Louis Ngai Yuen Wong

List of Publications by Year
in descending order

111 papers	7,331 citations	43973 48 h-index	58464 82 g-index
112 all docs	112 docs citations	112 times ranked	3132 citing authors

#	Article	IF	Citations
1	Crack Coalescence in Molded Gypsum and Carrara Marble: Part 1. Macroscopic Observations and Interpretation. Rock Mechanics and Rock Engineering, 2009, 42, 475-511.	2.6	527
2	The Brazilian Disc Test for Rock Mechanics Applications: Review and New Insights. Rock Mechanics and Rock Engineering, 2013, 46, 269-287.	2.6	477
3	Crack Initiation, Propagation and Coalescence in Rock-Like Material Containing Two Flaws: a Numerical Study Based on Bonded-Particle Model Approach. Rock Mechanics and Rock Engineering, 2013, 46, 1001-1021.	2.6	301
4	Frictional crack initiation and propagation analysis using the numerical manifold method. Computers and Geotechnics, 2012, 39, 38-53.	2.3	276
5	Crack Coalescence in Molded Gypsum and Carrara Marble: Part 2â€"Microscopic Observations and Interpretation. Rock Mechanics and Rock Engineering, 2009, 42, 513-545.	2.6	257
6	Water effects on rock strength and stiffness degradation. Acta Geotechnica, 2016, 11, 713-737.	2.9	223
7	Cracking Processes in Rock-Like Material Containing a Single Flaw Under Uniaxial Compression: A Numerical Study Based on Parallel Bonded-Particle Model Approach. Rock Mechanics and Rock Engineering, 2012, 45, 711.	2.6	203
8	Influence of grain size heterogeneity on strength and microcracking behavior of crystalline rocks. Journal of Geophysical Research: Solid Earth, 2017, 122, 1054-1073.	1.4	197
9	Influence of flaw inclination angle and loading condition on crack initiation and propagation. International Journal of Solids and Structures, 2012, 49, 2482-2499.	1.3	168
10	Experimental Study on the Growth, Coalescence and Wrapping Behaviors of 3D Cross-Embedded Flaws Under Uniaxial Compression. Rock Mechanics and Rock Engineering, 2018, 51, 1379-1400.	2.6	167
11	Influence of water content and anisotropy on the strength and deformability of low porosity meta-sedimentary rocks under triaxial compression. Engineering Geology, 2012, 126, 46-66.	2.9	165
12	Loading rate effects on cracking behavior of flaw-contained specimens under uniaxial compression. International Journal of Fracture, 2013, 180, 93-110.	1.1	147
13	Effects of twin tunnels construction beneath existing shield-driven twin tunnels. Tunnelling and Underground Space Technology, 2015, 45, 128-137.	3.0	140
14	Different mechanical and cracking behaviors of single-flawed brittle gypsum specimens under dynamic and quasi-static loadings. Engineering Geology, 2016, 201, 71-84.	2.9	123
15	Shallow tunnelling method (STM) for subway station construction in soft ground. Tunnelling and Underground Space Technology, 2012, 29, 10-30.	3.0	122
16	Numerical study on coalescence of two pre-existing coplanar flaws in rock. International Journal of Solids and Structures, 2013, 50, 3685-3706.	1.3	122
17	Experimental studies on cracking processes and failure in marble under dynamic loading. Engineering Geology, 2014, 173, 19-31.	2.9	111
18	Rock brittleness indices and their applications to different fields of rock engineering: A review. Journal of Rock Mechanics and Geotechnical Engineering, 2021, 13, 221-247.	3.7	101

