

David Mañá-n

List of Publications by Year in descending order

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98
papers

3,007
citations

147801

31
h-index

175258

52
g-index

104
all docs

104
docs citations

104
times ranked

1318
citing authors

#	ARTICLE	IF	CITATIONS
1	A hypoplastic constitutive model for clays. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2005, 29, 311-336.	3.3	235
2	Cyclic lateral response and failure mechanisms of semi-rigid pile in soft clay: centrifuge tests and numerical modelling. <i>Canadian Geotechnical Journal</i> , 2017, 54, 806-824.	2.8	135
3	Predicting the dependency of a degree of saturation on void ratio and suction using effective stress principle for unsaturated soils. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2010, 34, 73-90.	3.3	132
4	Three-dimensional centrifuge and numerical modeling of the interaction between perpendicularly crossing tunnels. <i>Canadian Geotechnical Journal</i> , 2013, 50, 935-946.	2.8	118
5	The soilmodels.info project. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2008, 32, 1571-1572.	3.3	107
6	Comparison of different probabilistic methods for predicting stability of a slope in spatially variable c� soil. <i>Computers and Geotechnics</i> , 2010, 37, 132-140.	4.7	106
7	Clay hypoplasticity model including stiffness anisotropy. <i>Geotechnique</i> , 2014, 64, 232-238.	4.0	97
8	Clay hypoplasticity with explicitly defined asymptotic states. <i>Acta Geotechnica</i> , 2013, 8, 481-496.	5.7	94
9	Double structure hydromechanical coupling formalism and a model for unsaturated expansive clays. <i>Engineering Geology</i> , 2013, 165, 73-88.	6.3	89
10	Sandstone landforms shaped by negative feedback between stress and erosion. <i>Nature Geoscience</i> , 2014, 7, 597-601.	12.9	77
11	Influence of sand density and retaining wall stiffness on three-dimensional responses of tunnel to basement excavation. <i>Canadian Geotechnical Journal</i> , 2015, 52, 1811-1829.	2.8	69
12	Benchmark of constitutive models for unsaturated soils. <i>Geotechnique</i> , 2011, 61, 283-302.	4.0	68
13	Hypoplastic Cam-clay model. <i>Geotechnique</i> , 2012, 62, 549-553.	4.0	68
14	Swelling phenomena and effective stress in compacted expansive clays. <i>Canadian Geotechnical Journal</i> , 2016, 53, 134-147.	2.8	59
15	A hypoplastic model for mechanical response of unsaturated soils. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2008, 32, 1903-1926.	3.3	57
16	Graphical representation of constitutive equations. <i>Geotechnique</i> , 2009, 59, 147-151.	4.0	57
17	3D Modeling of an NATM Tunnel in High KO Clay Using Two Different Constitutive Models. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2009, 135, 1326-1335.	3.0	56
18	State boundary surface of a hypoplastic model for clays. <i>Computers and Geotechnics</i> , 2005, 32, 400-410.	4.7	54

