

Giovanni Grasselli

List of Publications by Year in descending order

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45
papers

2,900
citations

218677

26
h-index

243625

44
g-index

47
all docs

47
docs citations

47
times ranked

1893
citing authors

#	ARTICLE	IF	CITATIONS
1	A review of discrete modeling techniques for fracturing processes in discontinuous rock masses. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2014, 6, 301-314.	8.1	384
2	A new 2D discontinuity roughness parameter and its correlation with JRC. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2010, 47, 1391-1400.	5.8	227
3	Continuum–discontinuum analysis of failure mechanisms around unsupported circular excavations in anisotropic clay shales. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2014, 65, 96-115.	5.8	214
4	ISRM Suggested Method for Laboratory Determination of the Shear Strength of Rock Joints: Revised Version. <i>Rock Mechanics and Rock Engineering</i> , 2014, 47, 291-302.	5.4	188
5	The excavation of a circular tunnel in a bedded argillaceous rock (Opalinus Clay): Short-term rock mass response and FDEM numerical analysis. <i>Tunnelling and Underground Space Technology</i> , 2015, 45, 227-248.	6.2	144
6	A method to evaluate the three-dimensional roughness of fracture surfaces in brittle geomaterials. <i>Review of Scientific Instruments</i> , 2009, 80, 125110.	1.3	140
7	Trapping zones: The effect of fracture roughness on the directional anisotropy of fluid flow and colloid transport in a single fracture. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	138
8	An Example of Realistic Modelling of Rock Dynamics Problems: FEM/DEM Simulation of Dynamic Brazilian Test on Barre Granite. <i>Rock Mechanics and Rock Engineering</i> , 2010, 43, 707-716.	5.4	132
9	An Investigation of Discontinuity Roughness Scale Dependency Using High-Resolution Surface Measurements. <i>Rock Mechanics and Rock Engineering</i> , 2013, 46, 657-681.	5.4	121
10	Numerical Modelling of the Anisotropic Mechanical Behaviour of Opalinus Clay at the Laboratory-Scale Using FEM/DEM. <i>Rock Mechanics and Rock Engineering</i> , 2014, 47, 187-206.	5.4	118
11	Numerical simulation of hydraulic fracturing and associated microseismicity using finite-discrete element method. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2014, 6, 574-581.	8.1	108
12	Fracture development around deep underground excavations: Insights from FDEM modelling. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2014, 6, 493-505.	8.1	95
13	Grain based modelling of rocks using the combined finite-discrete element method. <i>Computers and Geotechnics</i> , 2018, 103, 73-81.	4.7	85
14	Hybrid Finite-Discrete Element Simulation of the EDZ Formation and Mechanical Sealing Process Around a Microtunnel in Opalinus Clay. <i>Rock Mechanics and Rock Engineering</i> , 2016, 49, 1849-1873.	5.4	80
15	Rock Slide Simulation with the Combined Finite-Discrete Element Method. <i>International Journal of Geomechanics</i> , 2012, 12, 711-721.	2.7	70
16	Quantitative Measurements of Fracture Aperture and Directional Roughness from Rock Cores. <i>Rock Mechanics and Rock Engineering</i> , 2012, 45, 619-629.	5.4	49
17	ROCKTOPPLE: A spreadsheet-based program for probabilistic block-toppling analysis. <i>Computers and Geosciences</i> , 2010, 36, 98-114.	4.2	43
18	Influence of pre-existing discontinuities and bedding planes on hydraulic fracturing initiation. <i>European Journal of Environmental and Civil Engineering</i> , 2015, 19, 580-597.	2.1	40

