Liberato Ferrara

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5663075/publications.pdf

Version: 2024-02-01

106 papers	4,537 citations	109137 35 h-index	106150 65 g-index
112 all docs	112 docs citations	112 times ranked	2203 citing authors

#	Article	IF	Citations
1	A Review of Selfâ€Healing Concrete for Damage Management of Structures. Advanced Materials Interfaces, 2018, 5, 1800074.	1.9	412
2	Self-healing capability of concrete with crystalline admixtures in different environments. Construction and Building Materials, 2015, 86, 1-11.	3.2	229
3	A â€œfracture testingâ€•based approach to assess crack healing of concrete with and without crystalline admixtures. Construction and Building Materials, 2014, 68, 535-551.	3.2	221
4	A method for mix-design of fiber-reinforced self-compacting concrete. Cement and Concrete Research, 2007, 37, 957-971.	4.6	211
5	High mechanical performance of fibre reinforced cementitious composites: the role of â€œcasting-flow inducedâ€•fibre orientation. Materials and Structures/Materiaux Et Constructions, 2011, 44, 109-128.	1.3	210
6	Effect of crystalline admixtures on the self-healing capability of early-age concrete studied by means of permeability and crack closing tests. Construction and Building Materials, 2016, 114, 447-457.	3.2	209
7	Experimental characterization of the self-healing capacity of cement based materials and its effects on the material performance: A state of the art report by COST Action SARCOS WG2. Construction and Building Materials, 2018, 167, 115-142.	3.2	183
8	Relationships between fibre distribution, workability and the mechanical properties of SFRC applied to precast roof elements. Materials and Structures/Materiaux Et Constructions, 2007, 39, 411-420.	1.3	139
9	Early age performance and mechanical characteristics of recycled PET fibre reinforced concrete. Construction and Building Materials, 2016, 108, 29-47.	3.2	138
10	A methodology to assess crack-sealing effectiveness of crystalline admixtures under repeated cracking-healing cycles. Construction and Building Materials, 2018, 179, 619-632.	3.2	119
11	Opportunities and challenges for structural engineering of digitally fabricated concrete. Cement and Concrete Research, 2020, 133, 106079.	4.6	117
12	On the use of crystalline admixtures in cement based construction materials: from porosity reducers to promoters of self healing. Smart Materials and Structures, 2016, 25, 084002.	1.8	114
13	Correlation among Fresh State Behavior, Fiber Dispersion, and Toughness Properties of SFRCs. Journal of Materials in Civil Engineering, 2008, 20, 493-501.	1.3	97
14	Double edge wedge splitting (DEWS): an indirect tension test to identify post-cracking behaviour of fibre reinforced cementitious composites. Materials and Structures/Materiaux Et Constructions, 2013, 46, 1893-1918.	1.3	91
15	Effects of autogenous healing on the recovery of mechanical performance of High Performance Fibre Reinforced Cementitious Composites (HPFRCCs): Part 1. Cement and Concrete Composites, 2017, 83, 76-100.	4.6	85
16	A magnetic method for non destructive monitoring of fiber dispersion and orientation in steel fiber reinforced cementitious compositesâ€”part 1: method calibration. Materials and Structures/Materiaux Et Constructions, 2012, 45, 575-589.	1.3	82
17	Numerical simulations of concrete flow: A benchmark comparison. Cement and Concrete Research, 2016, 79, 265-271.	4.6	81
18	The realities of additively manufactured concrete structures in practice. Cement and Concrete Research, 2022, 156, 106746.	4.6	79

