Anode distance and electrical resistivity on macrocell corrosion currents and cathodic response in cases of chloride induced corrosion in reinforced concrete structures. Construction and Building Materials, 2020, 245, 118337.	3.2	16
6	Influence of load-induced cracks coupled or not with top-casting-induced defects on the corrosion of the longitudinal tensile reinforcement of naturally corroded beams exposed to chloride environment under sustained loading. Cement and Concrete Research, 2020, 129, 105972.	4.6	21
7	Characteristics of the steel-concrete interface and their effect on the corrosion of steel bars in concrete. Construction and Building Materials, 2020, 253, 119162.	3.2	27
8	Critical chloride threshold values as a function of cement type and steel surface condition. Cement and Concrete Research, 2020, 134, 106086.	4.6	27
9	Influence of artificial cracks and interfacial defects on the corrosion behavior of steel in concrete during corrosion initiation under a chloride environment. Construction and Building Materials, 2020, 253, 119165.	3.2	34
10	The effect of the steel-concrete interface on chloride-induced corrosion initiation in concrete: a critical review by RILEM TC 262-SCI. Materials and Structures/Materiaux Et Constructions, 2019, 52, 1.	1.3	98
11	Determination of chloride threshold initiating corrosion: A new set-up taking the localized aspect of corrosion into account. Cement and Concrete Research, 2019, 124, 105825.	4.6	21
12	Strength of Corroded RC Beams with Bond Deterioration. Journal of Structural Engineering, 2019, 145, .	1.7	14
13	Influence of top-casting-induced defects on the corrosion of the compressive reinforcement of naturally corroded beams under sustained loading. Construction and Building Materials, 2019, 229, 116912.	3.2	9
14	New service limit state criteria for reinforced concrete in chloride environments. Corrosion Reviews, 2019, 37, 21-29.	1.0	1
15	Steel Corrosion in Reinforced Concrete. , 2018, , 1-41.		17
16	Mechanical performance of deep beams damaged by corrosion in a chloride environment. European Journal of Environmental and Civil Engineering, 2018, 22, 523-545.	1.0	6
17	Propagation of corrosion-induced cracks of the RC beam exposed to marine environment under sustained load for a period of 26 years. Cement and Concrete Research, 2018, 103, 66-76.	4.6	46
18	A new approach to determine the chloride threshold initiating corrosion: Preliminary results. MATEC Web of Conferences, 2018, 199, 04003.	0.1	0

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19	Relation between crack opening and extent of the damage induced at the steel/mortar interface. Construction and Building Materials, 2018, 193, 97-104.	3.2	6
20	A critical discussion on rebar electrical continuity and usual interpretation thresholds in the field of half-cell potential measurements in steel reinforced concrete. Materials and Structures/Materiaux Et Constructions, 2018, 51, 1.	1.3	14
21	Protection cathodique appliquée au béton armé arien: Étude expérimentale et modélisation. Materiaux Et Techniques, 2018, 106, 201.	0.3	0
22	The steel-concrete interface. Materials and Structures/Materiaux Et Constructions, 2017, 50, 1.	1.3	170
23	Effect of crack openings on carbonation-induced corrosion. Cement and Concrete Research, 2017, 95, 257-269.	4.6	51
24	Influences of corrosion degree and corrosion morphology on the ductility of steel reinforcement. Construction and Building Materials, 2017, 148, 297-306.	3.2	65
25	Effect of accelerated carbonation conditions on the characterization of load-induced damage in reinforced concrete members. Materials and Structures/Materiaux Et Constructions, 2017, 50, 1.	1.3	7
26	Propagation of corrosion and corrosion patterns of bars embedded in RC beams stored in chloride environment for various periods. Construction and Building Materials, 2017, 145, 147-156.	3.2	37
