

Eduardo E Alonso

List of Publications by Year in descending order

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140
papers

9,079
citations

66343

42
h-index

42399

92
g-index

144
all docs

144
docs citations

144
times ranked

3481
citing authors

#	ARTICLE	IF	CITATIONS
1	A constitutive model for partially saturated soils. <i>Geotechnique</i> , 1990, 40, 405-430.	4.0	1,995
2	A framework for the behaviour of unsaturated expansive clays. <i>Canadian Geotechnical Journal</i> , 1992, 29, 1013-1032.	2.8	587
3	Modelling the mechanical behaviour of expansive clays. <i>Engineering Geology</i> , 1999, 54, 173-183.	6.3	468
4	Mechanical behaviour of heavily compacted bentonite under high suction changes. <i>Geotechnique</i> , 2003, 53, 27-40.	4.0	399
5	Nonisothermal multiphase flow of brine and gas through saline media. <i>Transport in Porous Media</i> , 1994, 15, 271-293.	2.6	331
6	A microstructurally based effective stress for unsaturated soils. <i>Geotechnique</i> , 2010, 60, 913-925.	4.0	312
7	Expansive bentonite-sand mixtures in cyclic controlled-suction drying and wetting. <i>Engineering Geology</i> , 2005, 81, 213-226.	6.3	213
8	A full-scale in situ heating test for high-level nuclear waste disposal: observations, analysis and interpretation. <i>Geotechnique</i> , 2009, 59, 377-399.	4.0	188
9	Risk analysis of slopes and its application to slopes in Canadian sensitive clays. <i>Geotechnique</i> , 1976, 26, 453-472.	4.0	175
10	Hydro-mechanical behaviour of bentonite pellet mixtures. <i>Physics and Chemistry of the Earth</i> , 2007, 32, 832-849.	2.9	159
11	Compacted soil behaviour: initial state, structure and constitutive modelling. <i>Geotechnique</i> , 2013, 63, 463-478.	4.0	156
12	The material point method for unsaturated soils. <i>Geotechnique</i> , 2015, 65, 201-217.	4.0	145
13	Progressive failure of Aznalc��llar dam using the material point method. <i>Geotechnique</i> , 2011, 61, 795-808.	4.0	144
14	A model for rockfill compressibility. <i>Geotechnique</i> , 2001, 51, 127-139.	4.0	142
15	Theoretical investigation of the time-dependent behaviour of rockfill. <i>Geotechnique</i> , 2007, 57, 289-301.	4.0	142
16	Analysis of a full scale in situ test simulating repository conditions. , 1998, 22, 515-548.		138
17	The FEBEX benchmark test: case definition and comparison of modelling approaches. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2005, 42, 611-638.	5.8	125
18	Influence of rainfall on the deformation and stability of a slope in overconsolidated clays: a case study. <i>Hydrogeology Journal</i> , 2003, 11, 174-192.	2.1	121