#	Article	IF	Citations
19	Modeling Micro-cracking Behavior of Bukit Timah Granite Using Grain-Based Model. Rock Mechanics and Rock Engineering, 2018, 51, 135-154.	2.6	94
20	Shear Rate Effects on the Post-peak Shear Behaviour and Acoustic Emission Characteristics of Artificially Split Granite Joints. Rock Mechanics and Rock Engineering, 2019, 52, 2155-2174.	2.6	93
21	Engineering properties of quartz mica schist. Engineering Geology, 2011, 121, 135-149.	2.9	89
22	New Criterion for Evaluating the Peak Shear Strength of Rock Joints Under Different Contact States. Rock Mechanics and Rock Engineering, 2016, 49, 1191-1199.	2.6	89
23	Rock strengthening or weakening upon heating in the mild temperature range?. Engineering Geology, 2020, 272, 105619.	2.9	88
24	Water Saturation Effects on the Brazilian Tensile Strength of Gypsum and Assessment of Cracking Processes Using High-Speed Video. Rock Mechanics and Rock Engineering, 2014, 47, 1103-1115.	2.6	78
25	Application of the numerical manifold method to model progressive failure in rock slopes. Engineering Fracture Mechanics, 2014, 119, 1-20.	2.0	77
26	Ground surface settlements due to construction of closely-spaced twin tunnels with different geometric arrangements. Tunnelling and Underground Space Technology, 2016, 51, 144-151.	3.0	76
27	Modeling cracking behavior of rock mass containing inclusions using the enriched numerical manifold method. Engineering Geology, 2013, 162, 1-13.	2.9	75
28	Choosing a proper loading rate for bonded-particle model of intact rock. International Journal of Fracture, 2014, 189, 163-179.	1.1	74
29	An Extended Grainâ€Based Model Accounting for Microstructures in Rock Deformation. Journal of Geophysical Research: Solid Earth, 2019, 124, 125-148.	1.4	74
30	A Method for Multiscale Interpretation of Fracture Processes in Carrara Marble Specimen Containing a Single Flaw Under Uniaxial Compression. Journal of Geophysical Research: Solid Earth, 2018, 123, 6459-6490.	1.4	72
31	Effects of specimen size and thermal-damage on physical and mechanical behavior of a fine-grained marble. Engineering Geology, 2018, 232, 46-55.	2.9	71
32	Size Effects on Cracking Behavior of Flaw-Containing Specimens Under Compressive Loading. Rock Mechanics and Rock Engineering, 2014, 47, 1921-1930.	2.6	70
33	Displacement field analysis for cracking processes in bonded-particle model. Bulletin of Engineering Geology and the Environment, 2014, 73, 13-21.	1.6	68
34	Effects of grain size-to-particle size ratio on micro-cracking behavior using a bonded-particle grain-based model. International Journal of Rock Mechanics and Minings Sciences, 2017, 100, 207-217.	2.6	61
35	Fracturing and Failure Behavior of Carrara Marble in Quasistatic and Dynamic Brazilian Disc Tests. Rock Mechanics and Rock Engineering, 2014, 47, 1117-1133.	2.6	58
36	A Cohesive Element-Based Numerical Manifold Method for Hydraulic Fracturing Modelling with Voronoi Grains. Rock Mechanics and Rock Engineering, 2019, 52, 2335-2359.	2.6	58