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19	A hypoplastic constitutive model for clays with meta-stable structure. Canadian Geotechnical Journal, 2007, 44, 363-375.	2.8	52
20	A thermo-mechanical model for variably saturated soils based on hypoplasticity. International Journal for Numerical and Analytical Methods in Geomechanics, 2012, 36, 1461-1485.	3.3	52
21	Asymptotic behaviour of granular materials. Granular Matter, 2012, 14, 759-774.	2.2	50
22	Small strain stiffness anisotropy of natural sedimentary clays: review and a model. Acta Geotechnica, 2014, 9, 299-312.	5.7	50
23	A unified lateral soil reaction model for monopiles in soft clay considering various length-to-diameter (L/D) ratios. Ocean Engineering, 2020, 212, 107492.	4.3	50
24	Directional response of a reconstituted fine-grained soil – Part II: performance of different constitutive models. International Journal for Numerical and Analytical Methods in Geomechanics, 2006, 30, 1303-1336.	3.3	48
25	Ability of three different soil constitutive models to predict a tunnel’s response to basement excavation. Canadian Geotechnical Journal, 2015, 52, 1685-1698.	2.8	46
26	Enhancement of a hypoplastic model for granular soil – structure interface behaviour. Acta Geotechnica, 2016, 11, 1249-1261.	5.7	46
27	Improvement of a hypoplastic model to predict clay behaviour under undrained conditions. Acta Geotechnica, 2007, 2, 261-268.	5.7	41
28	Bentonite microstructure and saturation evolution in wetting – drying cycles evaluated using ESEM, MIP and WRC measurements. Geotechnique, 2019, 69, 713-726.	4.0	41
29	Fractal characteristics of pore structure of compacted bentonite studied by ESEM and MIP methods. Acta Geotechnica, 2020, 15, 1655-1671.	5.7	41
30	Probabilistic analyses of a strip footing on horizontally stratified sandy deposit using advanced constitutive model. Computers and Geotechnics, 2011, 38, 363-374.	4.7	39
31	Coupled Thermohydromechanical Double-Structure Model for Expansive Soils. Journal of Engineering Mechanics - ASCE, 2017, 143, .	2.9	37
32	Small-strain behaviour of cemented soils. Geotechnique, 2012, 62, 943-947.	4.0	34
33	Effects of Pillar Depth and Shielding on the Interaction of Crossing Multitunnels. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2015, 141, .	3.0	32
34	Numerical modelling of the effects of consolidation on jack-up spudcan penetration. Computers and Geotechnics, 2016, 78, 25-37.	4.7	31
35	Arcades: Products of stress-controlled and discontinuity-related weathering. Earth-Science Reviews, 2018, 180, 159-184.	9.1	30
36	Water retention of a bentonite for deep geological radioactive waste repositories: High-temperature experiments and thermodynamic modeling. Engineering Geology, 2020, 269, 105549.	6.3	30

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37	Modelling of Soil Behaviour with Hypoplasticity. Springer Series in Geomechanics and Geoengineering, 2019, , .	0.1	29
38	Modelling of shear stiffness of unsaturated fine grained soils at very small strains. Computers and Geotechnics, 2014, 56, 28-39.	4.7	27
39	The influence of experimental and sampling uncertainties on the probability of unsatisfactory performance in geotechnical applications. Geotechnique, 2015, 65, 897-910.	4.0	25
40	Class A predictions of a NATM tunnel in stiff clay. Computers and Geotechnics, 2010, 37, 817-825.	4.7	24
41	A general approach to model interfaces using existing soil constitutive models application to hypoplasticity. Computers and Geotechnics, 2017, 87, 115-127.	4.7	24
42	Constitutive model for monotonic and cyclic loading on anisotropic clays. Geotechnique, 2021, , 1-17.	4.0	23
43	Characteristic limitations of advanced plasticity and hypoplasticity models for cyclic loading of sands. Acta Geotechnica, 2022, 17, 2235-2257.	5.7	23
44	Numerical modelling of lumpy clay landfill. International Journal for Numerical and Analytical Methods in Geomechanics, 2012, 36, 17-35.	3.3	22
45	An approach for modelling volume change of fine-grained soil subjected to thermal cycles. Canadian Geotechnical Journal, 2017, 54, 896-901.	2.8	22
46	Hypoplastic interface models for fine-grained soils. International Journal for Numerical and Analytical Methods in Geomechanics, 2017, 41, 284-303.	3.3	22
47	Comparison of displacement field predicted by 2D and 3D finite element modelling of shallow NATM tunnels in clays. Geotechnik, 2011, 34, 115-126.	0.2	21
48	Numerical modelling of the effects of consolidation on the undrained spudcan capacity under combined loading in silty clay. Computers and Geotechnics, 2017, 86, 33-51.	4.7	20
49	An intergranular strain concept for material models formulated as rate equations. International Journal for Numerical and Analytical Methods in Geomechanics, 2020, 44, 1003-1018.	3.3	20
50	Capability of constitutive models to simulate soils with different OCR using a single set of parameters. Computers and Geotechnics, 2009, 36, 655-664.	4.7	19
51	Coupled hydro-mechanical model for partially saturated soils predicting small strain stiffness. Computers and Geotechnics, 2014, 61, 355-369.	4.7	19
52	Gravity-induced stress as a factor reducing decay of sandstone monuments in Petra, Jordan. Journal of Cultural Heritage, 2016, 19, 415-425.	3.3	18
53	Hypoplastic and viscohypoplastic models for soft clays with strength anisotropy. International Journal for Numerical and Analytical Methods in Geomechanics, 2020, 44, 1396-1416.	3.3	18
54	On the behavior of monopiles subjected to multiple episodes of cyclic loading and reconsolidation in cohesive soils. Computers and Geotechnics, 2021, 134, 104049.	4.7	17

