

# Jean Vaunat

## List of Publications by Year in descending order

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Version: 2024-02-01

38  
papers

1,570  
citations

516215

16  
h-index

525886

27  
g-index

44  
all docs

44  
docs citations

44  
times ranked

977  
citing authors

#	ARTICLE	IF	CITATIONS
1	Modelling the mechanical behaviour of expansive clays. <i>Engineering Geology</i> , 1999, 54, 173-183.	2.9	468
2	A microstructurally based effective stress for unsaturated soils. <i>Geotechnique</i> , 2010, 60, 913-925.	2.2	312
3	Fast physically-based model for rainfall-induced landslide susceptibility assessment at regional scale. <i>Catena</i> , 2021, 201, 105213.	2.2	92
4	Consequences on water retention properties of double-porosity features in a compacted silt. <i>Acta Geotechnica</i> , 2012, 7, 139-150.	2.9	82
5	Benchmark of constitutive models for unsaturated soils. <i>Geotechnique</i> , 2011, 61, 283-302.	2.2	68
6	Numerical modelling of slopeâ€™vegetationâ€™atmosphere interaction: an overview. <i>Quarterly Journal of Engineering Geology and Hydrogeology</i> , 2017, 50, 249-270.	0.8	64
7	Revisiting the thermodynamics of hardening plasticity for unsaturated soils. <i>Computers and Geotechnics</i> , 2010, 37, 207-215.	2.3	63
8	A time-dependent anisotropic model for argillaceous rocks. Application to an underground excavation in Callovo-Oxfordian claystone. <i>Computers and Geotechnics</i> , 2017, 85, 341-350.	2.3	48
9	A stress point algorithm for an elastoplastic model in unsaturated soils. <i>International Journal of Plasticity</i> , 2000, 16, 121-141.	4.1	45
10	Nonlocal plasticity modelling of strain localisation in stiff clays. <i>Computers and Geotechnics</i> , 2018, 103, 138-150.	2.3	44
11	Thermal Conductivity of Argillaceous Rocks: Determination Methodology Using In Situ Heating Tests. <i>Rock Mechanics and Rock Engineering</i> , 2014, 47, 111-129.	2.6	40
12	Analysis of Post-Failure Slope Movements within the Framework of Hazard and Risk Analysis. <i>Natural Hazards</i> , 2002, 26, 81-107.	1.6	33
13	Thermo-Hydro-Mechanical Coupled Modeling of Methane Hydrate-Bearing Sediments: Formulation and Application. <i>Energies</i> , 2019, 12, 2178.	1.6	30
14	Analysis of the hydration of a bentonite seal in a deep radioactive waste repository. <i>Engineering Geology</i> , 2005, 81, 317-328.	2.9	21
15	Monitoring of a Full-Scale Embankment Experiment Regarding Soilâ€™Vegetationâ€™Atmosphere Interactions. <i>Water (Switzerland)</i> , 2018, 10, 688.	1.2	21
16	Feasibility of constructing a full-scale radioactive high-level waste disposal cell and characterization of its thermo-hydro-mechanical behavior. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2021, 137, 104555.	2.6	20
17	A densification mechanism to model the mechanical effect of methane hydrates in sandy sediments. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2020, 44, 782-802.	1.7	17
18	Slope Orientation and Vegetation Effects on Soil Thermo-Hydraulic Behavior. An Experimental Study. <i>Sustainability</i> , 2021, 13, 14.	1.6	16

#	ARTICLE	IF	CITATIONS
19	Numerical simulation of underground excavations in an indurated clay using non-local regularisation. Part 1: formulation and base case. <i>Geotechnique</i> , 2022, 72, 1092-1112.	2.2	13
20	Applications of multiphysical geomechanics in underground nuclear waste storage. <i>European Journal of Environmental and Civil Engineering</i> , 2009, 13, 937-962.	1.0	11
21	An effective combined framework for modelling the time-dependent behaviour of soft structured clays. <i>Acta Geotechnica</i> , 2021, 16, 535-550.	2.9	11
22	Potentials for the modified Cam-Clay model. <i>European Journal of Mechanics, A/Solids</i> , 2010, 29, 327-336.	2.1	8
23	Modelling Landslides Induced by Rainfall: A Coupled Approach. <i>Procedia Earth and Planetary Science</i> , 2014, 9, 222-228.	0.6	8
24	Residual Strength of Clays at High Suctions. , 2007, , 151-163.		7
25	Modelling Methane Hydrate Saturation in Pores: Capillary Inhibition Effects. <i>Energies</i> , 2021, 14, 5627.	1.6	7
26	The MUSE Network: Sharing Research Expertise on Unsaturated Soils Across Europe. , 2006, , 2075.		5
27	An Adapted Ring Shear Apparatus for Testing Partly Saturated Soils in the High Suction Range. <i>Geotechnical Testing Journal</i> , 2011, 34, 433-444.	0.5	5
28	Consolidation of gas hydrate-bearing sediments with hydrate dissociation. <i>E3S Web of Conferences</i> , 2020, 205, 11007.	0.2	3
29	A Microstructural Model on the Link Between Change in Pore Size Distribution and Wetting Induced Deformation in a Compacted Silt. , 2013, , .		2
30	Finite-Element Implementation of BExM Elastoplastic Model for Swelling Unsaturated Soils. , 2006, , 1932.		0
31	Simulation aided testing of hydro-mechanical processes on clay. <i>EPJ Web of Conferences</i> , 2010, 6, 17002.	0.1	0
32	A Poromechanical Framework to Model Soil Fabric Evolution and Its Effect on Material Hydromechanical Response. , 2017, , .		0
33	Analysis of the Hydration of an Unsaturated Seal. , 2018, , .		0
34	Copper canister shearing in spent nuclear fuel repository using Bodner's Partom model. <i>Geomechanics for Energy and the Environment</i> , 2020, 22, 100171.	1.2	0
35	Homogenización de barreras de arcilla para residuos nucleares. <i>Geotecnia</i> , 2021, , 87-111.	0.1	0
36	A thermomechanical framework for modeling the response of unsaturated soils. , 2008, , 547-552.		0

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37	Applications of multiphysical geomechanics in underground nuclear waste storage. Revue Européenne De Génie Civil, 2009, 13, 937-962.	0.0	0
38	Modeling flow instability of an Algerian sand with the dilatancy rule in CASM. Geomechanics and Engineering, 2015, 9, 729-742.	0.9	0