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37	Protection of Buildings against Damages as a Result of Adjacent Large-Span Tunneling in Shallowly Buried Soft Ground. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2013, 139, 903-913.	1.5	56
38	A review of numerical techniques approaching microstructures of crystalline rocks. Computers and Geosciences, 2018, 115, 167-187.	2.0	56
39	Environmental risk management for a cross interchange subway station construction in China. Tunnelling and Underground Space Technology, 2011, 26, 750-763.	3.0	55
40	Experimental study on the formation of faults from en-echelon fractures in Carrara Marble. Engineering Geology, 2015, 195, 312-326.	2.9	55
41	Asperity degradation characteristics of soft rock-like fractures under shearing based on acoustic emission monitoring. Engineering Geology, 2020, 266, 105392.	2.9	55
42	Comparative study on dynamic shear behavior and failure mechanism of two types of granite joint. Engineering Geology, 2018, 245, 356-369.	2.9	54
43	Influences of Normal Loading Rate and Shear Velocity on the Shear Behavior of Artificial Rock Joints. Rock Mechanics and Rock Engineering, 2016, 49, 2165-2172.	2.6	53
44	Dynamic Study on Fracture Problems in Viscoelastic Sedimentary Rocks Using the Numerical Manifold Method. Rock Mechanics and Rock Engineering, 2013, 46, 1415-1427.	2.6	52
45	Numerical Study on Coalescence of Pre-Existing Flaw Pairs in Rock-Like Material. Rock Mechanics and Rock Engineering, 2014, 47, 2087-2105.	2.6	52
46	Point Load Test on Meta-Sedimentary Rocks and Correlation to UCS and BTS. Rock Mechanics and Rock Engineering, 2013, 46, 889-896.	2.6	51
47	Microscopic Characterization of Tensile and Shear Fracturing in Progressive Failure in Marble. Journal of Geophysical Research: Solid Earth, 2018, 123, 204-225.	1.4	51
48	Numerical investigation of mineralogical composition effect on strength and micro-cracking behavior of crystalline rocks. Journal of Natural Gas Science and Engineering, 2018, 53, 191-203.	2.1	50
49	Experimental Study of Cracking Characteristics of Kowloon Granite Based on Three Mode I Fracture Toughness Methods. Rock Mechanics and Rock Engineering, 2019, 52, 4217-4235.	2.6	49
50	Evaluation of drainage tunnel effectiveness in landslide control. Landslides, 2010, 7, 445-454.	2.7	47
51	Microcracking behavior of two semi-circular bend specimens in mode I fracture toughness test of granite. Engineering Fracture Mechanics, 2019, 221, 106565.	2.0	46
52	Elasticâ€“plastic cracking analysis for brittleâ€“ductile rocks using manifold method. International Journal of Fracture, 2013, 180, 71-91.	1.1	45
53	Dynamic Loading of Carrara Marble in a Heated State. Rock Mechanics and Rock Engineering, 2017, 50, 1487-1505.	2.6	45
54	Microcracking behavior of three granites under mode I loading: Insights from acoustic emission. Engineering Geology, 2020, 278, 105823.	2.9	45

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55	Extension of numerical manifold method for coupled fluid flow and fracturing problems. International Journal for Numerical and Analytical Methods in Geomechanics, 2014, 38, 1990-2008.	1.7	44
56	Investigating the effects of micro-defects on the dynamic properties of rock using Numerical Manifold method. Construction and Building Materials, 2014, 72, 72-82.	3.2	44
57	A re-examination of slenderness ratio effect on rock strength: Insights from DEM grain-based modelling. Engineering Geology, 2018, 246, 245-254.	2.9	44
58	Ground reaction curves for deep circular tunnels considering the effect of ground reinforcement. International Journal of Rock Mechanics and Minings Sciences, 2013, 60, 401-412.	2.6	42
59	A Modified Correlation Between Roughness Parameter Z 2 and the JRC. Rock Mechanics and Rock Engineering, 2015, 48, 387-396.	2.6	41
60	Choosing Appropriate Parameters for Developing Empirical Shear Strength Criterion of Rock Joint: Review and New Insights. Rock Mechanics and Rock Engineering, 2016, 49, 4479-4490.	2.6	40
61	Experimental Studies on Permeability of Intact and Singly Jointed Meta-Sedimentary Rocks Under Confining Pressure. Rock Mechanics and Rock Engineering, 2013, 46, 107-121.	2.6	39
62	Effects of the ratio of flaw size to specimen size on cracking behavior. Bulletin of Engineering Geology and the Environment, 2015, 74, 181-193.	1.6	37
63	Acoustic emission characteristics of a fine-grained marble with different thermal damages and specimen sizes. Bulletin of Engineering Geology and the Environment, 2019, 78, 4479-4491.	1.6	37
64	Size and Geometry Effects on the Mechanical Properties of Carrara Marble Under Dynamic Loadings. Rock Mechanics and Rock Engineering, 2016, 49, 1695-1708.	2.6	36
65	Effect of contact state on the shear behavior of artificial rock joint. Bulletin of Engineering Geology and the Environment, 2016, 75, 761-769.	1.6	33
66	Influence of grain size on strength of polymineralic crystalline rock: New insights from DEM grain-based modeling. Journal of Rock Mechanics and Geotechnical Engineering, 2021, 13, 755-766.	3.7	33
67	Microcracking behavior transition in thermally treated granite under mode I loading. Engineering Geology, 2021, 282, 105992.	2.9	31
68	Characterization of roughness and shear behavior of thermally treated granite fractures. Engineering Geology, 2021, 293, 106287.	2.9	31
69	Excavation failure due to pipeline damage during shallow tunnelling in soft ground. Tunnelling and Underground Space Technology, 2015, 46, 76-84.	3.0	30
70	Transgranular Crack Nucleation in Carrara Marble of Brittle Failure. Rock Mechanics and Rock Engineering, 2016, 49, 3069-3082.	2.6	28
71	Influence of initial micro-crack damage on strength and micro-cracking behavior of an intrusive crystalline rock. Bulletin of Engineering Geology and the Environment, 2019, 78, 2957-2971.	1.6	28
72	Experimental investigation and modeling of viscoelastic behavior of concrete. Construction and Building Materials, 2013, 48, 814-821.	3.2	26