#	Article	IF	Citations
19	External treatments for the preventive repair of existing constructions: A review. Construction and Building Materials, 2018, 193, 435-452.	3.2	68
20	Autogenous healing on the recovery of mechanical performance ofÂHigh Performance Fibre Reinforced Cementitious Composites (HPFRCCs): Part 2 â€“ Correlation between healing of mechanical performance and crack sealing. Cement and Concrete Composites, 2016, 73, 299-315.	4.6	66
21	Mixed mode fracture in plain and reinforced concrete: some results on benchmark tests. International Journal of Fracture, 2000, 103, 127-148.	1.1	61
22	Synergy between crystalline admixtures and nano-constituents in enhancing autogenous healing capacity of cementitious composites under cracking and healing cycles in aggressive waters. Construction and Building Materials, 2021, 266, 121447.	3.2	61
23	Crack sealing capacity in chloride-rich environments of mortars containing different cement substitutes and crystalline admixtures. Journal of Sustainable Cement-Based Materials, 2018, 7, 141-159.	1.7	60
24	Simulation of the flow of fresh cement suspensions by a Lagrangian finite element approach. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 1555-1563.	1.0	58
25	Self-healing capacity of fiber reinforced cementitious composites. State of the art and perspectives. KSCE Journal of Civil Engineering, 2017, 21, 2777-2789.	0.9	58
26	Mechanical properties and self-healing capacity of Ultra High Performance Fibre Reinforced Concrete with alumina nano-fibres: Tailoring Ultra High Durability Concrete for aggressive exposure scenarios. Cement and Concrete Composites, 2021, 118, 103956.	4.6	57
27	Correlating dynamic segregation of self-consolidating concrete to the slump-flow test. Construction and Building Materials, 2012, 28, 499-505.	3.2	55
28	A comprehensive methodology to test the performance of Steel Fibre Reinforced Self-Compacting Concrete (SFR-SCC). Construction and Building Materials, 2012, 37, 406-424.	3.2	52
29	Effect of age and level of damage on the autogenous healing of lime mortars. Composites Part B: Engineering, 2017, 124, 144-157.	5.9	52
30	A magnetic method for non destructive monitoring of fiber dispersion and orientation in steel fiber reinforced cementitious composites. Part 2: Correlation to tensile fracture toughness. Materials and Structures/Materiaux Et Constructions, 2012, 45, 591-598.	1.3	48
31	On the identification of rheological properties of cement suspensions: Rheometry, Computational Fluid Dynamics modeling and field test measurements. Cement and Concrete Research, 2012, 42, 1134-1146.	4.6	48
32	Effectiveness of crystalline admixtures and lime/cement coated granules in engineered self-healing capacity of lime mortars. Materials and Structures/Materiaux Et Constructions, 2017, 50, 1.	1.3	45
33	Nondestructive Testing of Steel-Fiber-Reinforced Concrete Using a Magnetic Approach. IEEE Transactions on Instrumentation and Measurement, 2011, 60, 1709-1717.	2.4	44
34	Tensile behaviour identification in Ultra-High Performance Fibre Reinforced Cementitious Composites: indirect tension tests and back analysis of flexural test results. Materials and Structures/Materiaux Et Constructions, 2020, 53, 1.	1.3	41
35	Self-healing characterization of UHPFRCC with crystalline admixture: Experimental assessment via multi-test/multi-parameter approach. Construction and Building Materials, 2021, 283, 122579.	3.2	39
36	Research Progress on Numerical Models for Selfâ€Healing Cementitious Materials. Advanced Materials Interfaces, 2018, 5, 1701378.	1.9	37