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19	Gas flow through clay barriers. <i>Geotechnique</i> , 2008, 58, 157-176.	4.0	116
20	An interface element formulation for the analysis of soil-reinforcement interaction. <i>Computers and Geotechnics</i> , 1989, 7, 133-151.	4.7	111
21	Hydromechanical behaviour of compacted granular expansive mixtures: experimental and constitutive study. <i>Geotechnique</i> , 2011, 61, 329-344.	4.0	107
22	Canelles landslide: modelling rapid drawdown and fast potential sliding. <i>Landslides</i> , 2012, 9, 33-51.	5.4	102
23	Estimation of parameters in geotechnical backanalysis â€” I. Maximum likelihood approach. <i>Computers and Geotechnics</i> , 1996, 18, 1-27.	4.7	93
24	A review of Beliche Dam. <i>Geotechnique</i> , 2005, 55, 267-285.	4.0	86
25	A constitutive model for rock joints formulation and numerical implementation. <i>Computers and Geotechnics</i> , 1990, 9, 3-20.	4.7	81
26	Estimation of parameters in geotechnical backanalysis â€” II. Application to a tunnel excavation problem. <i>Computers and Geotechnics</i> , 1996, 18, 29-46.	4.7	72
27	Microstructural deformation mechanisms of unsaturated granular soils. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2002, 26, 433-468.	3.3	72
28	Criteria for rapid sliding I. A review of Vaiont case. <i>Engineering Geology</i> , 2010, 114, 198-210.	6.3	65
29	Scale effects in rockfill behaviour. <i>Geotechnique Letters</i> , 2012, 2, 155-160.	1.2	65
30	PARAMETER AND VARIANCE ESTIMATION IN GEOTECHNICAL BACKANALYSIS USING PRIOR INFORMATION. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 1996, 20, 119-141.	3.3	64
31	Factors controlling rockâ€“clay buffer interaction in a radioactive waste repository. <i>Engineering Geology</i> , 2002, 64, 297-308.	6.3	63
32	AznalcÃ³llar dam failure. Part 2: Stability conditions and failure mechanism. <i>Geotechnique</i> , 2006, 56, 185-201.	4.0	63
33	Mechanical behaviour of heavily compacted bentonite under high suction changes. <i>Geotechnique</i> , 2003, 53, 27-40.	4.0	61
34	Thermo-poro-mechanical analysis of landslides: from creeping behaviour to catastrophic failure. <i>Geotechnique</i> , 2016, 66, 202-219.	4.0	59
35	Suction effects on rockfill compressibility. <i>Geotechnique</i> , 2003, 53, 289-292.	4.0	58
36	AznalcÃ³llar dam failure. Part 1: Field observations and material properties. <i>Geotechnique</i> , 2006, 56, 165-183.	4.0	57

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37	Negative skin friction on piles: a simplified analysis and prediction procedure. <i>Geotechnique</i> , 1984, 34, 341-357.	4.0	54
38	Criteria for rapid sliding II.. <i>Engineering Geology</i> , 2010, 114, 211-227.	6.3	52
39	A constitutive model for soft clayey rocks that includes weathering effects. <i>Geotechnique</i> , 2007, 57, 137-151.	4.0	51
40	Rapid drawdown in slopes and embankments. <i>Water Resources Research</i> , 2008, 44, .	4.2	51
41	Thermal effects in landslide mobility. <i>Geotechnique</i> , 2018, 68, 528-545.	4.0	50
42	A particle model for rockfill behaviour. <i>Geotechnique</i> , 2015, 65, 975-994.	4.0	49
43	Precompression design for secondary settlement reduction. <i>Geotechnique</i> , 2000, 50, 645-656.	4.0	46
44	Behavior of materials for earth and rockfill dams: Perspective from unsaturated soil mechanics. <i>Frontiers of Architecture and Civil Engineering in China</i> , 2010, 4, 1-39.	0.4	46
45	Environmental degradation of claystones. <i>Geotechnique</i> , 2014, 64, 64-82.	4.0	42
46	Triggering and motion of landslides. <i>Geotechnique</i> , 2021, 71, 3-59.	4.0	42
47	Porosity variations in saline media caused by temperature gradients coupled to multiphase flow and dissolution/precipitation. <i>Transport in Porous Media</i> , 1996, 25, 1-25.	2.6	40
48	Modeling swelling soils for disposal barriers. <i>Computers and Geotechnics</i> , 2000, 27, 19-43.	4.7	38
49	Internal Progressive Failure in Deep-Seated Landslides. <i>Rock Mechanics and Rock Engineering</i> , 2016, 49, 2317-2332.	5.4	38
50	Extreme expansive phenomena in anhydritic-gypsiferous claystone: the case of Lilla tunnel. <i>Geotechnique</i> , 2013, 63, 584-612.	4.0	37
51	Secondary compression of clays as a local dehydration process. <i>Geotechnique</i> , 2001, 51, 859-869.	4.0	36
52	Predicting the Behavior of an Earth and Rockfill Dam under Construction. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2009, 135, 851-862.	3.0	33
53	Problems of friction posed by the use of geomembranes on dam slopes—examples and measurements. <i>Geotextiles and Geomembranes</i> , 1990, 9, 129-143.	4.6	32
54	Numerical analysis of rapid drawdown: Applications in real cases. <i>Water Science and Engineering</i> , 2016, 9, 175-182.	3.2	32