27	Influence of steel-concrete interface defects induced by top-casting on development of chloride-induced corrosion in RC beams under sustained loading. Materials and Structures/Materiaux Et Constructions, 2016, 49, 5169-5181.	1.3	23
28	The Assessment of Flexural and Shear Strength of R/C Members with Chloride Attack. Key Engineering Materials, 2016, 711, 29-36.	0.4	0
29	Influence of long-term chloride diffusion in concrete and the resulting corrosion of reinforcement on the serviceability of RC beams. Cement and Concrete Composites, 2016, 71, 144-152.	4.6	57
30	Prediction of the residual load-bearing capacity of naturally corroded beams using the variability of tension behaviour of corroded steel bars. Structure and Infrastructure Engineering, 2016, 12, 143-158.	2.0	12
31	Shear behaviour and load capacity of short reinforced concrete beams exposed to chloride environment. European Journal of Environmental and Civil Engineering, 2016, 20, 379-395.	1.0	4
32	Behaviour of corroded reinforced concrete beams repaired with NSM CFRP rods, experimental and finite element study. Composites Part B: Engineering, 2016, 92, 477-488.	5.9	33
33	Modeling Steel Concrete Bond Strength Reduction Due to Corrosion. ACI Structural Journal, 2016, 113, .	0.3	16
34	Reinforced Concrete Beams Strengthened with NSM CFRP Rods in Shear. Advances in Structural Engineering, 2015, 18, 1563-1574.	1.2	22
35	Structural performance of RC beams damaged by natural corrosion under sustained loading in a chloride environment. Engineering Structures, 2015, 96, 30-40.	2.6	66
36	Behaviour of corroded shear-critical reinforced concrete beams repaired with NSM CFRP rods. Composite Structures, 2015, 123, 204-215.	3.1	15

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37	A FEM-based model to study the behaviour of corroded RC beams shear-repaired by NSM CFRP rods technique. <i>Composite Structures</i> , 2015, 131, 731-741.	3.1	10
38	Failure mode transitions of corroded deep beams exposed to marine environment for long period. <i>Engineering Structures</i> , 2015, 96, 66-77.	2.6	37
39	Distribution of corrosion and pitting factor of steel in corroded RC beams. <i>Construction and Building Materials</i> , 2015, 95, 384-392.	3.2	60
40	Structural performance of RC beams in relation with the corroded period in chloride environment. <i>Materials and Structures/Materiaux Et Constructions</i> , 2015, 48, 1757-1769.	1.3	35
41	Development of chloride-induced corrosion in pre-cracked RC beams under sustained loading: Effect of load-induced cracks, concrete cover, and exposure conditions. <i>Cement and Concrete Research</i> , 2015, 67, 246-258.	4.6	89
42	Propagation of corrosion in pre-cracked carbonated reinforced mortar. <i>Materials and Structures/Materiaux Et Constructions</i> , 2015, 48, 2575-2595.	1.3	13
43	Experimental investigation of the relationships between residual cross-section shapes and the ductility of corroded bars. <i>Construction and Building Materials</i> , 2014, 69, 335-345.	3.2	53
44	Effect of corrosion of tensile rebars and stirrups on the flexural stiffness of reinforced concrete members. <i>European Journal of Environmental and Civil Engineering</i> , 2014, 18, 358-376.	1.0	4
45	Potential measurement to determine the chloride threshold concentration that initiates corrosion of reinforcing steel bar in slag concretes. <i>Materials and Structures/Materiaux Et Constructions</i> , 2014, 47, 1483-1499.	1.3	41
46	Experimental and analytical study of corroded shear-critical reinforced concrete beams. <i>Materials and Structures/Materiaux Et Constructions</i> , 2014, 47, 1467-1481.	1.3	37
47	Prediction of reinforcement corrosion using corrosion induced cracks width in corroded reinforced concrete beams. <i>Cement and Concrete Research</i> , 2014, 56, 84-96.	4.6	129