#	Article	IF	Citations
37	Mode I Fracture Behavior in Concrete: Nonlocal Damage Modeling. Journal of Engineering Mechanics - ASCE, 2001, 127, 678-692.	1.6	33
38	Crystalline Admixture as Healing Promoter in Concrete Exposed to Chloride-Rich Environments: Experimental Study. Journal of Materials in Civil Engineering, 2021, 33, .	1.3	32
39	Numerical and experimental analysis of an innovative lightweight precast concrete wall. Engineering Structures, 2017, 137, 204-222.	2.6	31
40	Full-scale testing and numerical analysis of a precast fibre reinforced self-compacting concrete slab pre-stressed with basalt fibre reinforced polymer bars. Composites Part B: Engineering, 2017, 128, 120-133.	5.9	31
41	Numerical modeling of mechanical regain due to self-healing in cement based composites. Cement and Concrete Composites, 2018, 86, 190-205.	4.6	30
42	Effects of Autogenous and Stimulated Self-Healing on Durability and Mechanical Performance of UHPFRC: Validation of Tailored Test Method through Multi-Performance Healing-Induced Recovery Indices. Sustainability, 2021, 13, 11386.	1.6	30
43	An overview of a twofold effect of crystalline admixtures in cement-based materials: from permeability-reducers to self-healing stimulators. Journal of Building Engineering, 2021, 41, 102400.	1.6	29
44	Fracture toughness parameters to assess crack healing capacity of fiber reinforced concrete under repeated cracking-healing cycles. Theoretical and Applied Fracture Mechanics, 2020, 106, 102468.	2.1	27
45	A discrete numerical model for the effects of crack healing on the behaviour of ordinary plain concrete: Implementation, calibration, and validation. Engineering Fracture Mechanics, 2022, 263, 108266.	2.0	25
46	Durability-Based Design of Structures Made with Ultra-High-Performance/Ultra-High-Durability Concrete in Extremely Aggressive Scenarios: Application to a Geothermal Water Basin Case Study. Infrastructures, 2020, 5, 102.	1.4	24
47	Environmental and economic sustainability of crack mitigation in reinforced concrete with SuperAbsorbent polymers (SAPs). Journal of Cleaner Production, 2022, 358, 131998.	4.6	23
48	Effects of Alumina Nanofibers and Cellulose Nanocrystals on Durability and Self-Healing Capacity of Ultrahigh-Performance Fiber-Reinforced Concretes. Journal of Materials in Civil Engineering, 2022, 34, .	1.3	23
49	Meta-Analysis and Machine Learning Models to Optimize the Efficiency of Self-Healing Capacity of Cementitious Material. Materials, 2021, 14, 4437.	1.3	22
50	Effect of casting flow defects on the crack propagation in UHPFRC thin slabs by means of stereovision Digital Image Correlation. Construction and Building Materials, 2016, 129, 182-192.	3.2	21
51	Innovative Design Concept of Cooling Water Tanks/Basins in Geothermal Power Plants Using Ultra-High-Performance Fiber-Reinforced Concrete with Enhanced Durability. Sustainability, 2021, 13, 9826.	1.6	21
52	Efficacy of roof-to-beam mechanical connections on the diaphragm behaviour of precast decks with spaced roof elements. Engineering Structures, 2018, 176, 681-696.	2.6	20
53	Coal mining wastes valorization as raw geomaterials in construction: A review with new perspectives. Journal of Cleaner Production, 2022, 336, 130213.	4.6	20
54	Structural elements made with highly flowable UHPFRC: Correlating computational fluid dynamics (CFD) predictions and non-destructive survey of fiber dispersion with failure modes. Engineering Structures, 2017, 133, 151-171.	2.6	19

