Pietro Cornetti

List of Publications by Year
in descending order

90 papers	3,196 citations	159585 30 h-index	155660 55 g-index
91 all docs	91 docs citations	91 times ranked	1488 citing authors

#	Article	IF	Citations
1	A generalized Parisâ€™ law for fatigue crack growth. Journal of the Mechanics and Physics of Solids, 2006, 54, 1333-1349.	4.8	269
2	Finite fracture mechanics: A coupled stress and energy failure criterion. Engineering Fracture Mechanics, 2006, 73, 2021-2033.	4.3	264
3	The fracture mechanics of finite crack extension. Engineering Fracture Mechanics, 2005, 72, 1021-1038.	4.3	231
4	A finite fracture mechanics approach to structures with sharp V-notches. Engineering Fracture Mechanics, 2008, 75, 1736-1752.	4.3	172
5	A fractional calculus approach to the description of stress and strain localization in fractal media. Chaos, Solitons and Fractals, 2002, 13, 85-94.	5.1	131
6	A fractional calculus approach to nonlocal elasticity. European Physical Journal: Special Topics, 2011, 193, 193-204.	2.6	114
7	Staticâ€“kinematic duality and the principle of virtual work in the mechanics of fractal media. Computer Methods in Applied Mechanics and Engineering, 2001, 191, 3-19.	6.6	98
8	On the mechanics of quasi-brittle materials with a fractal microstructure. Engineering Fracture Mechanics, 2003, 70, 2321-2349.	4.3	94
9	Modelling the FRP-concrete delamination by means of an exponential softening law. Engineering Structures, 2011, 33, 1988-2001.	5.3	84
10	A Finite Fracture Mechanics approach to V-notched elements subjected to mixed-mode loading. Engineering Fracture Mechanics, 2013, 97, 216-226.	4.3	78
11	A scale-invariant cohesive crack model for quasi-brittle materials. Engineering Fracture Mechanics, 2002, 69, 207-217.	4.3	74
12	Calculation of the tensile and flexural strength of disordered materials using fractional calculus. Chaos, Solitons and Fractals, 2004, 21, 623-632.	5.1	72
13	Wave propagation in nonlocal elastic continua modelled by a fractional calculus approach. Communications in Nonlinear Science and Numerical Simulation, 2013, 18, 63-74.	3.3	71
14	Edge debonding in FRP strengthened beams: Stress versus energy failure criteria. Engineering Structures, 2009, 31, 2436-2447.	5.3	65
15	Finite Fracture Mechanics at elastic interfaces. International Journal of Solids and Structures, 2012, 49, 1022-1032.	2.7	65
16	Cohesive crack model description of ductile to brittle size-scale transition: dimensional analysis vs. renormalization group theory. Engineering Fracture Mechanics, 2003, 70, 1809-1839.	4.3	64
17	Nonlocal elasticity: an approach based on fractional calculus. Meccanica, 2014, 49, 2551-2569.	2.0	62
18	The elastic problem for fractal media: basic theory and finite element formulation. Computers and Structures, 2004, 82, 499-508.	4.4	48

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19	Triggering of dry snow slab avalanches: stress versus fracture mechanical approach. Cold Regions Science and Technology, 2008, 53, 170-178.	3.5	48
20	New unified laws in fatigue: From the WÃ¶hlerâ€™s to the Parisâ€™ regime. Engineering Fracture Mechanics, 2007, 74, 595-601.	4.3	44
21	Brittle failures at rounded V-notches: a finite fracture mechanics approach. International Journal of Fracture, 2011, 172, 1-8.	2.2	42
22	Scaling Laws and Multiscale Approach in the Mechanics of Heterogeneous and Disordered Materials. Applied Mechanics Reviews, 2006, 59, 283-305.	10.1	41
23	Staticâ€kinematic fractional operators for fractal and nonâ€local solids. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2009, 89, 207-217.	1.6	41
24	Short cracks and V-notches: Finite Fracture Mechanics vs. Cohesive Crack Model. Engineering Fracture Mechanics, 2016, 168, 2-12.	4.3	40
25	Finite Fracture Mechanics crack initiation from a circular hole. Fatigue and Fracture of Engineering Materials and Structures, 2018, 41, 1627-1636.	3.4	37
26	A fractal theory for the mechanics of elastic materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 365, 235-240.	5.6	36
27	A Finite Fracture Mechanics approach to the asymptotic behaviour of Uâ€notched structures. Fatigue and Fracture of Engineering Materials and Structures, 2012, 35, 451-457.	3.4	36
28	Mode-I debonding of a double cantilever beam: A comparison between cohesive crack modeling and Finite Fracture Mechanics. International Journal of Solids and Structures, 2017, 124, 57-72.	2.7	35
29	Size effects on brittle fracture of Brazilian disk samples containing a circular hole. Engineering Fracture Mechanics, 2017, 186, 496-503.	4.3	34
30	An analytical cohesive crack modeling approach to the edge debonding failure of FRP-plated beams. International Journal of Solids and Structures, 2015, 53, 92-106.	2.7	31
31	Crack onset and propagation stability from a circular hole under biaxial loading. International Journal of Fracture, 2018, 214, 97-104.	2.2	31
32	Fractional calculus in solid mechanics: local versus non-local approach. Physica Scripta, 2009, T136, 014003.	2.5	29
33	Mode mixity and size effect in V-notched structures. International Journal of Solids and Structures, 2013, 50, 1562-1582.	2.7	29
34	An improved Finite Fracture Mechanics approach to blunt V-notch brittle fracture mechanics: Experimental verification on ceramic, metallic, and plastic materials. Theoretical and Applied Fracture Mechanics, 2015, 78, 20-24.	4.7	29
35	On the most dangerous V-notch. International Journal of Solids and Structures, 2010, 47, 887-893.	2.7	28
36	A disordered microstructure material model based on fractal geometry and fractional calculus. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2004, 84, 128-135.	1.6	27