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55	A permafrost test on intact gneiss rock. International Journal of Rock Mechanics and Minings Sciences, 2015, 77, 142-151.	5.8	31
56	Soil heterogeneity and preferential paths for gas migration. Engineering Geology, 2002, 64, 251-271.	6.3	30
57	A model for rockfill compressibility. Geotechnique, 2001, 51, 127-139.	4.0	30
58	Monitoring the Performance of Unsaturated Soil Slopes. Geotechnical and Geological Engineering, 2008, 26, 799-816.	1.7	28
59	Modelling the degradation and swelling of clayey rocks bearing calcium-sulphate. International Journal of Rock Mechanics and Minings Sciences, 2012, 54, 90-102.	5.8	28
60	Volume changes of an unsaturated clay during heating and cooling. Geotechnique Letters, 2016, 6, 192-198.	1.2	28
61	Geomechanics of Failures. , 2010, , .		28
62	The landslide of Cortes de Pallas, Spain. Geotechnique, 1993, 43, 507-521.	4.0	27
63	Aznalcázar dam failure. Part 3: Dynamics of the motion. Geotechnique, 2006, 56, 203-210.	4.0	27
64	Gas injection tests on sand/bentonite mixtures in the laboratory. Experimental results and numerical modelling. Physics and Chemistry of the Earth, 2008, 33, S237-S247.	2.9	27
65	A constitutive law for rock joints considering the effects of suction and roughness on strength parameters. International Journal of Rock Mechanics and Minings Sciences, 2013, 60, 333-344.	5.8	27
66	Geomechanics of Failures. Advanced Topics. , 2010, , .		26
67	Thermo-hydraulic characterisation of soft rock by means of heating pulse tests. Geotechnique, 2009, 59, 293-306.	4.0	25
68	Joints in unsaturated rocks: Thermo-hydro-mechanical formulation and constitutive behaviour. Journal of Rock Mechanics and Geotechnical Engineering, 2013, 5, 200-213.	8.1	25
69	Gas flow in anisotropic claystone: modelling triaxial experiments. International Journal for Numerical and Analytical Methods in Geomechanics, 2013, 37, 2239-2256.	3.3	25
70	Effect of temperature induced excess porewater pressures on the shaft bearing capacity of geothermal piles. Geomechanics for Energy and the Environment, 2016, 8, 30-37.	2.5	24
71	Long term cyclic behavior of unsaturated granular soils. Transportation Geotechnics, 2018, 17, 48-55.	4.5	24
72	A review of Beliche Dam. Geotechnique, 2005, 55, 267-285.	4.0	22

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73	Fast planar slides. A closed-form thermo-hydro-mechanical solution. International Journal for Numerical and Analytical Methods in Geomechanics, 2010, 34, 27-52.	3.3	21
74	Microstructural model for delayed deformation of clay: loading history effects. Canadian Geotechnical Journal, 2005, 42, 381-392.	2.8	20
75	Swelling in clayey soils induced by the presence of salt crystals. Applied Clay Science, 2010, 47, 105-112.	5.2	20
76	Design of Micropiles for Tunnel Face Reinforcement: Undrained Upper Bound Solution. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2012, 138, 89-99.	3.0	20
77	Heave of a railway bridge induced by gypsum crystal growth: field observations. Geotechnique, 2013, 63, 707-719.	4.0	20
78	Monitoring Large-Scale Tests for Nuclear Waste Disposal. Geotechnical and Geological Engineering, 2008, 26, 817-826.	1.7	18
79	Massive sulfate attack to cement-treated railway embankments. Geotechnique, 2013, 63, 857-870.	4.0	18
80	Modelling the response of Lechago earth and rockfill dam. Geotechnique, 2011, 61, 387-407.	4.0	17
81	Heave of a railway bridge: modelling gypsum crystal growth. Geotechnique, 2013, 63, 720-732.	4.0	17
82	Dilatancy of Coarse Granular Aggregates. , 2007, , 119-135.		17
83	Experimental behaviour of compacted marls. Geotechnique, 2012, 62, 999-1012.	4.0	16
84	Slope stability in slightly fissured claystones and marls. Landslides, 2015, 12, 643-656.	5.4	16
85	Degradation of marls; two case studies from the Iberian Peninsula. Geological Society Engineering Geology Special Publication, 2010, 23, 47-75.	0.2	15
86	Rights and Argumentation in Open Multi-Agent Systems. Artificial Intelligence Review, 2004, 21, 3-24.	15.7	14
87	Porosity Variations in Saline Media Induced by Temperature Gradients: Experimental Evidences and Modelling. Transport in Porous Media, 2011, 90, 763-777.	2.6	14
88	Hydro-chemo-mechanical modelling of tunnels in sulfated rocks. Geotechnique, 2017, 67, 968-982.	4.0	14
89	Landslide motion assessment including rate effects and thermal interactions: revisiting the Canelles landslide. Canadian Geotechnical Journal, 2019, 56, 1338-1350.	2.8	13
90	Modelling the field behaviour of a granular expansive barrier. Physics and Chemistry of the Earth, 2007, 32, 850-865.	2.9	12