48	Corrosion of the reinforcement and its influence on the residual structural performance of a 26-year-old corroded RC beam. <i>Construction and Building Materials</i> , 2014, 51, 461-472.	3.2	125
49	Prediction of ductility factor of corroded reinforced concrete beams exposed to long term aging in chloride environment. <i>Cement and Concrete Composites</i> , 2014, 53, 136-147.	4.6	47
50	Mechanical behaviour of corroded RC beams strengthened by NSM CFRP rods. <i>Composites Part B: Engineering</i> , 2014, 64, 97-107.	5.9	39
51	Effect of corrosion of reinforcement on the mechanical behaviour of highly corroded RC beams. <i>Engineering Structures</i> , 2013, 56, 544-554.	2.6	95
52	Impact of corrosion on mechanical properties of steel embedded in 27-year-old corroded reinforced concrete beams. <i>Materials and Structures/Materiaux Et Constructions</i> , 2013, 46, 899-910.	1.3	128
53	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.	1.0	2
54	Influence of long-term corrosion in chloride environment on mechanical behaviour of RC beam. <i>Engineering Structures</i> , 2013, 48, 558-568.	2.6	82

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55	Calculation of the Overall Stiffness and Irreversible Deflection of Cracked Reinforced Concrete Beams. <i>Advances in Structural Engineering</i> , 2013, 16, 2035-2042.	1.2	11
56	Effects of pre-cracks on both initiation and propagation of re-bar corrosion in pure carbon dioxide. <i>EPJ Web of Conferences</i> , 2013, 56, 06006.	0.1	12
57	Effect of corrosion pattern on the ductility of tensile reinforcement extracted from a 26-year-old corroded beam. <i>Advances in Concrete Construction</i> , 2013, 1, 121-136.	0.4	36
58	Response of corroded prestressed beams with bonded strands. <i>Proceedings of the Institution of Civil Engineers: Structures and Buildings</i> , 2012, 165, 233-244.	0.4	6
59	Finite-Element Modeling to Calculate the Overall Stiffness of Cracked Reinforced Concrete Beams. <i>Journal of Structural Engineering</i> , 2012, 138, 889-898.	1.7	25
60	Study of the impact of localised cracks on the corrosion mechanism. <i>European Journal of Environmental and Civil Engineering</i> , 2012, 16, 392-401.	1.0	22
61	Structural performance of a 26-year-old corroded reinforced concrete beam. <i>European Journal of Environmental and Civil Engineering</i> , 2012, 16, 440-449.	1.0	26
62	Concrete cracking due to chloride-induced reinforcement corrosion – influence of steel–concrete interface defects due to the “top-bar effect”. <i>European Journal of Environmental and Civil Engineering</i> , 2012, 16, 402-413.	1.0	13
63	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.	5.9	17
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.	2.6	21
65	Repairing corroded RC beam with near-surface mounted CFRP rods. <i>Materials and Structures/Materiaux Et Constructions</i> , 2011, 44, 1205-1217.	1.3	48
66	Anchorage and tension-stiffening effect between near-surface-mounted CFRP rods and concrete. <i>Cement and Concrete Composites</i> , 2011, 33, 346-352.	4.6	38
67	Structural Response of Corroded, Unbonded Posttensioned Beams. <i>Journal of Structural Engineering</i> , 2011, 137, 761-771.	1.7	21
68	Modelling the Stiffness Reduction of Corroded Reinforced Concrete Beams after Cracking. , 2011, , 219-230.		2
69	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.	0.9	43
70	Mechanical Behavior of Long-Term Corroded Reinforced Concrete Beam. , 2011, , 243-258.		4
71	Response of post-tensioned concrete beams with unbonded tendons including serviceability and ultimate state. <i>Engineering Structures</i> , 2010, 32, 556-569.	2.6	57
72	Concrete cover cracking with reinforcement corrosion of RC beam during chloride-induced corrosion process. <i>Cement and Concrete Research</i> , 2010, 40, 415-425.	4.6	227