#	Article	IF	Citations
55	Low Frequency Electrical and Magnetic Methods for Non-Destructive Analysis of Fiber Dispersion in Fiber Reinforced Cementitious Composites: An Overview. Sensors, 2013, 13, 1300-1318.	2.1	18
56	Performance of sustainable SCC mixes with mineral additions for use in precast concrete industry. Journal of Sustainable Cement-Based Materials, 2016, 5, 157-175.	1.7	17
57	Comparative environmental and social life cycle assessments of off-shore aquaculture rafts made in ultra-high performance concrete (UHPC). International Journal of Life Cycle Assessment, 2022, 27, 281-300.	2.2	17
58	Performance Assessment of Ultra-High Durability Concrete Produced From Recycled Ultra-High Durability Concrete. Frontiers in Built Environment, 2021, 7, .	1.2	16
59	Zero-thickness interface constitutive theory for concrete self-healing effects. Computers and Structures, 2017, 186, 22-34.	2.4	14
60	Recycling ceramic waste powder: effects its grain-size distribution on fresh and hardened properties of cement pastes/mortars formulated from SCC mixes. Journal of Sustainable Cement-Based Materials, 2019, 8, 145-160.	1.7	14
61	Effect of Cellulose Nanopulp on Autogenous and Drying Shrinkage of Cement Based Composites. , 2015, , 325-330.		12
62	Effect of crack pattern on the self-healing capability in traditional, HPC and UHPFRC concretes measured by water and chloride permeability. MATEC Web of Conferences, 2019, 289, 01006.	0.1	12
63	The Application of Lysinibacillus sphaericus for Surface Treatment and Crack Healing in Mortar. Frontiers in Built Environment, 2019, 5, .	1.2	12
64	Onset and intensity of shear thickening in cementitious suspensions â€“ A parametrical study. Construction and Building Materials, 2020, 244, 118292.	3.2	10
65	Tailoring the orientation of fibres in high performance fibre reinforced cementitious composites: part 1 - experimental evidence, monitoring and prediction. International Journal of Materials and Structural Integrity, 2015, 9, 72.	0.1	9
66	High performance fibre reinforced cementitious composites: Six memos for the XXI century societal and economical challenges of civil engineering. Case Studies in Construction Materials, 2019, 10, e00219.	0.8	9
67	Friction dissipative devices for cladding panels in precast buildings. An experimental investigation. European Journal of Environmental and Civil Engineering, 2011, 15, 1319-1338.	1.0	9
68	Flow-Induced Fiber Orientation in SCSFRC: Monitoring and Prediction. , 2010, , 417-428.		8
69	An Overview on H2020 Project â€œReSHEALienceâ€• IABSE Symposium Report, 2019, , .	0.0	8
70	Self-healing capacity of advanced lime mortars. Advances in Materials and Processing Technologies, 2016, 2, 349-360.	0.8	7
71	A multi-electrode measurement system for steel fiber reinforced concrete materials monitoring. , 2009, , .		6
72	Steel fiber reinforced concrete characterization based on a magnetic probe. , 2010, , .		6

#	Article	IF	Citations
73	Tailoring the orientation of fibres in high performance fibre reinforced cementitious composites: part 2 - correlation to mechanical properties and design implications. International Journal of Materials and Structural Integrity, 2015, 9, 92.	0.1	6
74	Structural validation of geothermal water basins constructed with durability enhanced ultra high performance fiber reinforced concrete (Ultra High Durability Concrete). Case Studies in Construction Materials, 2022, 17, e01202.	0.8	6
75	â€œCollapsibleâ€•lightweight aggregate concrete. Part I: material concept and preliminary characterization under static loadings. Materials and Structures/Materiaux Et Constructions, 2016, 49, 1733-1745.	1.3	5
76	Self-healing cement-based materials: an asset for sustainable construction industry. IOP Conference Series: Materials Science and Engineering, 0, 442, 012007.	0.3	5
77	Effect of plain and carboxylated styrene-butadiene rubber on the rheological behavior of silica fume-class G Portland cement slurries. Journal of Materials Research and Technology, 2020, 9, 5364-5377.	2.6	5
78	Meta-Analysis of Steel Fiber-Reinforced Concrete Mixtures Leads to Practical Mix Design Methodology. Materials, 2021, 14, 3900.	1.3	5
79	Predicting Dynamic Segregation of Self-Consolidating Concrete from the Slump-Flow Test. Journal of ASTM International, 2010, 7, 1-7.	0.2	5
80	Friction dissipative devices for cladding panels in precast buildings. European Journal of Environmental and Civil Engineering, 2011, 15, 1319-1338.	1.0	4
81	Citius, altius, fortius/faster, higher, tougher: pushing ahead the boundaries of structural concrete through fiber-reinforced cementitious composites with adapted rheology. Journal of Sustainable Cement-Based Materials, 2016, 5, 135-156.	1.7	4
82	â€œCollapsibleâ€•lightweight aggregate concrete. Part II: characterization under static and dynamic loadings. Materials and Structures/Materiaux Et Constructions, 2016, 49, 1747-1760.	1.3	4
83	Experimental Characterization of the Self-Healing Capacity of Cement Based Materials: An Overview. Proceedings (mdpi), 2018, 2, 454.	0.2	4
84	Cementitious Composites Reinforced with Natural Fibres. Research for Development, 2017, , 197-331.	0.2	4
85	Self-healing of slag-cement ultra-high performance steel fiber reinforced concrete (UHPFRC) containing sisal fibers as healing conveyor. Journal of Building Engineering, 2022, 54, 104638.	1.6	4
86	Performance of concrete with and without crystalline admixtures under repeated cracking/healing cycles. MATEC Web of Conferences, 2018, 199, 02016.	0.1	3
87	Experimental Investigation on the Early Age Tensile Strength of Fiber Reinforced Mortar Used in 3D Concrete Printing. RILEM Bookseries, 2020, , 255-261.	0.2	3
88	Design with Highly Flowable Fiber-Reinforced Concrete: Overview of the Activity of fib TG 8.8. , 2010, , 395-406.		3
89	Sustainable Roof Elements: A Proposal Offered by Cementitious Composites Technology. , 2012, , 167-181.		3
90	Strengthening/retrofitting of coupling beams using advanced cement based materials. , 2015, , 165-166.		3

