

Giuseppe Buscarnera

List of Publications by Year in descending order

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Version: 2024-02-01

87
papers

1,328
citations

377584

21
h-index

466096

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89
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89
docs citations

89
times ranked

775
citing authors

#	ARTICLE	IF	CITATIONS
1	Insight into contact forces in crushable sand using experiments and predictive particle-scale modelling. <i>Geotechnique</i> , 2024, 74, 238-249.	2.2	4
2	Strain localization criteria for viscoplastic geomaterials. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2022, 46, 717-738.	1.7	3
3	Evolution of earth pressure coefficient of sand undergoing varying rate of dissolution. <i>Geotechnique Letters</i> , 2022, 12, 74-79.	0.6	1
4	A breakage“damage framework for porous granular rocks in surface-reactive environments. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2022, 154, 105111.	2.6	3
5	Simulation of heterogeneous breakage in sand based on full-field X-ray tomography measurements. <i>Computers and Geotechnics</i> , 2022, 147, 104746.	2.3	2
6	Evolution of particle morphology and mode of fracture during the oedometric compression of sand. <i>Geotechnique</i> , 2021, 71, 853-865.	2.2	27
7	The Role of Stratigraphy and Loading History in Generating Complex Compaction Bands in Idealized Field“Scale Settings. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2020JB020452.	1.4	5
8	Numerical simulation of unstable suction transients in unsaturated soils: the role of wetting collapse. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2021, 45, 1569-1587.	1.7	5
9	Regional Subsidence Analysis Through a Multi“Scale Modeling Framework Based on Breakage Mechanics. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2020JB021335.	1.4	0
10	The mechanics of brittle granular materials with coevolving grain size and shape. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021, 477, 20201005.	1.0	17
11	Simulation of High-Strain-Rate Comminution through a Breakage Model with Adaptive Rate Dependence. <i>Journal of Engineering Mechanics - ASCE</i> , 2021, 147, .	1.6	4
12	Shallow landslide triggering in unsaturated vegetated slopes: Efficient computation of susceptibility maps. <i>Computers and Geosciences</i> , 2021, 154, 104826.	2.0	3
13	Regional-scale simulation of flowslide triggering in stratified deposits. <i>Engineering Geology</i> , 2021, 292, 106248.	2.9	6
14	Flowslide Triggering in Volcanic Soils: Role of Stratigraphy and Bedrock Exfiltration. , 2021, , .		0
15	DEM Modeling of Grain Size Effect in Brittle Granular Soils. <i>Journal of Engineering Mechanics - ASCE</i> , 2020, 146, .	1.6	30
16	Influence of Clay Anisotropy on Model Simulations of Wetting Collapse. <i>Journal of Engineering Mechanics - ASCE</i> , 2020, 146, 04019130.	1.6	4
17	Simulation of emergent compaction banding fronts caused by frictional boundaries. <i>Geotechnique Letters</i> , 2020, 10, 436-444.	0.6	5
18	Modelling of simple shear tests on volcanic unsaturated sands. <i>E3S Web of Conferences</i> , 2020, 195, 02021.	0.2	3

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19	A geospatial model for the analysis of time-dependent land subsidence induced by reservoir depletion. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2020, 129, 104272.	2.6	5
20	Probabilistic modeling of shallow landslide initiation using regional scale random fields. <i>Landslides</i> , 2020, 17, 1979-1988.	2.7	8
21	Spatially distributed landslide triggering analyses accounting for coupled infiltration and volume change. <i>Landslides</i> , 2020, 17, 2811-2824.	2.7	12
22	Quantification of grain breakage during creep based on X-ray microtomography. <i>E3S Web of Conferences</i> , 2020, 205, 09004.	0.2	1
23	A Miniaturized Testing Apparatus to Study the Chemo-Mechanics of Porous Media. <i>Geotechnical Testing Journal</i> , 2020, 43, 829-843.	0.5	2
24	Simulating spatial heterogeneity through a CT-FE mapping scheme discloses boundary effects on emerging compaction bands. <i>International Journal of Solids and Structures</i> , 2020, 206, 247-261.	1.3	6
25	A Generalized Backward Euler algorithm for the numerical integration of a viscous breakage model. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2019, 43, 3-29.	1.7	6
26	Mathematical interpretation of delayed instability in viscous unsaturated soil. <i>Geotechnique Letters</i> , 2019, 9, 165-172.	0.6	3
27	Measurement and simulation of comminution rate in granular materials subjected to creep tests. <i>Granular Matter</i> , 2019, 21, 1.	1.1	8
28	Viscoplastic Interpretation of Localized Compaction Creep in Porous Rock. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 10180-10196.	1.4	18
29	Simulation of localized compaction in Tuffeau de Maastricht based on evidence from X-ray tomography. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2019, 121, 104039.	2.6	19
30	Anisotropic breakage mechanics: From stored energy to yielding in transversely isotropic granular rocks. <i>Journal of the Mechanics and Physics of Solids</i> , 2019, 129, 1-18.	2.3	23
31	Bounding Surface Elasto-Viscoplasticity: A General Constitutive Framework for Rate-Dependent Geomaterials. <i>Journal of Engineering Mechanics - ASCE</i> , 2019, 145, .	1.6	9
32	Spatially distributed modeling of rainfall-induced landslides in shallow layered slopes. <i>Landslides</i> , 2019, 16, 253-263.	2.7	19
33	A Rotational Hardening Model Capturing Undrained Failure in Anisotropic Soft Clays. <i>Indian Geotechnical Journal</i> , 2019, 49, 369-380.	0.7	3
34	A hybrid plastic flow rule for cyclically loaded clay. <i>Computers and Geotechnics</i> , 2018, 101, 65-79.	2.3	11
35	Model-Based Assessment of the Effect of Surface Area Growth on the Permeability of Granular Rocks. <i>Journal of Engineering Mechanics - ASCE</i> , 2018, 144, 04018023.	1.6	6
36	Instability criteria for quasi-saturated viscous soils. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2018, 42, 379-400.	1.7	9