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91	Rock joints: FEM implementation and applications. <i>Studies in Applied Mechanics</i> , 1995, , 395-420.	0.4	11
92	Foundation of a Gravity Dam on Layered Soft Rock: Shear Strength of Bedding Planes in Laboratory and Large Scale Tests. <i>Geotechnical and Geological Engineering</i> , 2014, 32, 1439-1450.	1.7	10
93	Recent developments of the Material Point Method for the simulation of landslides. <i>IOP Conference Series: Earth and Environmental Science</i> , 2015, 26, 012003.	0.3	10
94	Coupled analysis of a backfill hydration test. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 1998, 22, 1-27.	3.3	8
95	Suction and time effects in rockfill deformation. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2019, 43, 1032-1050.	3.3	8
96	Highly selective formation of aldehydes in the hydrogenation of the corresponding acid chlorides with silica-supported palladium catalysts prepared by a complexing agent-assisted sol-gel method. <i>Applied Catalysis A: General</i> , 2002, 229, 175-180.	4.3	7
97	A constitutive model for compacted expansive and bonded marls. <i>Geotechnique</i> , 2013, 63, 1116-1130.	4.0	7
98	A constitutive model for the accumulated strain of unsaturated soil under high cycle traffic loading. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2021, 45, 990-1004.	3.3	7
99	A New High-Pressure Triaxial Apparatus for Inducing and Tracking Hydro-Mechanical Degradation of Clayey Rocks. <i>Geotechnical Testing Journal</i> , 2014, 37, 933-947.	1.0	7
100	Thermo-poro-mechanical analysis of landslides: from creeping behaviour to catastrophic failure. <i>Geotechnique</i> , 2015, , 1-18.	4.0	6
101	Heave of a Building Induced by Swelling of an Anhydritic Triassic Claystone. <i>Rock Mechanics and Rock Engineering</i> , 2018, 51, 2881-2894.	5.4	6
102	A Rockfill Triaxial Cell with Suction Control. <i>Geotechnical Testing Journal</i> , 2009, 32, 219-231.	1.0	6
103	Secondary compression of clays as a local dehydration process. <i>Geotechnique</i> , 2001, 51, 859-869.	4.0	6
104	Foundation analysis of an arch dam. Comparison of two modelling techniques: No tension and jointed rock material. <i>Rock Mechanics and Rock Engineering</i> , 1985, 18, 149-182.	5.4	5
105	Unsaturated Soil Mechanics Applied to Geotechnical Problems. , 2006, , 1.		5
106	Thermo-hydro-mechanical model of the Canister Retrieval Test. <i>Physics and Chemistry of the Earth</i> , 2011, 36, 1806-1816.	2.9	5
107	Compressibility, grain breakage and time-dependent behavior of gap-graded aggregates of sugar cubes. <i>Soils and Foundations</i> , 2016, 56, 805-817.	3.1	5
108	The Failure of the Aznalc��llar Tailings Dam in SW Spain. <i>Mine Water and the Environment</i> , 2021, 40, 209-224.	2.0	5