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37	T-stress effects on crack kinking in Finite Fracture Mechanics. Engineering Fracture Mechanics, 2014, 132, 169-176.	4.3	26
38	Crack onset and propagation at fibreâ€“matrix elastic interfaces under biaxial loading using finite fracture mechanics. Composites Part A: Applied Science and Manufacturing, 2016, 82, 267-278.	7.6	26
39	Fatigue limit: Crack and notch sensitivity by Finite Fracture Mechanics. Theoretical and Applied Fracture Mechanics, 2020, 105, 102407.	4.7	26
40	Generalized fracture toughness for specimens with re-entrant corners: Experiments vs. theoretical predictions. Structural Engineering and Mechanics, 2009, 32, 609-620.	1.0	25
41	Finite fracture mechanics and cohesive crack model: Weight functions vs. cohesive laws. International Journal of Solids and Structures, 2019, 156-157, 126-136.	2.7	24
42	A stereological analysis of aggregate grading and size effect on concrete tensile strength. International Journal of Fracture, 2004, 128, 233-242.	2.2	23
43	The use of fractional calculus to model the experimental creep-recovery behavior of modified bituminous binders. Materials and Structures/Materiaux Et Constructions, 2016, 49, 45-55.	3.1	23
44	Penny-shaped cracks by Finite Fracture Mechanics. International Journal of Fracture, 2019, 219, 153-159.	2.2	22
45	V-notched elements under mode II loading conditions. Structural Engineering and Mechanics, 2014, 49, 499-508.	1.0	22
46	Nonlinear consolidation of soil modeling and solution techniques. Mathematical and Computer Modelling, 1994, 20, 1-12.	2.0	20
47	Size Effects on Concrete Tensile Fracture Properties: An Interpretation of the Fractal Approach Based on the Aggregate Grading. Journal of the Mechanical Behavior of Materials, 2002, 13, 233-246.	1.8	20
48	T -stress effects on crack deflection: Straight vs. curved crack advance. European Journal of Mechanics, A/Solids, 2016, 60, 52-57.	3.7	19
49	Cracks at rounded V-notch tips: an analytical expression for the stress intensity factor. International Journal of Fracture, 2014, 187, 285-291.	2.2	16
50	Towards a Unified Approach for the Analysis of Failure Modes in FRP-Retrofitted Concrete Beams. Advances in Structural Engineering, 2009, 12, 715-729.	2.4	14
51	Nonlocal Diffusion in Porous Media: A Spatial Fractional Approach. Journal of Engineering Mechanics - ASCE, 2017, 143, .	2.9	14
52	Size effect upon grained materials tensile strength: The increase of the statistical dispersion at the smaller scales. Theoretical and Applied Fracture Mechanics, 2005, 44, 192-199.	4.7	13
53	Comments on â€œIs the cause of size effect on structural strength fractal or energetic-statistical?â€• by BaÅ¾ant & Yavari [Engng Fract Mech 2005;72:1â€“31]. Engineering Fracture Mechanics, 2007, 74, 2892-2896.	4.3	13
54	Interface crack model using finite fracture mechanics applied to the double pull-push shear test. International Journal of Solids and Structures, 2020, 188-189, 56-73.	2.7	12