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19	Characterization of the effect of normal load on the discontinuity morphology in direct shear specimens using X-ray micro-CT. <i>Acta Geotechnica</i> , 2015, 10, 31-54.	5.7	39
20	An enhanced tool for probing the microscopic behavior of granular materials based on X-ray micro-CT and FDEM. <i>Computers and Geotechnics</i> , 2021, 132, 103974.	4.7	33
21	Simulation of thermal cracking in anisotropic shale formations using the combined finite-discrete element method. <i>Computers and Geotechnics</i> , 2020, 117, 103237.	4.7	32
22	Understanding progressive rock failure and associated seismicity using ultrasonic tomography and numerical simulation. <i>Tunnelling and Underground Space Technology</i> , 2018, 81, 26-34.	6.2	31
23	The role of discontinuities in rock slope stability: Insights from a combined finite-discrete element simulation. <i>Computers and Geotechnics</i> , 2022, 147, 104788.	4.7	31
24	Influence of <i>in situ</i> stress variations on acoustic emissions: a numerical study. <i>Geophysical Journal International</i> , 2015, 203, 1246-1252.	2.4	29
25	Seismic attenuation in partially saturated rocks: Recent advances and future directions. <i>The Leading Edge</i> , 2014, 33, 640-646.	0.7	28
26	Finite/discrete element modelling of reversed cyclic tests on unreinforced masonry structures. <i>Engineering Structures</i> , 2017, 138, 159-169.	5.3	25
27	A New Contact Formulation for Large Frictional Sliding and Its Implement in the Explicit Numerical Manifold Method. <i>Rock Mechanics and Rock Engineering</i> , 2020, 53, 435-451.	5.4	25
28	Simulating the entire progressive failure process of rock slopes using the combined finite-discrete element method. <i>Computers and Geotechnics</i> , 2022, 141, 104557.	4.7	24
29	Direct Observation of Faulting by Means of Rotary Shear Tests Under X-ray Micro-Computed Tomography. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 7389-7403.	3.4	23
30	Numerical Simulation on Seismic Response of the Filled Joint under High Amplitude Stress Waves Using Finite-Discrete Element Method (FDEM). <i>Materials</i> , 2017, 10, 13.	2.9	19
31	Hyperglycemia compromises Rat Cortical Bone by Increasing Osteocyte Lacunar Density and Decreasing Vascular Canal Volume. <i>Communications Biology</i> , 2020, 3, 20.	4.4	17
32	Investigate the Mode I Fracture Characteristics of Granite After Heating/LN2 Cooling Treatments. <i>Rock Mechanics and Rock Engineering</i> , 2022, 55, 4477-4496.	5.4	14
33	Simulating tunnel support integrity using FEM and FDEM based on laboratory test data. <i>Tunnelling and Underground Space Technology</i> , 2021, 111, 103848.	6.2	12
34	Thermal cracking simulation of functionally graded materials using the combined finite-discrete element method. <i>Computational Particle Mechanics</i> , 2020, 7, 903-917.	3.0	11
35	Finite/discrete element model of tension stiffening in GFRP reinforced concrete. <i>Engineering Structures</i> , 2016, 111, 494-504.	5.3	10
36	Spectral-element simulations of elastic wave propagation in exploration and geotechnical applications. <i>Earthquake Science</i> , 2014, 27, 179-187.	0.9	9

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37	Rotary shear experiments under X-ray micro-computed tomography. <i>Review of Scientific Instruments</i> , 2017, 88, 015110.	1.3	8
38	Assessing Energy Budget of Laboratory Fault Slip Using Rotary Shear Experiments and Micro-Computed Tomography. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL084787.	4.0	8
39	Mapping Fracture Complexity of Fractured Shale in Laboratory: Three-dimensional Reconstruction From Serial-section Images. <i>Rock Mechanics and Rock Engineering</i> , 2022, 55, 2937-2948.	5.4	8
40	Geostatistical downscaling of fracture surface topography accounting for local roughness. <i>Acta Geotechnica</i> , 2010, 5, 127-138.	5.7	7
41	A pragmatic approach to abstract the excavation damaged zone around tunnels of a geological radioactive waste repository: application to the HG-A experiment in Mont Terri. <i>Geological Society Special Publication</i> , 2017, 443, 127-147.	1.3	4
42	Novel Mechanical Classification Method of Rock Based on the Uniaxial Compressive Strength and Brazilian Disc Strength. <i>Rock Mechanics and Rock Engineering</i> , 2022, 55, 2503-2507.	5.4	4
43	Effect of pre-existing cracks on thermal cracking of granitic rocks under confinement. <i>Geomechanics and Geophysics for Geo-Energy and Geo-Resources</i> , 2022, 8, .	2.9	2
44	Simplified Dark Data Analytics of Everyday Completions Data, and its Relation to Observed Induced Seismicity Events: An Unconventional Big Data Solution. , 2019, , .		1
45	Dataset for time-lapse ultrasonic tomography of a granite slab under uniaxial compression test. <i>Data in Brief</i> , 2018, 20, 614-616.	1.0	0