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37	Model-based interpretation of undrained creep instability in loose sands. <i>Geotechnique</i> , 2018, 68, 504-517.	2.2	16
38	Safety factors to detect flowslides and slips in unsaturated shallow slopes. <i>Geotechnique</i> , 2018, 68, 442-450.	2.2	10
39	Breakage mechanics for granular materials in surface-reactive environments. <i>Journal of the Mechanics and Physics of Solids</i> , 2018, 112, 89-108.	2.3	42
40	Assessment of statistical homogeneity in chemically treated granular materials. <i>Geotechnique Letters</i> , 2018, 8, 32-39.	0.6	4
41	Effect of Grain Crushing and Grain Size on the Evolution of Water Retention Curves. , 2018, , .		0
42	Simulation of cyclic strength degradation of natural clays via bounding surface model with hybrid flow rule. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2018, 42, 1719-1740.	1.7	8
43	Calibration of Plasticity-Based Safety Factors for Rainfall-Induced Landslides. , 2018, , .		0
44	Mechanics of Unsaturated Porous Media. <i>Journal of Engineering Mechanics - ASCE</i> , 2018, 144, 02018001.	1.6	0
45	A rate-dependent breakage model based on the kinetics of crack growth at the grain scale. <i>Geotechnique</i> , 2017, 67, 953-967.	2.2	35
46	Localized Compaction in Tuffeau de Maastricht: Experiments and Modeling. <i>Springer Series in Geomechanics and Geoengineering</i> , 2017, , 481-488.	0.0	8
47	A lattice discrete particle model for pressure-dependent inelasticity in granular rocks. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2017, 91, 49-58.	2.6	17
48	Experimental Validation of Terzaghi's Effective Stress Principle for Gassy Sand. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2017, 143, .	1.5	23
49	Regional-scale modelling of shallow landslides with different initiation mechanisms: Sliding versus liquefaction. <i>Engineering Geology</i> , 2017, 228, 346-356.	2.9	18
50	Experimental assessment of continuum breakage models accounting for mechanical interactions at particle contacts. <i>Granular Matter</i> , 2017, 19, 1.	1.1	21
51	Solute mixing regulates heterogeneity of mineral precipitation in porous media. <i>Geophysical Research Letters</i> , 2017, 44, 6658-6666.	1.5	14
52	Identification of Potential Strain Heterogeneities During Wetting-Induced Compaction. <i>E3S Web of Conferences</i> , 2016, 9, 17004.	0.2	0
53	Implicit integration under mixed controls of a breakage model for unsaturated crushable soils. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2016, 40, 887-918.	1.7	11
54	Mathematical capture of failure processes in elastoplastic geomaterials. <i>Soils and Foundations</i> , 2016, 56, 1-18.	1.3	4

