Jean Michel Torrenti

List of Publications by Year
in descending order

98 papers	3,372 citations	126907 33 h-index	149698 56 g-index
110 all docs	110 docs citations	110 times ranked	1833 citing authors

#	Article	IF	Citations
1	Leaching of both calcium hydroxide and C-S-H from cement paste: Modeling the mechanical behavior. Cement and Concrete Research, 1996, 26, 1257-1268.	11.0	202
2	Modelling of leaching in pure cement paste and mortar. Cement and Concrete Research, 2000, 30, 83-90.	11.0	195
3	Comparison between natural and accelerated carbonation (3% CO2): Impact on mineralogy, microstructure, water retention and cracking. Cement and Concrete Research, 2018, 109, 64-80.	11.0	151
4	Interaction between drying, shrinkage, creep and cracking phenomena in concrete. Engineering Structures, 2005, 27, 239-250.	5.3	147
5	Durability of cement pastes exposed to external sulfate attack and leaching: Physical and chemical aspects. Cement and Concrete Research, 2019, 116, 134-145.	11.0	136
6	Early-age behaviour of concrete nuclear containments. Nuclear Engineering and Design, 2008, 238, 2495-2506.	1.7	117
7	Long-term performance of cement paste during combined calcium leachingâ€“sulfate attack: kinetics and size effect. Cement and Concrete Research, 2006, 36, 137-143.	11.0	115
8	Chemo-mechanical coupling behaviour of leached concrete. Nuclear Engineering and Design, 2007, 237, 2083-2089.	1.7	107
9	Carbonation of hardened cement pastes: Influence of temperature. Cement and Concrete Research, 2019, 115, 445-459.	11.0	106
10	Impact of carbonation on unsaturated water transport properties of cement-based materials. Cement and Concrete Research, 2015, 74, 44-58.	11.0	103
11	Chemoporoplasticity of Calcium Leaching in Concrete. Journal of Engineering Mechanics - ASCE, 1999, 125, 1200-1211.	2.9	99
12	Chemical modelling of Alkali Silica reaction: Influence of the reactive aggregate size distribution. Materials and Structures/Materiaux Et Constructions, 2007, 40, 229-239.	3.1	97
13	Numerical analysis of the thermal active restrained shrinkage ring test to study the early age behavior of massive concrete structures. Engineering Structures, 2011, 33, 1390-1401.	5.3	93
14	Experimental investigation of the variability of concrete durability properties. Cement and Concrete Research, 2013, 45, 21-36.	11.0	86
15	Concrete early age basic creep: Experiments and test of rheological modelling approaches. Construction and Building Materials, 2012, 36, 373-380.	7.2	85
16	Prediction of elastic properties of cement pastes at early ages. Computational Materials Science, 2010, 47, 775-784.	3.0	84
17	Concrete calcium leaching at variable temperature: Experimental data and numerical model inverse identification. Computational Materials Science, 2010, 49, 35-45.	3.0	65
18	Influence of Water on Alkali-Silica Reaction: Experimental Study and Numerical Simulations. Journal of Materials in Civil Engineering, 2006, 18, 588-596.	2.9	64

