Aurelio Muttoni

List of Publications by Year
in descending order

89 papers	2,753 citations	168829 31 h-index	232693 48 g-index
89 all docs	89 docs citations	89 times ranked	1167 citing authors

#	Article	IF	Citations
1	Deformation capacity evaluation for flat slab seismic design. Bulletin of Earthquake Engineering, 2022, 20, 1619-1654.	2.3	8
2	Characterization of shear deformations in reinforced concrete members without shear reinforcement. Engineering Structures, 2022, 257, 113910.	2.6	7
3	Considerations on the partial safety factor format for reinforced concrete structures accounting for multiple failure modes. Engineering Structures, 2022, 264, 114442.	2.6	2
4	Anchorage of shear reinforcement in beams and slabs. Engineering Structures, 2022, 265, 114340.	2.6	3
5	The influence of casting position and disturbance induced by reinforcement on the structural concrete strength. Structural Concrete, 2021, 22, E655.	1.5	5
6	Concrete compressive strength: From material characterization to a structural value. Structural Concrete, 2021, 22, E634.	1.5	11
7	A detailed view on the rebarâ€“toâ€“concrete interaction based on refined measurement techniques. Engineering Structures, 2021, 226, 111332.	2.6	38
8	An interlocking approach for the rebar-to-concrete contact in bond. Magazine of Concrete Research, 2021, 73, 379-393.	0.9	5
9	Casting position effects on bond performance of reinforcement bars. Structural Concrete, 2021, 22, 1612-1632.	1.5	18
10	Shear force redistributions and resistance of slabs and wide beams. Structural Concrete, 2021, 22, 2443-2465.	1.5	7
11	Spalling of concrete cover induced by reinforcement. Engineering Structures, 2021, 237, 112188.	2.6	14
12	Testing of a full-scale flat slab building for gravity and lateral loads. Engineering Structures, 2021, 243, 112551.	2.6	12
13	Design against splitting failures in reinforced concrete due to concentrated forces and minimum bend diameter of reinforcement. Engineering Structures, 2021, 245, 112902.	2.6	5
14	A consistent safety format and design approach for brittle systems and application to textile reinforced concrete structures. Engineering Structures, 2021, 249, 113306.	2.6	10
15	The role of thermal loads in the performance-based design of energy piles. Geomechanics for Energy and the Environment, 2020, 21, 100153.	1.2	21
16	Influence of cracking and rough surface properties on the transfer of forces in cracked concrete. Engineering Structures, 2020, 225, 111138.	2.6	26
17	A state of the art of flatâ€slab frame tests for gravity and lateral loading. Structural Concrete, 2020, 21, 2764-2781.	1.5	6
18	Tensile response of textile reinforced concrete. Construction and Building Materials, 2020, 258, 119517.	3.2	44

#	Article	IF	Citations
19	Modelling of Textile Reinforced Concrete in bending and shear with Elastic-Cracked Stress Fields. Engineering Structures, 2020, 215, 110664.	2.6	19
20	<scp>Authors' closure on the discussion of the article</scp>: â€œFrom experimental evidence to mechanical modeling and design expressions: The Critical Shear Crack Theory for Shear Designâ€• (discussion by DÃ¶nmez et al.). Structural Concrete, 2020, 21, 1690-1692.	1.5	0
21	Textile reinforced concrete for sustainable structures: Future perspectives and application to a prototype pavilion. Structural Concrete, 2020, 21, 2251-2267.	1.5	29
22	Parametric analysis on punching shear resistance of reinforced-concrete continuous slabs. Magazine of Concrete Research, 2019, 71, 1083-1096.	0.9	21
23	Review of fundamental assumptions of the Two-Phase model for aggregate interlocking in cracked concrete using numerical methods and experimental evidence. Cement and Concrete Research, 2019, 125, 105855.	4.6	13
24	From experimental evidence to mechanical modeling and design expressions: The Critical Shear Crack Theory for shear design. Structural Concrete, 2019, 20, 1464-1480.	1.5	29
25	Assessing the compressive strength of concrete under sustained actions: From refined models to simple design expressions. Structural Concrete, 2019, 20, 971-985.	1.5	9
26	Enhancing Punching Strength and Deformation Capacity of Flat Slabs. ACI Structural Journal, 2019, 116, .	0.3	7
27	Shell Modelling Strategies for the Assessment of Punching Shear Resistance of Continuous Slabs. Lecture Notes in Civil Engineering, 2018, , 49-57.	0.3	0
28	Validation of the Critical Shear Crack Theory for punching of slabs without transverse reinforcement by means of a refined mechanical model. Structural Concrete, 2018, 19, 191-216.	1.5	28
29	Shear design and assessment: The coming steps forward for fib Model Code 2020. Structural Concrete, 2018, 19, 3-4.	1.5	8
30	A mechanical model for failures in shear of members without transverse reinforcement based on development of a critical shear crack. Engineering Structures, 2018, 157, 300-315.	2.6	72
31	Measurements of internal cracking in punching test slabs without shear reinforcement. Magazine of Concrete Research, 2018, 70, 798-810.	0.9	9
32	The theoretical principles of the critical shear crack theory for punching shear failures and derivation of consistent closedâ€form design expressions. Structural Concrete, 2018, 19, 174-190.	1.5	56
33	An analysis of the shearâ€transfer actions in reinforced concrete members without transverse reinforcement based on refined experimental measurements. Structural Concrete, 2018, 19, 49-64.	1.5	89
34	Test and lower bound modeling of keyed shear connections in RC shear walls. Engineering Structures, 2018, 155, 115-126.	2.6	15
35	Size effect in shear and punching shear failures of concrete members without transverse reinforcement: Differences between statically determinate members and redundant structures. Structural Concrete, 2018, 19, 65-75.	1.5	21
36	Compressive Strength and Deformation Capacity of Concrete under Sustained Loading and Low Stress Rates. Journal of Advanced Concrete Technology, 2018, 16, 396-415.	0.8	34