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73	RC beams strengthened with NSM CFRP rods and modeling of peeling-off failure. Composite Structures, 2010, 92, 1920-1930.	3.1	98
74	Bond and cracking properties of self-consolidating concrete. Construction and Building Materials, 2010, 24, 1222-1231.	3.2	36
75	Characterization of Steel/Concrete Interface for a Long-Term Corroded Beam Stored in Chloride Environment. Advanced Materials Research, 2010, 163-167, 3415-3420.	0.3	1
76	The corrosion pattern of reinforcement and its influence on serviceability of reinforced concrete members in chloride environment. Cement and Concrete Research, 2009, 39, 1077-1086.	4.6	101
77	Strengthening of RC members with near-surface mounted CFRP rods. Composite Structures, 2009, 91, 138-147.	3.1	159
78	Corroded post-tensioned beams with bonded tendons and wire failure. Engineering Structures, 2009, 31, 1687-1697.	2.6	55
79	Effect of crack opening on carbon dioxide penetration in cracked mortar samples. Materials and Structures/Materiaux Et Constructions, 2009, 42, 559-566.	1.3	46
80	Serviceability Limit State criteria based on steel-concrete bond loss for corroded reinforced concrete in chloride environment. Materials and Structures/Materiaux Et Constructions, 2009, 42, 1407-1421.	1.3	68
81	Effect of stress corrosion cracking on stress-strain response of steel wires used in prestressed concrete beams. Corrosion Science, 2009, 51, 1453-1459.	3.0	81
82	Modelling the response of prestressed beams with corroded reinforcement. Revue Européenne De Génie Civil, 2009, 13, 653-669.	0.0	0
83	Effect of crack opening on the local diffusion of chloride in cracked mortar samples. Cement and Concrete Research, 2008, 38, 1106-1111.	4.6	171
84	Corroded RC beam repaired with near-face mounted CFRP rods. , 2008, , 435-436.		0
85	Modélisation par macro-éléments. Revue Européenne De Génie Civil, 2007, 11, 141-161.	0.0	2
86	Experimental and numerical study of electrochemical chloride removal from brick and concrete specimens. Cement and Concrete Research, 2007, 37, 54-62.	4.6	50
87	Corrosion process and structural performance of a 17 year old reinforced concrete beam stored in chloride environment. Cement and Concrete Research, 2007, 37, 1551-1561.	4.6	187
88	Measurement and modeling of gas transfer in cracked mortars. Materials and Structures/Materiaux Et Constructions, 2007, 39, 43-52.	1.3	5
89	Effects of Bar-Placement Conditions on Steel-Concrete Bond. Materials and Structures/Materiaux Et Constructions, 2007, 39, 211-220.	1.3	19
90	Effective Tension Active Cross-Section of Reinforced Concrete Beams After Cracking. Materials and Structures/Materiaux Et Constructions, 2007, 39, 115-126.	1.3	17

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91	A finite macro-element for corroded reinforced concrete. <i>Materials and Structures/Materiaux Et Constructions</i> , 2007, 39, 571-584.	1.3	24
92	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.	4.6	89
93	Long term corrosion behavior of reinforced concrete structures in chloride environment. <i>European Physical Journal Special Topics</i> , 2006, 136, 285-293.	0.2	10
94	Corrosion of Reinforcement in Relation to Presence of Defects at the Interface between Steel and Concrete. <i>Journal of Materials in Civil Engineering</i> , 2005, 17, 447-455.	1.3	49
95	Analyzing crack width to predict corrosion in reinforced concrete. <i>Cement and Concrete Research</i> , 2004, 34, 165-174.	4.6	391
96	Effect of crack opening on the local diffusion of chloride in inert materials. <i>Cement and Concrete Research</i> , 2004, 34, 711-716.	4.6	87
97	Quality of steel-concrete interface and corrosion of reinforcing steel. <i>Cement and Concrete Research</i> , 2003, 33, 1407-1415.	4.6	132