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19	Temperature influence on water transport in hardened cement pastes. Cement and Concrete Research, 2015, 76, 37-50.	11.0	56
20	Design for SLS according to <i>fib</i> Model Code 2010. Structural Concrete, 2013, 14, 99-123.	3.1	55
21	Effects of early-age thermal behaviour on damage risks in massive concrete structures. European Journal of Environmental and Civil Engineering, 2012, 16, 589-605.	2.1	51
22	Modeling basic creep of concrete since setting time. Cement and Concrete Composites, 2017, 83, 239-250.	10.7	47
23	Simulated microstructure and transport properties of ultra-high performance cement-based materials. Cement and Concrete Research, 2000, 30, 1947-1954.	11.0	46
24	Thoughts about drying shrinkage: Experimental results and quantification of structural drying creep. Materiaux Et Constructions, 1997, 30, 588-598.	0.3	45
25	Chemo-mechanical coupling behaviour of leached concrete. Nuclear Engineering and Design, 2007, 237, 2090-2097.	1.7	44
26	Influence of Boundary Conditions on Strain Softening in Concrete Compression Test. Journal of Engineering Mechanics - ASCE, 1993, 119, 2369-2384.	2.9	43
27	Optimization of concrete mix design to account for strength and hydration heat in massive concrete structures. Cement and Concrete Composites, 2019, 103, 233-241.	10.7	43
28	Is long-term autogenous shrinkage a creep phenomenon induced by capillary effects due to self-desiccation?. Cement and Concrete Research, 2018, 108, 186-200.	11.0	42
29	Coupling between leaching and creep of concrete. Cement and Concrete Research, 2008, 38, 816-821.	11.0	41
30	A thermal active restrained shrinkage ring test to study the early age concrete behaviour of massive structures. Cement and Concrete Research, 2011, 41, 56-63.	11.0	39
31	A viscoelastic poromechanical model for shrinkage and creep of concrete. Cement and Concrete Research, 2020, 129, 105970.	11.0	36
32	A separation of scales homogenization analysis for the modelling of calcium leaching in concrete. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 7196-7210.	6.6	34
33	Influence of relative humidity on delayed ettringite formation. Cement and Concrete Composites, 2015, 58, 14-22.	10.7	34
34	Long term basic creep behavior of high performance concrete: data and modelling. Materials and Structures/Materiaux Et Constructions, 2017, 50, 1.	3.1	34
35	Reuse potential of dredged river sediments in concrete: Effect of sediment variability. Journal of Cleaner Production, 2020, 265, 121665.	9.3	34
36	Theoretical and practical differences between creep and relaxation Poissonâ€™s ratios in linear viscoelasticity. Mechanics of Time-Dependent Materials, 2015, 19, 537-555.	4.4	32

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37	Thoughts about drying shrinkage: Scale effects and modelling. Materiaux Et Constructions, 1997, 30, 96-105.	0.3	31
38	Analysis of some basic creep tests on concrete and their implications for modeling. Structural Concrete, 2018, 19, 483-488.	3.1	31
39	Coupling between mechanical and transfer properties and expansion due to DEF in a concrete of a nuclear power plant. Nuclear Engineering and Design, 2014, 266, 70-77.	1.7	27
40	A viscoelastic approach for the assessment of the drying shrinkage behaviour of cementitious materials. Materials and Structures/Materiaux Et Constructions, 2007, 40, 163-174.	3.1	25
41	Effect of the Young modulus variability on the mechanical behaviour of a nuclear containment vessel. Nuclear Engineering and Design, 2010, 240, 4051-4060.	1.7	24
42	Time evolutions of non-aging viscoelastic Poisson's ratio of concrete and implications for creep of C-S-H. Cement and Concrete Research, 2016, 90, 144-161.	11.0	24
43	Toward a codified design of recycled aggregate concrete structures: Background for the new <scp><i>fib</i> Model Code 2020 and Eurocode 2</scp>. Structural Concrete, 2021, 22, 2916-2938.	3.1	23
44	Improvement of Recycled Aggregates Properties by Means of CO2 Uptake. Applied Sciences (Switzerland), 2021, 11, 6571.	2.5	23
45	Stereophotogrammetry and Localization in Concrete under Compression. Journal of Engineering Mechanics - ASCE, 1991, 117, 1455-1465.	2.9	22
46	Creep Consideration Effect on Meso-Scale Modeling of Concrete Hydration Process and Consequences on the Mechanical Behavior. Journal of Engineering Mechanics - ASCE, 2013, 139, 1808-1817.	2.9	22
47	Effect of potassium humate as humic substances from river sediments on the rheology, the hydration and the strength development of a cement paste. Cement and Concrete Composites, 2019, 104, 103400.	10.7	22
48	Influence of limestone filler and of the size of the aggregates on DEF. Cement and Concrete Composites, 2016, 71, 175-180.	10.7	20
49	ModÃ©lisation du retrait du bÃ©ton en ambiance variable. Revue EuropÃ©enne De GÃ©nie Civil, 1997, 1, 687-698.	0.0	19
50	Basic creep of concrete-coupling between high stresses and elevated temperatures. European Journal of Environmental and Civil Engineering, 2018, 22, 1419-1428.	2.1	19
51	Analysis of localization in brittle materials through optical techniques. Experimental Mechanics, 1997, 37, 216-220.	2.0	18
52	Behaviour of steel-fibre-reinforced concretes under biaxial compression loads. Cement and Concrete Composites, 1995, 17, 261-266.	10.7	16
53	Recommendations of RILEM TC 287-CCS: thermo-chemo-mechanical modelling of massive concrete structures towards cracking risk assessment. Materials and Structures/Materiaux Et Constructions, 2021, 54, 1.	3.1	13
54	Mechanical threshold of cementitious materials at early age. Materials and Structures/Materiaux Et Constructions, 2005, 38, 299-304.	3.1	13