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55	Evolution of the Water Retention Characteristics of Granular Materials Subjected to Grain Crushing. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2016, 142, .	1.5	6
56	DEM assessment of scaling laws capturing the grain size dependence of yielding in granular soils. Granular Matter, 2016, 18, 1.	1.1	50
57	Micromechanical Modeling of Proppants for Hydraulic Fracturing. , 2016, , .		0
58	Controllability Criteria for Soils Saturated by a Compressible Fluid. Journal of Engineering Mechanics - ASCE, 2016, 142, 04016076.	1.6	14
59	Diffusive Instability of Pore Pressure Transients in Deformable Unsaturated Soils. Journal of Engineering Mechanics - ASCE, 2016, 142, .	1.6	7
60	Grain size dependence of yielding in granular soils interpreted using fracture mechanics, breakage mechanics and Weibull statistics. Geotechnique, 2016, 66, 149-160.	2.2	89
61	Modelling suction instabilities in soils at varying degrees of saturation. E3S Web of Conferences, 2016, 9, 03003.	0.2	1
62	Chemo-mechanics of cemented granular solids subjected to precipitation and dissolution of mineral species. International Journal for Numerical and Analytical Methods in Geomechanics, 2016, 40, 1295-1320.	1.7	24
63	Parameter calibration for high-porosity sandstones deformed in the compaction banding regime. International Journal of Rock Mechanics and Minings Sciences, 2015, 78, 240-252.	2.6	19
64	Prediction of breakage-induced couplings in unsaturated granular soils. Geotechnique, 2015, 65, 135-140.	2.2	25
65	Is Wetting Collapse an Unstable Compaction Process?. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2015, 141, .	1.5	17
66	Shale Fracturing for Energy Recovery: Current Issues and Review of Available Analytical and Computational Models. , 2014, , .		3
67	Uniqueness and existence in plasticity models for unsaturated soils. Acta Geotechnica, 2014, 9, 313-327.	2.9	23
68	Instability of unsaturated soils: A review of theoretical methods. Journal of Geo-Engineering Sciences, 2014, 2, 39-65.	0.3	1
69	Simulation of localized compaction in high-porosity calcarenite subjected to boundary constraints. International Journal of Rock Mechanics and Minings Sciences, 2014, 71, 91-104.	2.6	25
70	Grainsize dependence of clastic yielding in unsaturated granular soils. Granular Matter, 2014, 16, 469-483.	1.1	28
71	Mathematical identification of diffuse and localized instabilities in fluid-saturated sands. International Journal for Numerical and Analytical Methods in Geomechanics, 2014, 38, 111-141.	1.7	22
72	Path dependence of the potential for compaction banding: Theoretical predictions based on a plasticity model for porous rocks. Journal of Geophysical Research: Solid Earth, 2014, 119, 1882-1903.	1.4	22

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73	Model Prediction of Static Liquefaction: Influence of the Initial State on Potential Instabilities. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2013, 139, 420-432.	1.5	33
74	Soil stability and flow slides in unsaturated shallow slopes: can saturation events trigger liquefaction processes?. Geotechnique, 2013, 63, 801-817.	2.2	36
75	A particle-based water based model for water retention hysteresis. Geotechnique Letters, 2013, 3, 152-161.	0.6	18
76	A conceptual model for the chemo-mechanical degradation of granular geomaterials. Geotechnique Letters, 2012, 2, 149-154.	0.6	25
77	Constitutive modelling approach for evaluating the triggering of flow slides. Canadian Geotechnical Journal, 2012, 49, 499-511.	1.4	35
78	The yielding of brittle unsaturated granular soils. Geotechnique, 2012, 62, 147-160.	2.2	63
79	Discussing the definition of the second-order work for unsaturated soils. International Journal for Numerical and Analytical Methods in Geomechanics, 2012, 36, 36-49.	1.7	42
80	Modelling instabilities in triaxial testing on unsaturated soil specimens. International Journal for Numerical and Analytical Methods in Geomechanics, 2011, 35, 179-200.	1.7	50
81	Controllability, uniqueness and existence of the incremental response: A mathematical criterion for elastoplastic constitutive laws. International Journal of Solids and Structures, 2011, 48, 1867-1878.	1.3	58
82	Stability criteria for unsaturated shallow slopes. Geotechnique Letters, 2011, 1, 85-90.	0.6	18
83	Loss of controllability in unsaturated soils. European Journal of Environmental and Civil Engineering, 2009, 13, 235-250.	1.0	3
84	An elastoplastic strainhardening model for soil allowing for hydraulic bonding-debonding effects. International Journal for Numerical and Analytical Methods in Geomechanics, 2009, 33, 1055-1086.	1.7	42
85	Fabric-enriched Continuum Breakage Mechanics (F-CBM). Geotechnique, 0, , 1-43.	2.2	3
86	Hybrid stochastic-mechanical modeling of precipitation thresholds of shallow landslide initiation. Natural Hazards, 0, , 1.	1.6	0
87	Unified modelling framework of flowslide triggering and runout. Geotechnique, 0, , 1-14.	2.2	5