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109	Landslides and hydraulic structures. <i>Engineering Geology</i> , 2021, 292, 106264.	6.3	5
110	Semantics and Pragmatics for Agent Communication. <i>Lecture Notes in Computer Science</i> , 2005, , 524-535.	1.3	5
111	A slow and complex landslide under static and seismic action. <i>Engineering Geology</i> , 2022, 297, 106478.	6.3	5
112	Modelling fluid flow in Opalinus Clay excavation damage zone. A semi-analytical approach. <i>Geological Society Special Publication</i> , 2015, 415, 143-166.	1.3	4
113	A particle model for rockfill behaviour. <i>Geotechnique</i> , 2015, , 1-20.	4.0	4
114	Effect of Microstructure and Relative Humidity on Strength and Creep of Gypsum. <i>Rock Mechanics and Rock Engineering</i> , 2021, 54, 4121-4145.	5.4	4
115	Measurement of Lateral Stress and Friction in Rockfill Oedometer Tests Enabling the Analysis of the Experimental Results in the p - q Space. <i>Geotechnical Testing Journal</i> , 2017, 40, 822-832.	1.0	4
116	Multi-agent learning. <i>Autonomous Agents and Multi-Agent Systems</i> , 2007, 15, 3-4.	2.1	3
117	Discussion on "Large landslides associated with a diapiric fold in Canelles reservoir (Spanish)" by Gutiérrez et al. (2015). <i>Geomorphology</i> , 2016, 263, 170-174.	2.6	3
118	Degradation effects at microstructural scale and their consequences on macroscopic behaviour of a slightly weathered siltstone. , 2010, , 73-78.		3
119	Suction effects on rockfill compressibility. <i>Geotechnique</i> , 2003, 53, 289-292.	4.0	3
120	Modelling Gas Flow Through Deformable Fractured Rocks. <i>Elsevier Geo-Engineering Book Series</i> , 2004, , 31-36.	0.0	2
121	Earth Dam Sliding Failure: Aznalcóllar Dam, Spain. , 2010, , 129-164.		2
122	Normative Pragmatics for Agent Communication Languages. <i>Lecture Notes in Computer Science</i> , 2005, , 172-181.	1.3	2
123	Fabric Changes of a Pellet-Based Bentonite Buffer Material and Their Effects on Mechanical Behaviour. <i>Elsevier Geo-Engineering Book Series</i> , 2004, , 341-346.	0.0	1
124	The FEBEX Benchmark Test. Case Definition and Comparison of Different Modelling Approaches. <i>Elsevier Geo-Engineering Book Series</i> , 2004, 2, 95-111.	0.0	1
125	Fabric Changes of a Pellet-Based Bentonite Buffer Material and its Effect on Mechanical Behaviour. , 2006, , 2523.		1
126	Monitoring the Performance of Unsaturated Soil Slopes. , 2008, , 187-204.		1

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127	Microstructural Evaluation of the Water Sensitivity of Clayey Rocks. , 2013, , .		1
128	Monitoring Large-Scale Tests for Nuclear Waste Disposal. , 2008, , 205-214.		1
129	Effect of Loading History on Time Dependent Deformation of Rockfill. , 2012, , 419-424.		1
130	Experimental and Numerical Investigation of Porosity Variations in Saline Media Induced by Temperature Gradients. Theory and Applications of Transport in Porous Media, 2000, , 327-338.	0.4	1
131	Influence of suction on the mechanical behaviour of rock joints under shear loading. , 2010, , 1483-1488.		1
132	Behavior of Bentonite-Sand Mixtures Subjected to Cyclic Drying and Wetting Paths. , 2006, , 1005.		0
133	Hydro-Mechanical Small-Scale Tests on Compacted Bentonite. , 2006, , 973.		0
134	Field Applications of Unsaturated Soil Mechanics. , 2006, , 1.		0
135	A Model for Bonded Expansive Natural Soils and Rocks. , 2006, , 1980.		0
136	Effect of Loading and Suction History on Time Dependent Deformation of Crushed Granular Aggregates. Springer Series in Geomechanics and Geoengineering, 2013, , 99-104.	0.1	0
137	Modelling large deformation problems in unsaturated soils. E3S Web of Conferences, 2016, 9, 08019.	0.5	0
138	Dinámica de deslizamientos en rocas blandas arcillosas. Geotecnia, 2021, , 273-305.	0.1	0
139	Gas flow in variable permeability porous media. , 2014, , 1163-1171.		0
140	Failures Inspire Progress: Protecting Sensitive Buildings from Tunnelling. Geo-strata, 2019, 23, 34-39.	0.1	0