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55	Reuse of Untreated Fine Sediments as Filler: Is It More Beneficial than Incorporating Them as Sand?. Buildings, 2022, 12, 211.	3.1	11
56	Modelling the influence of temperature on accelerated leaching in ammonium nitrate. European Journal of Environmental and Civil Engineering, 2012, 16, 322-335.	2.1	9
57	On DEF expansion modelling in concrete structures under variable hydric conditions. Construction and Building Materials, 2019, 207, 396-402.	7.2	9
58	Influential factors in volume change measurements for cementitious materials at early ages and in isothermal conditions. Cement and Concrete Composites, 2018, 85, 105-121.	10.7	8
59	Structural Effects of Drying Shrinkage. Journal of Engineering Mechanics - ASCE, 2005, 131, 1195-1199.	2.9	7
60	A nonlinear mesoâ€"macro approach to modelling delayed ettringite formation and concrete degradation. Materials and Structures/Materiaux Et Constructions, 2014, 47, 1911-1920.	3.1	7
61	On the Very Long-Term Delayed Behavior of Biaxially Prestressed Structures: The Case of the Containments of Nuclear Power Plants. , 2015, , .		7
62	Coupling of attrition and accelerated carbonation for CO2 sequestration in recycled concrete aggregates. Cleaner Engineering and Technology, 2021, 3, 100106.	4.0	7
63	Modeling Long-term Delayed Strains of Prestressed Concrete with Real Temperature and Relative Humidity History. Journal of Advanced Concrete Technology, 2020, 18, 396-408.	1.8	7
64	Restrained shrinkage of massive reinforced concrete structures: results of the project CEOS.fr. European Journal of Environmental and Civil Engineering, 2016, 20, 785-808.	2.1	6
65	Impact of carbonation on the durability of cementitious materials: water transport properties characterization. EPJ Web of Conferences, 2013, 56, 01008.	0.3	6
66	Influence of residual mortar volume on the properties of recycled concrete aggregates. Journal of Building Engineering, 2022, 57, 104945.	3.4	6
67	Comparative study of two biaxial presses for concrete. Materials and Structures/Materiaux Et Constructions, 1991, 24, 52-60.	3.1	5
68	Analysis of localization in concrete through stereophotogrametry, speckle laser and replica. Cement and Concrete Research, 1993, 23, 1340-1350.	11.0	5
69	Discussion of â€˜Drying creep of concrete: constitutive model and new experiments separating its mechanismsâ€™, by Z. P. Bazant and Y. Xi. Materiaux Et Constructions, 1994, 27, 616-618.	0.3	5
70	Uncertainty propagation on damage evolution of a concrete structure subjected to coupled leaching and creep. European Journal of Environmental and Civil Engineering, 2010, 14, 891-921.	2.1	4
71	Modelling desiccation shrinkage of large structures. EPJ Web of Conferences, 2013, 56, 02001.	0.3	4
72	The Effects of Long-Term Behavior of Both Concrete and Prestressing Tendons on the Delayed Deflection of a Prestressed Structure. , 2015, , .		4