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55	Improvement to the intergranular strain model for larger numbers of repetitive cycles. Acta Geotechnica, 2020, 15, 3593-3604.	5.7	16
56	Automated calibration of advanced soil constitutive models. Part I: hypoplastic sand. Acta Geotechnica, 2022, 17, 3421-3438.	5.7	13
57	Inspection of four advanced constitutive models for fine-grained soils under monotonic and cyclic loading. Acta Geotechnica, 2022, 17, 4395-4418.	5.7	13
58	Evaluation of K ₀ in stiff clay by back-analysis of convergence measurements from unsupported cylindrical cavity. Acta Geotechnica, 2015, 10, 719-733.	5.7	12
59	The strength reduction method in clay hypoplasticity. Computers and Geotechnics, 2020, 126, 103687.	4.7	12
60	Performance of tripod foundations for offshore wind turbines: a numerical study. Geotechnique Letters, 2021, 11, 230-238.	1.2	12
61	Comparison of Predictive Capabilities of Selected Elasto-Plastic and Hypoplastic Models for Structured Clays. Soils and Foundations, 2009, 49, 381-390.	3.1	11
62	Automated calibration of advanced soil constitutive models. Part II: hypoplastic clay and modified Cam-Clay. Acta Geotechnica, 2022, 17, 3439-3462.	5.7	11
63	Evaluation of hypoplastic model for soft clays by modelling of Nicoll highway case history. Computers and Geotechnics, 2021, 134, 104053.	4.7	9
64	Numerical modeling of the evolution of arcades and rock pillars. Geomorphology, 2020, 365, 107260.	2.6	9
65	Manufacture of samples of overconsolidated clay by laboratory sedimentation. Geotechnique, 2007, 57, 249-253.	4.0	8
66	Mineralogical, Geochemical and Geotechnical Study of BCV 2017 Bentonite – The Initial State and the State following Thermal Treatment at 200 °C. Minerals (Basel, Switzerland), 2021, 11, 871.	2.0	8
67	General method for simulating laboratory tests with constitutive models for geomechanics. International Journal for Numerical and Analytical Methods in Geomechanics, 2017, 41, 304-312.	3.3	5
68	Hypoplastic Model for Clays with Stiffness Anisotropy. Lecture Notes in Civil Engineering, 2021, , 414-421.	0.4	5
69	Small-strain behaviour of unsaturated silty clay: experiments and model interpretation. Acta Geotechnica, 2021, 16, 2837-2849.	5.7	5
70	An Evaluation of Different Constitutive Models to Predict the Directional Response of a Reconstituted Fine-Grained Soil. Springer Proceedings in Physics, 2006, , 143-157.	0.2	4
71	Thermo-mechanical hypoplastic interface model for fine-grained soils. , 2016, , 351-357.		4
72	Observed and calculated gravity anomalies above a tunnel driven in clays – implication for errors in gravity interpretation. Near Surface Geophysics, 2013, 11, 569-578.	1.2	3

