Pascal A Forquin

List of Publications by Year
in descending order

100	2,303	159585	233421
papers	citations	30 h-index	45 g-index

112	112	112	1024
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An Experimental Method to Determine the Tensile Strength of Concrete at High Rates of Strain. Experimental Mechanics, 2010, 50, 941-955.	2.0	142
2	A testing technique for concrete under confinement at high rates of strain. International Journal of Impact Engineering, 2008, 35, 425-446.	5.0	122
3	Experiments and mesoscopic modelling of dynamic testing of concrete. Mechanics of Materials, 2011, 43, 505-527.	3.2	109
4	A Probabilistic Damage Model of the Dynamic Fragmentation Process in Brittle Materials. Advances in Applied Mechanics, 2010, 44, 1-72.	2.3	92
5	Influence of free water on the quasi-static and dynamic strength of concrete in confined compression tests. Cement and Concrete Research, 2010, 40, 321-333.	11.0	89
6	Influence of strain rate, temperature and adiabatic heating on the mechanical behaviour of poly-methyl-methacrylate: Experimental and modelling analyses. Materials & Design, 2012, 37, 500-509.	5.1	85
7	On the probabilisticâ€“deterministic transition involved in a fragmentation process of brittle materials. Computers and Structures, 2003, 81, 1241-1253.	4.4	83
8	Ultraâ€Highâ€Speed Fullâ€Field Deformation Measurements on Concrete Spalling Specimens and Stiffness Identification with the Virtual Fields Method. Strain, 2012, 48, 388-405.	2.4	83
9	Role of porosity in controlling the mechanical and impact behaviours of cement-based materials. International Journal of Impact Engineering, 2008, 35, 133-146.	5.0	70
10	Dynamic fragmentation process in concrete under impact and spalling tests. International Journal of Fracture, 2010, 163, 193-215.	2.2	69
11	Effect of aluminum reinforcement on the dynamic fragmentation of SiC ceramics. International Journal of Impact Engineering, 2003, 28, 1061-1076.	5.0	66
12	On the dynamic fragmentation of two limestones using edge-on impact tests. International Journal of Impact Engineering, 2008, 35, 977-991.	5.0	53
13	Granite rock fragmentation at percussive drilling â€“ experimental and numerical investigation. International Journal for Numerical and Analytical Methods in Geomechanics, 2014, 38, 828-843.	3.3	52
14	Analysis and modelling of the cohesion strength of concrete at high strain-rates. International Journal of Solids and Structures, 2014, 51, 2559-2574.	2.7	51
15	Experimental and numerical analysis of the dynamic fragmentation in a SiC ceramic under impact. International Journal of Impact Engineering, 2015, 76, 9-19.	5.0	50
16	Dynamic Fragmentation of an Ultrahigh-Strength Concrete during Edge-On Impact Tests. Journal of Engineering Mechanics - ASCE, 2008, 134, 302-315.	2.9	49
17	A method to determine the macroscopic toughness scatter of brittle materials. International Journal of Fracture, 2004, 125, 171-187.	2.2	48
18	An experimental method of measuring the confined compression strength of geomaterials. International Journal of Solids and Structures, 2007, 44, 4291-4317.	2.7	47