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37	Efficiency Factors for Plastic Design in Concrete: Influence of Brittleness in Compression. , 2018, , 1234-1242.		1
38	Mechanical Model for Drift-Induced Punching of Slab-Column Connections without Transverse Reinforcement. ACI Structural Journal, 2018, 115, .	0.3	17
39	Internal force distribution in RC slabs subjected to punching shear. Engineering Structures, 2017, 153, 766-781.	2.6	31
40	Bond behaviour of straight, hooked, Uâ€shaped and headed bars in cracked concrete. Structural Concrete, 2016, 17, 799-810.	1.5	42
41	Internal slab-column connections under monotonic and cyclic imposed rotations. Engineering Structures, 2016, 123, 501-516.	2.6	39
42	Punching shear tests on compact footings with uniform soil pressure. Structural Concrete, 2016, 17, 603-617.	1.5	37
43	Strength of reinforced concrete footings without transverse reinforcement according to limit analysis. Engineering Structures, 2016, 112, 146-161.	2.6	30
44	Study on Influence of Column Size and Slab Slenderness on Punching Strength. ACI Structural Journal, 2016, 113, .	0.3	47
45	ÂÂPerformance of Punching Shear Reinforcement under Gravity Loading: Influence of Type and Detailing. ACI Structural Journal, 2016, 113, .	0.3	28
46	Punching Shear Capacity of Continuous Slabs. ACI Structural Journal, 2016, 113, .	0.3	28
47	Shear strength evaluation of RC slabs according to CSCT with multi-layered shell elements and PARC-CL crack model. , 2015, , .		7
48	Experimental investigation of soilâ€structure interaction for the transition slabs of integral bridges. Structural Concrete, 2015, 16, 470-479.	1.5	6
49	Influence of Fatigue Loading in Shear Failures of Reinforced Concrete Members without Transverse Reinforcement. Journal of Advanced Concrete Technology, 2015, 13, 263-274.	0.8	11
50	Derivation of the Ïƒâ€w relationship for SFRC from prism bending tests. Structural Concrete, 2015, 16, 93-105.	1.5	95
51	Shear strength of concrete members without transverse reinforcement: A mechanical approach to consistently account for size and strain effects. Engineering Structures, 2015, 99, 360-372.	2.6	110
52	Influence of moment redistribution and compressive membrane action on punching strength of flat slabs. Engineering Structures, 2015, 86, 43-57.	2.6	51
53	Experimental investigation on fatigue of concrete cantilever bridge deck slabs subjected to concentrated loads. Engineering Structures, 2015, 89, 191-203.	2.6	22
54	Analogy between Sustained Loading and Strain Rate Effects on the Nonlinear Creep Response of Concrete. , 2015, , .		4