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73	Compression Behaviour of Chlef Sand and Transition of Fines Content Using Pressure-Dependent Maximum Void Ratios of Sand. <i>Geotechnical and Geological Engineering</i> , 2022, 40, 1675-1692.	1.7	3
74	An experimental investigation on the swelling behavior of compacted B75 bentonite. <i>Engineering Geology</i> , 2022, 296, 106452.	6.3	3
75	Determination of erosion thickness by numerical back analysis: The case study of Badenian clays in the Carpathian Foredeep, Czech Republic. <i>Engineering Geology</i> , 2016, 214, 50-59.	6.3	2
76	Implications of the atmosphere-soil interaction for the design of earth retaining structures. <i>E3S Web of Conferences</i> , 2016, 9, 12002.	0.5	2
77	SHEAR STRENGTH OF SOILS FROM THE DOBKOVICKY LANDSLIDE IN THE CENTRAL BOHEMIAN UPLANDS DETERMINATED BY LABORATORY TESTS. <i>Acta Polytechnica CTU Proceedings</i> , 2017, 10, 48-51.	0.3	2
78	Applicability of hypoplasticity to reconstituted peat from drained triaxial tests. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2018, 42, 2049-2064.	3.3	2
79	Dynamical In Situ Study of Morphological Changes of Bentonite in ESEM. <i>Microscopy and Microanalysis</i> , 2017, 23, 2196-2197.	0.4	1
80	Thermal Water Retention Characteristics of Compacted Bentonite. , 2018, , 71-78.		1
81	Modelling of Deep Excavation Collapse Using Hypoplastic Model for Soft Clays. <i>Springer Series in Geomechanics and Geoengineering</i> , 2018, , 344-349.	0.1	1
82	Modelling of Spudcan Foundation Penetrations Using an Improved Hypoplastic Model for Soft Clays. , 2018, , 749-756.		1
83	Soil Mechanical Behaviour and Its Modelling. <i>Springer Series in Geomechanics and Geoengineering</i> , 2019, , 13-42.	0.1	1
84	Gravity Effects of Deformation Zones Induced by Tunnelling in Soft and Stiff Clays. , 2007, , .		1
85	Development of a coupled thermo-hydro-mechanical double structure model for expansive soils. <i>E3S Web of Conferences</i> , 2016, 9, 17002.	0.5	0
86	Modelling of Bentonite for Nuclear Waste Disposal Facilities with Hypoplasticity. <i>Springer Series in Geomechanics and Geoengineering</i> , 2019, , 93-98.	0.1	0
87	Simple Scalar and Vectorial Hypoplastic Models. <i>Springer Series in Geomechanics and Geoengineering</i> , 2019, , 43-72.	0.1	0
88	Hypoplastic Model for Sand. <i>Springer Series in Geomechanics and Geoengineering</i> , 2019, , 89-101.	0.1	0
89	Hypoplastic Model for Clay. <i>Springer Series in Geomechanics and Geoengineering</i> , 2019, , 103-117.	0.1	0
90	Advanced Modelling Approaches. <i>Springer Series in Geomechanics and Geoengineering</i> , 2019, , 119-189.	0.1	0

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91	The Strength Reduction Method in Clay Hypoplasticity. Lecture Notes in Civil Engineering, 2021, , 456-464.	0.4	0
92	A Procedure for 3D Modelling of Very Large Geotechnical Structures: Open Cast Coal Mine Case. Lecture Notes in Civil Engineering, 2021, , 36-43.	0.4	0
93	Explicit Incorporation of Asymptotic States into Hypoplasticity. Springer Series in Geomechanics and Geoengineering, 2013, , 609-616.	0.1	0
94	Discrete Element Investigation of the Asymptotic Behaviour of Granular Materials. Springer Series in Geomechanics and Geoengineering, 2013, , 423-430.	0.1	0
95	Constitutive model for unsaturated fine-grained soils incorporating small strain stiffness. , 2014, , 761-767.		0
96	The FEM back-analysis of earth pressure coefficient at rest in Brno clay K0 with the homogenization of steel/shotcrete lining. , 2014, , 113-124.		0
97	Experimental Study on Highly Compacted Bentonite Aggregates Subjected to Wetting and Drying. Springer Series in Geomechanics and Geoengineering, 2018, , 1632-1635.	0.1	0
98	Aspects of soft clay behaviour important for correct prediction of spudcan foundation penetration. Computers and Geotechnics, 2022, 142, 104552.	4.7	0