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19	A numerical study on the influence of free water content on the ballistic performances of plain concrete targets. Mechanics of Materials, 2015, 89, 176-189.	3.2	46
20	Experimental characterization of the punch through shear strength of an ultra-high performance concrete. International Journal of Impact Engineering, 2016, 91, 34-45.	5.0	42
21	The role of surface and volume defects in the fracture of glass under quasi-static and dynamic loadings. Journal of Non-Crystalline Solids, 2003, 316, 42-53.	3.1	41
22	Experimental study of the confined behaviour of PMMA under quasi-static and dynamic loadings. International Journal of Impact Engineering, 2012, 40-41, 46-57.	5.0	37
23	Experimental study of static and dynamic behavior of concrete under high confinement: Effect of coarse aggregate strength. Mechanics of Materials, 2016, 92, 164-174.	3.2	37
24	An optical correlation technique for characterizing the crack velocity in concrete. European Physical Journal: Special Topics, 2012, 206, 89-95.	2.6	35
25	Effect of plastic deformation and boundary conditions combined with elastic wave propagation on the collapse site of a crash box. Thin-Walled Structures, 2008, 46, 1143-1163.	5.3	34
26	Brittle materials at high-loading rates: an open area of research. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160436.	3.4	34
27	Experiments and modelling of the compressive behaviour of two SiC ceramics. Mechanics of Materials, 2003, 35, 987-1002.	3.2	33
28	A numerical study of the influence from preâ€existing cracks on granite rock fragmentation at percussive drilling. International Journal for Numerical and Analytical Methods in Geomechanics, 2015, 39, 558-570.	3.3	33
29	Dynamic fragmentation of an alumina ceramic subjected to shockless spalling: An experimental and numerical study. Journal of the Mechanics and Physics of Solids, 2015, 85, 112-127.	4.8	32
30	On the Processing of Spalling Experiments. PartÂI: Identification of the Dynamic Tensile Strength of Concrete. Journal of Dynamic Behavior of Materials, 2018, 4, 34-55.	1.7	32
31	An experimental investigation of the progressive collapse resistance of beam-column RC sub-assemblages. Construction and Building Materials, 2017, 152, 1068-1084.	7.2	31
32	Assessment of the metrological performance of anin situstorage image sensor ultra-high speed camera for full-field deformation measurements. Measurement Science and Technology, 2014, 25, 025401.	2.6	26
33	Penetration of common ordinary strength water saturated concrete targets by rigid ogive-nosed steel projectiles. International Journal of Impact Engineering, 2016, 90, 37-45.	5.0	23
34	Use of simulated experiments for material characterization of brittle materials subjected to high strain rate dynamic tension. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160168.	3.4	23
35	Performances and Limitations of Three Ultra High-Speed Imaging Cameras for Full-Field Deformation Measurements. Applied Mechanics and Materials, 0, 70, 81-86.	0.2	22
36	On the Processing of Spalling Experiments. Part II: Identification of Concrete Fracture Energy in Dynamic Tension. Journal of Dynamic Behavior of Materials, 2018, 4, 56-73.	1.7	21

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37	A study of the mechanical response of polycrystalline ice subjected to dynamic tension loading using the spalling test technique. International Journal of Impact Engineering, 2019, 132, 103315.	5.0	20
38	On the Tensile Strength of Granite at High Strain Rates considering the Influence from Preexisting Cracks. Advances in Materials Science and Engineering, 2016, 2016, 1-9.	1.8	19
39	Microstructure influence on the fragmentation properties of dense silicon carbides under impact. Mechanics of Materials, 2018, 123, 59-76.	3.2	19
40	Ultra-high performance fibre-reinforced concrete under impact of an AP projectile: Parameter identification and numerical modelling using the DFHcoh-KST coupled model. International Journal of Impact Engineering, 2021, 152, 103838.	5.0	16
41	Relationship between static bending and compressive behaviour of particle-reinforced cement composites. Composites Part B: Engineering, 2008, 39, 1205-1215.	12.0	14
42	Relationship Between Mesostructure, Mechanical Behaviour and Damage of Cement Composites Under High-Pressure Confinement. Experimental Mechanics, 2009, 49, 613-625.	2.0	14
43	Single and multiple fragmentation of brittle geomaterials. Revue EuropÃ©enne De GÃ©nie Civil, 2003, 7, 973-1002.	0.0	13
44	Free Water Influence on the Dynamic Tensile Behaviour of Concrete. Applied Mechanics and Materials, 0, 82, 45-50.	0.2	13
45	Influence of Free Water and Strain-Rate on the Shear Behaviour of Concrete. Applied Mechanics and Materials, 0, 82, 148-153.	0.2	13
46	Strain rate sensitivity of the tensile strength of two silicon carbides: experimental evidence and micromechanical modelling. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160167.	3.4	13
47	Application of microtomography and image analysis to the quantification of fragmentation in ceramics after impact loading. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160166.	3.4	13
48	On the Mechanical Behavior of Granite Material With Particular Emphasis on the Influence From Pre-Existing Cracks and Defects. Journal of Testing and Evaluation, 2018, 46, 33-45.	0.7	13
49	A benchmark testing technique to characterize the stressâ€“strain relationship in materials based on the spalling test and a photomechanical method. Measurement Science and Technology, 2019, 30, 125006.	2.6	11
50	Influence of Porosity on Ice Dynamic Tensile Behavior as Assessed by Spalling Tests. Journal of Dynamic Behavior of Materials, 2021, 7, 575-590.	1.7	11
51	Experimental Investigation of the Confined Behavior of Dry and Wet High-Strength Concrete: Quasi Static Versus Dynamic Loading. Journal of Dynamic Behavior of Materials, 2015, 1, 191-200.	1.7	10
52	Computational framework for analysis of contact-induced damage in brittle rocks. International Journal of Solids and Structures, 2019, 167, 24-35.	2.7	10
53	Continuous and discrete methods based on X-ray computed-tomography to model the fragmentation process in brittle solids over a wide range of strain-rates - application to three brittle materials. Journal of the Mechanics and Physics of Solids, 2021, 152, 104412.	4.8	10
54	An experimental method of measuring the confined compression strength of high-performance concretes to analyse their ballistic behaviour. European Physical Journal Special Topics, 2006, 134, 629-634.	0.2	9