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73	Mechanical analysis of circular tunnels supported by steel sets embedded in primary linings. Tunnelling and Underground Space Technology, 2013, 37, 80-88.	3.0	26
74	A New Way to Replicate the Highly Stressed Soft Rock: 3D Printing Exploration. Rock Mechanics and Rock Engineering, 2020, 53, 467-476.	2.6	26
75	A 3D thermo-hydro-mechanical coupling model for enhanced geothermal systems. International Journal of Rock Mechanics and Minings Sciences, 2021, 143, 104744.	2.6	26
76	Theoretical model with multi-asperity interaction for the closure behavior of rock joint. International Journal of Rock Mechanics and Minings Sciences, 2017, 97, 15-23.	2.6	25
77	A study on mechanical properties and fracturing behavior of Carrara marble with the flatâ€jointed model. International Journal for Numerical and Analytical Methods in Geomechanics, 2020, 44, 803-822.	1.7	25
78	An Extended Grainâ€Based Model for Characterizing Crystalline Materials: An Example of Marble. Advanced Theory and Simulations, 2018, 1, 1800039.	1.3	24
79	Numerical investigation of micro-cracking behavior of brittle rock containing a pore-like flaw under uniaxial compression. International Journal of Damage Mechanics, 2020, 29, 1543-1568.	2.4	24
80	Influence of Thermal and Mechanical Loading on Development of Microcracks in Granite. Rock Mechanics and Rock Engineering, 2020, 53, 2035-2051.	2.6	23
81	Comparison of Excavation Damage Zones Resulting from Blasting with Nonel Detonators and Blasting with Electronic Detonators. Rock Mechanics and Rock Engineering, 2014, 47, 809-816.	2.6	22
82	Structural Responses of Secondary Lining of High-Speed Railway Tunnel Excavated in Loess Ground. Advances in Structural Engineering, 2013, 16, 1371-1379.	1.2	21
83	Low cost colorimetry for assessment of fire damage in rock. Engineering Geology, 2017, 228, 50-60.	2.9	21
84	Cracking mechanisms of a medium-grained granite under mixed-mode I-II loading illuminated by acoustic emission. International Journal of Rock Mechanics and Minings Sciences, 2021, 145, 104852.	2.6	20
85	Joint spacing distribution of granites in Hong Kong. Engineering Geology, 2018, 245, 120-129.	2.9	19
86	Systematic monitoring of the performance of anchor systems in fractured rock masses. International Journal of Rock Mechanics and Minings Sciences, 2010, 47, 1038-1045.	2.6	18
87	Using multitemporal Landsat imagery to monitor and model the influences of landscape pattern on urban expansion in a metropolitan region. Journal of Applied Remote Sensing, 2014, 8, 083639.	0.6	18
88	Multi-approach stability analyses of large caverns excavated in low-angled bedded sedimentary rock masses in Singapore. Engineering Geology, 2019, 259, 105164.	2.9	18
89	Underground rockfall stability analysis using the numerical manifold method. Advances in Engineering Software, 2014, 76, 69-85.	1.8	16
90	Different Lithological Varieties of Bukit Timah Granite in Singapore: a Preliminary Comparison Study on Engineering Properties. Rock Mechanics and Rock Engineering, 2016, 49, 2923-2935.	2.6	15