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55	Shear failures in reinforced concrete members without transverse reinforcement: An analysis of the critical shear crack development on the basis of test results. Engineering Structures, 2015, 103, 157-173.	2.6	114
56	Design versus Assessment of Concrete Structures Using Stress Fields and Strut-and-Tie Models. ACI Structural Journal, 2015, 112, .	0.3	27
57	On the efficiency of flat slabs strengthening against punching using externally bonded fibre reinforced polymers. Construction and Building Materials, 2014, 73, 366-377.	3.2	32
58	Shear strength of RC slabs under concentrated loads near clamped linear supports. Engineering Structures, 2014, 76, 10-23.	2.6	39
59	Punching of flat slabs supported on rectangular columns. Engineering Structures, 2014, 77, 17-33.	2.6	72
60	Assessing punching shear failure in reinforced concrete flat slabs subjected to localised impact loading. International Journal of Impact Engineering, 2014, 71, 17-33.	2.4	72
61	Influence of prestressing on the punching strength of post-tensioned slabs. Engineering Structures, 2014, 72, 56-69.	2.6	41
62	How simple can nonlinear finite element modelling be for structural concrete?. Informes De La Construccion, 2014, 66, m013.	0.1	0
63	Post-tensioned girders with low amounts of shear reinforcement: Shear strength and influence of flanges. Engineering Structures, 2013, 56, 357-371.	2.6	26
64	Behaviour of nodal regions of reinforced concrete frames subjected to opening moments and proposals for their reinforcement. Engineering Structures, 2013, 51, 200-210.	2.6	9
65	Analysis of shear-transfer actions on one-way RC members based on measured cracking pattern and failure kinematics. Magazine of Concrete Research, 2013, 65, 386-404.	0.9	94
66	Background to fib Model Code 2010 shear provisions â€“ part II: punching shear. Structural Concrete, 2013, 14, 204-214.	1.5	55
67	Design for punching of prestressed concrete slabs. Structural Concrete, 2013, 14, 157-167.	1.5	29
68	Background to the fib Model Code 2010 shear provisions â€“ part I: beams and slabs. Structural Concrete, 2013, 14, 195-203.	1.5	78
69	Concrete shells â€“ towards efficient structures: construction of an ellipsoidal concrete shell in Switzerland. Structural Concrete, 2013, 14, 43-50.	1.5	17
70	Levels-of-Approximation Approach in Codes of Practice. Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE), 2012, 22, 190-194.	0.5	30
71	The levelsâ€ofâ€approximation approach in MC 2010: application to punching shear provisions. Structural Concrete, 2012, 13, 32-41.	1.5	66
72	Punching shear strength of steel fibre reinforced concrete slabs. Engineering Structures, 2012, 40, 83-94.	2.6	99

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73	Crushing and flexural strength of slabâ€“column joints. Engineering Structures, 2011, 33, 855-867.	2.6	15
74	Analytical and numerical analyses of the loadâ€bearing capacity of retaining walls laterally supported at both ends. International Journal for Numerical and Analytical Methods in Geomechanics, 2011, 35, 1019-1033.	1.7	7
75	Transition Slabs of Integral Abutment Bridges. Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE), 2011, 21, 144-150.	0.5	13
76	Non-axis-symmetrical punching shear around internal columns of RC slabs without transverse reinforcement. Magazine of Concrete Research, 2011, 63, 441-457.	0.9	81
77	Durchstanzen von Flachdecken bei hohen StÃƒÂ¼tzenlasten. Beton- Und Stahlbetonbau, 2010, 105, 19-26.	0.4	2
78	MC2010: The Critical Shear Crack Theory as a mechanical model for punching shear design and its application to code provisions. Fibre-reinforced Concrete: From Design To Structural Applications, 2010, , 31-60.	0.0	22
79	Shear in slabs and beams: should they be treated in the same way?. Fibre-reinforced Concrete: From Design To Structural Applications, 2010, , 105-128.	0.0	14
80	Shear strength of R/C bridge cantilever slabs. Engineering Structures, 2008, 30, 3024-3033.	2.6	40
81	Analytical Modeling of the Pre- and Postyield Behavior of Bond in Reinforced Concrete. Journal of Structural Engineering, 2007, 133, 1364-1372.	1.7	79
82	Concrete Cracking in Tension Members and Application to Deck Slabs of Bridges. Journal of Bridge Engineering, 2007, 12, 646-653.	1.4	32
83	Relationship between Nonlinear Creep and Cracking of Concrete under Uniaxial Compression. Journal of Advanced Concrete Technology, 2007, 5, 383-393.	0.8	83
84	Schubfestigkeit und Durchstanzen von Platten ohne Querkraftbewehrung. Beton- Und Stahlbetonbau, 2003, 98, 74-84.	0.4	46
85	BrÃ¼cken mit vorgespannter Stahlunterspannung. Stahlbau, 2002, 71, 592-597.	0.2	11
86	Design of Concrete Structures with Stress Fields. , 1996, , .		60
87	Die Anwendbarkeit der PlastizitÃtstheorie in der Bemessung von Stahlbeton. , 1990, , .		31
88	Verhalten von Stahlbeton. , 1990, , 29-64.		2
89	Compressive Membrane Action Effects on Punching Strength of Flat RC Slabs. Key Engineering Materials, 0, 711, 698-705.	0.4	8