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55	A pulse-shaping technique to investigate the behaviour of brittle materials subjected to plate-impact tests. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160333.	3.4	9
56	Investigation of the multiple-fragmentation process and post-fragmentation behaviour of dense and nacre-like alumina ceramics by means of tandem impact experiments and tomographic analysis. International Journal of Impact Engineering, 2021, 155, 103891.	5.0	8
57	The virtual fields method applied to spalling tests on concrete. EPJ Web of Conferences, 2012, 26, 01054.	0.3	6
58	On the use of Hillerborg regularization method to model the softening behaviour of concrete subjected to dynamic tensile loading. European Physical Journal: Special Topics, 2012, 206, 97-105.	2.6	6
59	Dynamic test devices for analyzing the tensile properties of concrete. , 2013, , 137-181e.		6
60	Response mechanisms of concrete under impulsive tensile loading. , 2013, , 181-217.		6
61	On the Use of Digital Image Correlation for the Analysis of the Dynamic Behavior of Materials. , 2018, , 185-206.		6
62	Experimental study of the static and dynamic behavior of pre-stressed concrete subjected to shear loading. Engineering Structures, 2021, 234, 111865.	5.3	5
63	A Testing Technique to Characterise the Shear Behaviour of Concrete at High Strain-Rates. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 531-536.	0.5	5
64	Experimental approach and modeling of the compressive behaviour of two SiC grades. European Physical Journal Special Topics, 2000, 10, Pr9-735-Pr9-740.	0.2	5
65	A comparison of DIC and grid measurements for processing spalling tests with the VFM and an 80-kpixel ultra-high speed camera. European Physical Journal: Special Topics, 2016, 225, 311-323.	2.6	4
66	Influence of the Confined Behaviour and the Tensile Strength of Concrete Slabs Under Projectile-Impact. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 567-571.	0.5	4
67	A rocking spalling test to characterize the crack velocity in concrete. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 1-2.	0.5	3
68	Modelling the response of concrete structures to dynamic loading. , 2013, , 125-142e.		3
69	Identification of the Quasi-Static and Dynamic Behaviour of Projectile-Core Steel by Using Shear-Compression Specimens. Metals, 2019, 9, 216.	2.3	3
70	Experimental and numerical study of the damage process in RC beamâ€column subâ€assemblages during a progressive collapse scenario. International Journal for Numerical and Analytical Methods in Geomechanics, 2019, 43, 1704-1723.	3.3	3
71	Validation of the photomechanical spalling test in the case of nonâ€linear dynamic response: Application to a granite rock. Strain, 2020, 56, e12363.	2.4	3
72	Ultra-high speed X-ray imaging of dynamic fracturing in cementitious materials under impact. EPJ Web of Conferences, 2021, 250, 01014.	0.3	3