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91	Experimental studies of groundwater pipe flow network characteristics in gravelly soil slopes. Landslides, 2012, 9, 475-483.	2.7	14
92	Power law relations in earthquakes from microscopic to macroscopic scales. Scientific Reports, 2019, 9, 10705.	1.6	14
93	A stability analysis of a layered-soil slope based on random field. Bulletin of Engineering Geology and the Environment, 2019, 78, 2611-2625.	1.6	14
94	The Role of Load Control Modes in Determination of Mechanical Properties of Granite. Rock Mechanics and Rock Engineering, 2020, 53, 539-552.	2.6	14
95	How do thermally induced microcracks alter microcracking mechanisms in Hong Kong granite?. Engineering Geology, 2021, 292, 106268.	2.9	14
96	Effective viscoelastic behaviour of rock mass with double-scale discontinuities. Geophysical Journal International, 2012, 191, 147-154.	1.0	13
97	Influence of poreâ€like flaws on strength and microcracking behavior of crystalline rock. International Journal for Numerical and Analytical Methods in Geomechanics, 2021, 45, 521-539.	1.7	13
98	Stability Analysis of Underground Storage Cavern Excavation in Singapore. Procedia Engineering, 2017, 191, 1040-1047.	1.2	12
99	Influence of the Choice of Reference Planes on the Determination of 2D and 3D Joint Roughness Parameters. Rock Mechanics and Rock Engineering, 2021, 54, 4393-4406.	2.6	12
100	Quantitative GSI Determination of Singaporeâ€™s Sedimentary Rock Mass by Applying Four Different Approaches. Geotechnical and Geological Engineering, 2019, 37, 2103-2119.	0.8	11
101	Review and assessment of In-situ rock stress in Hong Kong for territory-wide geological domains and depth profiling. Engineering Geology, 2019, 248, 267-282.	2.9	11
102	Brittle fracturing in low-porosity rock and implications to fault nucleation. Engineering Geology, 2021, 285, 106025.	2.9	10
103	Influence of petroleum on the failure pattern of saturated pre-cracked and intact sandstone. Bulletin of Engineering Geology and the Environment, 2018, 77, 767-774.	1.6	7
104	Recognition of Mesoscale Strikeâ€Slip En Echelon Faults From 2â€D Nonporous Models. Journal of Geophysical Research: Solid Earth, 2019, 124, 10916-10939.	1.4	7
105	A Review of Field Occurrence of Crack Types and Crack Coalescence in Rocks. Applied Mechanics and Materials, 0, 405-408, 191-202.	0.2	6
106	Finite Deformation Analysis on Sandstone Subjected to Thermo-Hydro-Mechanical (T-H-M) Coupling. Rock Mechanics and Rock Engineering, 2015, 48, 159-177.	2.6	6
107	Reply to Comment by Saffet Yagiz on â€œPoint Load Test on Meta-Sedimentary Rocks and Correlations to UCS and BTSâ€•by Diyuan Li and Louis Ngai Yuen Wong, Rock Mechanics and Rock Engineering, doi:10.1007/s00603-012-0299-x. Rock Mechanics and Rock Engineering, 2013, 46, 913-915.	2.6	4
108	Dynamic Response of Airport Concrete Pavement to Impact Loading. Advanced Materials Research, 0, 594-597, 1395-1401.	0.3	3

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109	Discussion on â€œPredicting the Uniaxial Compressive and Tensile Strengths of Gypsum Rock by Point Load Testingâ€•by M. Heidari et al., Rock Mechanics and Rock Engineering (2012) 45:265â€“273. Rock Mechanics and Rock Engineering, 2012, 45, 1127-1130.	2.6	3
110	Study of the Water Effects on the Tensile Strength and Cracking Processes of Molded Gypsum. , 2015, , 1263-1267.		1
111	Modeling Grain Size Heterogeneity Effects on Mechanical Behavior of Crystalline Rocks Under Compressive Loading. , 2019, , 177-184.		0