98	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.	0.0	0
99	Porous structure of the ITZ around galvanized and ordinary steel reinforcements. <i>Cement and Concrete Research</i> , 2001, 31, 1561-1566.	4.6	52
100	Modèle de comportement mécanique des poutres en béton armé après fissuration. <i>Revue Européenne De Génie Civil</i> , 2001, 5, 527-551.	0.0	2
101	Mechanical behaviour of corroded reinforced concrete beams—Part 1: Experimental study of corroded beams. <i>Materials and Structures/Materiaux Et Constructions</i> , 2000, 33, 539-544.	1.3	213
102	Mechanical behaviour of corroded reinforced concrete beams—Part 2: Bond and notch effects. <i>Materials and Structures/Materiaux Et Constructions</i> , 2000, 33, 545-551.	1.3	93
103	Modelling the loss of strength and porosity increase due to the leaching of cement pastes. <i>Cement and Concrete Composites</i> , 1999, 21, 181-188.	4.6	108
104	Effect of loading on carbonation penetration in reinforced concrete elements. <i>Cement and Concrete Research</i> , 1999, 29, 561-565.	4.6	53
105	Measuring chloride diffusion coefficients from non-steady state diffusion tests. <i>Cement and Concrete Research</i> , 1998, 28, 947-953.	4.6	25
106	Penetration of chlorides in relation to the microcracking state into reinforced ordinary and high strength concrete. <i>Materials and Structures/Materiaux Et Constructions</i> , 1998, 31, 310-316.	1.3	71
107	Analysis of progressive damage to reinforced ordinary and high performance concrete in relation to loading. <i>Materiaux Et Constructions</i> , 1998, 31, 27-35.	0.3	20
108	Optimisation des structures en béton armé vis-à-vis de la corrosion. <i>Revue Européenne De Génie Civil</i> , 1998, 2, 949-968.	0.0	3

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109	Influence of Service Cracking on Reinforcement Steel Corrosion. Journal of Materials in Civil Engineering, 1998, 10, 14-20.	1.3	74
110	Aging damage model of concrete behavior during the leaching process. Materiaux Et Constructions, 1997, 30, 465-472.	0.3	19
111	Effect of the leaching of calcium hydroxide from cement paste on mechanical and physical properties. Cement and Concrete Research, 1997, 27, 539-550.	4.6	211
112	EFFECT OF ITZ LEACHING ON DURABILITY OF CEMENT-BASED MATERIALS. Cement and Concrete Research, 1997, 27, 971-978.	4.6	35
113	Leaching of both calcium hydroxide and C-S-H from cement paste: Modeling the mechanical behavior. Cement and Concrete Research, 1996, 26, 1257-1268.	4.6	202
114	A reply to a discussion by P. Gu, P. Xie and J.J. beaudoin of the paper "Electrode potential measurements of concrete reinforcement for corrosion evaluation". Cement and Concrete Research, 1995, 25, 1115-1116.	4.6	0
115	Electrode potential measurements of concrete reinforcement for corrosion evaluation. Cement and Concrete Research, 1994, 24, 401-412.	4.6	16
116	Effect of the ITZ Damage on Durability of Reinforced Concrete in Chloride Environment. Materials Research Society Symposia Proceedings, 1994, 370, 465.	0.1	2
117	Effect of the ITZ on the Leaching of Calcium Hydroxide from Mortar. Materials Research Society Symposia Proceedings, 1994, 370, 457.	0.1	0
118	Méthode d'étude mécanique et physico-chimique de l'interface acier-béton. Materiaux Et Constructions, 1993, 26, 575-586.	0.3	2
119	Influence of creep and shrinkage on cracking in high strength concrete. Cement and Concrete Research, 1992, 22, 159-168.	4.6	32
120	Effect of damage in reinforced concrete on carbonation or chloride penetration. Cement and Concrete Research, 1988, 18, 961-970.	4.6	73
121	Cathodic protection in reinforced concrete structures affected by macrocell corrosion: a discussion about the significance of the protection criteria. RILEM Technical Letters, 0, 2, 27-32.	0.0	6