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73	Ultra high speed full-field strain measurements on spalling tests on concrete materials. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 221-228.	0.5	3
74	Influence of strain-rate and confining pressure on the shear strength of concrete. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 29-35.	0.5	2
75	Design of an experimental configuration for studying the dynamic fragmentation of ceramics under impact. European Physical Journal: Special Topics, 2012, 206, 107-115.	2.6	2
76	Investigation of Spalling Damage in Ultra-High Performance Concrete Through X-ray Computed Tomography. EPJ Web of Conferences, 2018, 183, 03024.	0.3	2
77	A Shockless Plate-Impact Spalling Technique, Based on Wavy-Machined Flyer-Plates, to Evaluate the Strain-Rate Sensitivity of Ceramic Tensile Strength. Journal of Dynamic Behavior of Materials, 2022, 8, 73-88.	1.7	2
78	Influence of Free Water and Strain-Rate on the Behaviour of Concrete Under High Confining Pressure. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 279-283.	0.5	2
79	Application of ultra-high speed photography in identification of the dynamic tensile response of quasi-brittle materials. , 2019, , .		2
80	A novel experimental method to characterise the shear strength of concrete based on preâ€stressed samples. Strain, 2022, 58, .	2.4	2
81	Dynamic testing of concrete under high confined pressure. Influence of saturation ratio and aggregate size. EPJ Web of Conferences, 2015, 94, 01071.	0.3	1
82	A novel experimental method to characterise the shear strength of concrete based on pre-stressed samples. A comparison with existing techniques. EPJ Web of Conferences, 2018, 183, 02049.	0.3	1
83	Experimental study of the dynamic behaviour of High Performance Concrete (HPC) under tensile loading. EPJ Web of Conferences, 2018, 183, 02043.	0.3	1
84	A Testing Technique of Confined Compression for Concrete at High Rates of Strain. , 2007, , 451-452.		1
85	Damage in Concrete Subjected to Impact Loading. , 2022, , 551-577.		1
86	Numerical analysis of a testing technique to investigate the dynamic crack propagation in armour ceramic. EPJ Web of Conferences, 2018, 183, 02039.	0.3	0
87	Experimental Investigation of the Confined Behavior of Concrete under Shear Loading at High Strain Rates. Proceedings (mdpi), 2018, 2, .	0.2	0
88	Strain special issue: Quantitative visualization testing techniques applied to civil engineering structures and materials. Strain, 2020, 56, e12353.	2.4	0
89	Investigation of the Quasi-Static and Dynamic Confined Strength of Concretes by Means of Quasi-Oedometric Compression Tests. , 2020, , .		0
90	Discrete Element Approach to Model Advanced Damage into Concrete Structures under Impact. , 2021, , 1-34.		0

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91	Numerical simulation of multi-hit impact on Ceramic/Composite armor. EPJ Web of Conferences, 2021, 250, 02004.	0.3	0
92	Damage in Concrete Subjected to Impact Loading. , 2021, , 1-27.		0
93	Damage in Armor Ceramics Subjected to High-Strain-Rate Dynamic Loadings: The Spherical Expansion Shock Wave Pyrotechnic Test. , 2021, , 1-30.		0
94	Dynamic fragmentation process in concrete under impact and spalling tests. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2009, , 447-469.	0.2	0
95	Experimental approach and modeling of the quasi-static and dynamic confined behaviour of PMMA. Revue Des Composites Et Des Materiaux Avances, 2012, 22, 115-130.	0.6	0
96	Granite rock fragmentation at percussive drilling. , 2013, , 437-442.		0
97	Investigation of the dynamic fragmentation process in ceramics by using ultra-high speed x-ray imaging with synchrotron radiation. , 2019, , .		0
98	Damage in Armor Ceramics Subjected to High-Strain-Rate Dynamic Loadings: The Spherical Expansion Shock Wave Pyrotechnic Test. , 2022, , 609-638.		0
99	Discrete Element Approach to Model Advanced Damage in Concrete Structures Under Impact. , 2022, , 517-550.		0
100	Damage in Armor Ceramics Subjected to High-Strain-Rate Dynamic Loadings: The Edge-On Impact Test. , 2022, , 639-661.		0