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55	A numerical implementation of the Coupled Criterion of Finite Fracture Mechanics for elastic interfaces. Theoretical and Applied Fracture Mechanics, 2020, 108, 102607.	4.7	11
56	The problem of the critical angle for edge and center V-notched structures. European Journal of Mechanics, A/Solids, 2011, 30, 281-285.	3.7	10
57	Fractional Viscoelastic Modeling of Antirutting Response of Bituminous Binders. Journal of Engineering Mechanics - ASCE, 2017, 143, .	2.9	10
58	Fatigue crack growth analysis of drill pipes during rotary drilling operations by the multiple reference state weight function approach. Engineering Failure Analysis, 2017, 74, 11-34.	4.0	10
59	Experimental and theoretical characterization of mixed mode brittle failure from square holes. International Journal of Fracture, 2021, 228, 33-43.	2.2	10
60	A mesoscopic theory of damage and fracture in heterogeneous materials. Theoretical and Applied Fracture Mechanics, 2004, 41, 43-50.	4.7	9
61	Crack Onset and Propagation in Composite Materials Using Finite Fracture Mechanics on Elastic Interfaces. , 2014, 3, 1365-1370.		9
62	Size-effect on the apparent tensile strength of brittle materials with spherical cavities. Theoretical and Applied Fracture Mechanics, 2021, 116, 103120.	4.7	9
63	Mode I fatigue limit of notched structures: A deeper insight into Finite Fracture Mechanics. International Journal of Fracture, 2021, 227, 1-13.	2.2	8
64	Non-local criteria for the borehole problem: Gradient Elasticity versus Finite Fracture Mechanics. Meccanica, 2022, 57, 871-883.	2.0	7
65	Diffusion problems on fractional nonlocal media. Open Physics, 2013, 11, .	1.7	6
66	An asymptotic matching approach to shallow-notched structural elements. Engineering Fracture Mechanics, 2010, 77, 348-358.	4.3	5
67	Finite Fracture Mechanics and Cohesive Crack Model: Size effects through a unified formulation. Frattura Ed Integrita Strutturale, 2022, 16, 496-509.	0.9	5
68	Numerical modelization of disordered media via fractional calculus. Computational Materials Science, 2004, 30, 155-162.	3.0	4
69	Analytical Stress Intensity Factors for Cracks at Blunted V-notches. , 2014, 3, 738-743.		4
70	Fractals to Model Hierarchical Biomaterials. Advances in Science and Technology, 2008, 58, 54-59.	0.2	3
71	On the Impossibility of Separating Nanotubes in a Bundle by Longitudinal Tension. Journal of Adhesion, 2008, 84, 439-444.	3.0	3
72	Application of Gradient Theory and Quantized Fracture Mechanics in Snow Avalanches. Journal of the Mechanical Behavior of Materials, 2009, 19, 39-48.	1.8	3

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73	Influence of a neighbour fibre on the onset and growth of a fibre-matrix debond under biaxial loading. A study by Finite Fracture Mechanics at linear elastic interfaces. Procedia Structural Integrity, 2016, 2, 2022-2029.	0.8	3
74	Analytical Modeling of Debonding Mechanism for Long and Short Bond Lengths in Direct Shear Tests Accounting for Residual Strength. Materials, 2021, 14, 6690.	2.9	3
75	Strength of hierarchical materials. Microsystem Technologies, 2009, 15, 27-31.	2.0	2
76	Brittle Materials and Stress Concentrations: are they Able to withstand?. Procedia Engineering, 2015, 109, 296-302.	1.2	2
77	Fatigue crack onset by Finite Fracture Mechanics. Procedia Structural Integrity, 2019, 18, 501-506.	0.8	2
78	Anisotropic linear elastic properties of fractal-like composites. Physical Review E, 2010, 82, 056114.	2.1	1
79	A. Konstantinidis, P. Cornetti, N. Pugno and E.C. Aifantis, Application of Gradient Theory and Quantized Fracture Mechanics in Snow Avalanches, J. Mech. Behav. Mater. 19, 39â€“47, 2009. Journal of the Mechanical Behavior of Materials, 2012, 20, 107-109.	1.8	1
80	Blunt V-Notch Brittle Fracture: An Improved Finite Fracture Mechanics Approach. Advanced Materials Research, 0, 1105, 237-244.	0.3	1
81	A coupled FFM model to interpret fracture toughness values for brittle materials. Procedia Structural Integrity, 2016, 2, 1983-1990.	0.8	1
82	An Analytical Study for Debonding in Single-lap Shear Test by Considering the Residual Strength. Procedia Structural Integrity, 2021, 33, 982-988.	0.8	1
83	Spherical voids by finite fracture mechanics. Procedia Structural Integrity, 2021, 33, 788-794.	0.8	1
84	Wave propagation in fractional nonlocal elastic continua. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 599-604.	0.4	0
85	Crack deflection in brittle materials by Finite Fracture Mechanics. Procedia Structural Integrity, 2016, 2, 1975-1982.	0.8	0
86	Brazilian disk tests: Circular holes and size effects. Procedia Structural Integrity, 2018, 13, 596-600.	0.8	0
87	Mode I fatigue limit of V- and U-notches. Procedia Structural Integrity, 2020, 28, 446-451.	0.8	0
88	SPECIAL FACTORS IN SOME COMBINATORIAL STRUCTURES. , 2000, , .		0
89	Comparison between two nonlocal criteria: A case study on pressurized holes. Procedia Structural Integrity, 2021, 33, 456-464.	0.8	0
90	Penny-shaped cracks: A comparison between FFM and CZM. Procedia Structural Integrity, 2022, 41, 505-509.	0.8	0