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73	On the relation between the mean compressive strength and the characteristic one. Structural Concrete, 2020, 21, 409-412.	3.1	4
74	Influence of the spatial variability of leaching kinetics parameters on the lifespan of a concrete structure. European Journal of Environmental and Civil Engineering, 2012, 16, 606-624.	2.1	3
75	CEOS.FR Experiments for the Crack Control of Concrete at an Early Age. , 2015, , .		3
76	Analysis and Modelling of Basic Creep. , 2015, , .		3
77	Novel semi-analytical model to calculate shear forces due to viscoelastic interactions. Engineering Structures, 2019, 183, 999-1013.	5.3	3
78	Probabilistic and predictive performance-based approach for assessing reinforced concrete structures lifetime: The applet project. EPJ Web of Conferences, 2011, 12, 01004.	0.3	2
79	Difference between Creep and Relaxation Poissonâ€™s Ratios: Theoretical and Practical Significance for Concrete Creep Testing. , 2015, , .		2
80	Interpretation of very long-term basic creep tests of concrete. European Journal of Environmental and Civil Engineering, 2019, 23, 586-592.	2.1	2
81	Prediction of the basic creep of concrete with high substitution of Portland cement by mineral additions at early age. Structural Concrete, 2021, 22, E563.	3.1	2
82	Cracking Risk and Regulations. RILEM State-of-the-Art Reports, 2019, , 257-306.	0.7	2
83	New experimental approach to accelerate the development of internal swelling reactions (ISR) in massive concrete structures. Construction and Building Materials, 2021, 313, 125388.	7.2	2
84	Probabilistic modelling of calcium leaching in a tunnel for nuclear waste disposal. EPJ Web of Conferences, 2011, 12, 04004.	0.3	1
85	Interest of the probabilistic approach for the equivalent durability concept. European Journal of Environmental and Civil Engineering, 2012, 16, 256-263.	2.1	1
86	Transient Thermal Creep at Moderate Temperature. Key Engineering Materials, 0, 711, 885-891.	0.4	1
87	Formulation of optimized excavatable cement treated materials using a new punching test apparatus. Materials and Structures/Materiaux Et Constructions, 2018, 51, 1.	3.1	1
88	Modelling of the Long Term Behaviour of Prestressed Concrete Structures: the Case of Nuclear Power Plants. , 2018, , .		1
89	The young's modulus of concrete reconsidered. Cement and Concrete Research, 1994, 24, 641-649.	11.0	0
90	Analyse des effets thermiques sur le comportement mÃ©canique des bÃ©tons destinÃ©s aux revÃªtements de tunnels. Materiaux Et Constructions, 1994, 27, 138-147.	0.3	0

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91	A reply to the discussion by A.M. Brandt of the paper â€œYoung's modulus of concrete reconsideredâ€. Cement and Concrete Research, 1995, 25, 1123.	11.0	0
92	Reply to the discussion of D. B. McDonald. Materials and Structures/Materiaux Et Constructions, 1997, 30, 574-575.	3.1	0
93	Modeling Concrete at Early Age Using Percolation. Advanced Structured Materials, 2010, , 333-346.	0.5	0
94	Modelling Basic Creep of Concrete at Elevated Temperatures and Stresses. Key Engineering Materials, 0, 711, 879-884.	0.4	0
95	On a Poromechanical Approach to Long-Term Autogenous Shrinkage. , 2017, , .		0
96	Uncertainty propagation on damage evolution of a concrete structure subjected to coupled leaching and creep. European Journal of Environmental and Civil Engineering, 2010, 14, 891-921.	2.1	0
97	Ultimate Strength and Criterion of Interphase Cracks Propagation. , 1991, , 30-39.		0
98	Materials and Properties. RILEM State-of-the-Art Reports, 2016, , 9-29.	0.7	0