#	Article	IF	Citations
91	Structural Design and Testing of Digitally Manufactured Concrete Structures. RILEM State-of-the-Art Reports, 2022, , 187-222.	0.3	3
92	An improved method for steel fiber reinforced concrete analysis. , 2012, , .		2
93	Self-healing Stimulated by Crystalline Admixtures in Chloride Rich Environments: Is It Possible to Extend the Structure Service Life?. RILEM Bookseries, 2020, , 141-147.	0.2	2
94	Fiber Reinforced SCC. RILEM State-of-the-Art Reports, 2014, , 161-219.	0.3	2
95	Design approach for diaphragm action of roof decks in precast concrete building under earthquake. , 2008, , 197-197.		2
96	Correlation Between â€œVery Earlyâ€•Age Fracture Performance and Evolution of Rheological Properties of High Performance Fiber Reinforced Cementitious Composites with Adapted Rheology. RILEM Bookseries, 2020, , 237-245.	0.2	2
97	Self-Healing Concrete Research in the European Projects SARCOS and SMARTINCS. RILEM Bookseries, 2022, , 303-307.	0.2	2
98	Specialty SCC. RILEM State-of-the-Art Reports, 2014, , 221-254.	0.3	1
99	Mechanical and Durability Assessment of Concretes Obtained from Recycled Ultra-High Performance Concretes. RILEM Bookseries, 2022, , 947-957.	0.2	1
100	Experimental Characterization of the Tensile Constitutive Behaviour of Ultra-High Performance Concretes: Effect of Cement and Fibre Type. RILEM Bookseries, 2022, , 936-946.	0.2	1
101	â€œStructural Design with Flowable Concreteâ€• A fib-Recommendation for Tailor-Made Concrete. , 2010, , 13-23.		1
102	Developments and Standardisation of Flowable Concrete Reinforced with Fibres for Structural Design, Update of fib TG 4.3. RILEM Bookseries, 2021, , 779-790.	0.2	1
103	An overview on the research on self-healing concrete at Politecnico di Milano. MATEC Web of Conferences, 2017, 120, 02001.	0.1	0
104	Connecting Non-destructive Fiber Dispersion Measurements with Tensile HPFRCC Behavior. RILEM Bookseries, 2012, , 43-50.	0.2	0
105	A Methodology to Assess Early Age Fracture Performance of 3D Printable Cementitious Mixes. , 2021, , 27-34.		0
106	Introduction to a New Extrusion-Based Technology for the Regeneration of Existing Tunnels. , 2022, 17, .		0