Frederic Collin

List of Publications by Year
in descending order

84 papers	1,802 citations	218677 26 h-index	289244 40 g-index
92 all docs	92 docs citations	92 times ranked	1175 citing authors

#	Article	IF	Citations
1	A second gradient cohesive element for mode I crack propagation. Finite Elements in Analysis and Design, 2022, 204, 103732.	3.2	2
2	Transfer properties in recycled aggregates concrete: Experimental and numerical approaches. Construction and Building Materials, 2022, 326, 126778.	7.2	5
3	Hydro-Mechanical Modelling of Multiphase Flow in Coalbed by Computational Homogenization. Lecture Notes in Civil Engineering, 2021, , 600-607.	0.4	0
4	Improvement of lifetime of compressed earth blocks by adding limestone, sandstone and porphyry aggregates. Journal of Building Engineering, 2020, 29, 101155.	3.4	10
5	Coupled hydro-mechanical analysis of expansive soils: Parametric identification and calibration. Journal of Rock Mechanics and Geotechnical Engineering, 2020, 12, 620-629.	8.1	6
6	Numerical simulation of a water infiltration test on a proposed backfill material in nuclear waste repositories. E3S Web of Conferences, 2020, 195, 04001.	0.5	0
7	Hydro-mechanical modelling of multiphase flow in naturally fractured coalbed using a multiscale approach. Journal of Natural Gas Science and Engineering, 2020, 78, 103303.	4.4	13
8	Modelling the multiscale behaviour of claystone: deformation, rupture, and hydro-mechanical phenomena around underground galleries. E3S Web of Conferences, 2020, 205, 10003.	0.5	2
9	Hydro-mechanical behaviour of a pellets based bentonite seal: Numerical modelling of lab scale experiments. E3S Web of Conferences, 2020, 195, 04009.	0.5	4
10	Modelling of Short-Term Interactions Between Concrete Support and the Excavated Damage Zone Around Galleries Drilled in Callovoâ€"Oxfordian Claystone. International Journal of Civil Engineering, 2019, 17, 1-18.	2.0	9
11	Cleat-scale modelling of the coal permeability evolution due to sorption-induced strain. International Journal of Coal Geology, 2019, 216, 103320.	5.0	18
12	Using a penalty term to deal with spurious oscillations in second gradient finite elements. International Journal of Damage Mechanics, 2019, 28, 346-366.	4.2	3
13	Evaluation of Belgian clays for manufacturing compressed earth blocks. Geologica Belgica, 2019, 22, 139-148.	1.1	5
14	Evaluation des Sols de Fondation de lâ€™Ã©vacuateur de Crue du Petit Barrage de Youmban (TillabÃ©ry-Niger). European Scientific Journal, 2019, 15, .	0.1	0
15	The influence of clay composition and lithology on the industrial potential of earthenware. Construction and Building Materials, 2018, 172, 650-659.	7.2	17
16	Cyclic and Fatigue Behaviour of Rock Materials: Review, Interpretation and Research Perspectives. Rock Mechanics and Rock Engineering, 2018, 51, 391-414.	5.4	231
17	Comprehensive study of the drying behavior of Boom clay: Experimental investigation and numerical modeling. International Journal for Numerical and Analytical Methods in Geomechanics, 2018, 42, 211-230.	3.3	4
18	Modelling the influence of strain localisation and viscosity on the behaviour of underground drifts drilled in claystone. Computers and Geotechnics, 2017, 85, 351-367.	4.7	44

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19	Modeling the strain localization around an underground gallery with a hydro-mechanical double scale model; effect of anisotropy. Computers and Geotechnics, 2017, 85, 384-400.	4.7	28
20	Microstructural Effects on Strain Localization in a Multiscale Model for Hydro-Mechanical Coupling. Springer Series in Geomechanics and Geoengineering, 2017, , 219-224.	0.1	0
21	Anisotropic modelling of Opalinus Clay behaviour: From triaxial tests to gallery excavation application. Journal of Rock Mechanics and Geotechnical Engineering, 2017, 9, 435-448.	8.1	12
22	A fully coupled hydro-mechanical model for the modeling of coalbed methane recovery. Journal of Natural Gas Science and Engineering, 2017, 46, 307-325.	4.4	47
23	Validation of a New Elastoplastic Constitutive Model Dedicated to the Cyclic Behaviour of Brittle Rock Materials. Rock Mechanics and Rock Engineering, 2017, 50, 2677-2694.	5.4	38
24	On the Variable Dilatancy Angle in Rocks Around Underground Galleries. Rock Mechanics and Rock Engineering, 2017, 50, 587-601.	5.4	9
25	Second Gradient Models and Concrete Structures. Springer Series in Geomechanics and Geoengineering, 2017, , 185-191.	0.1	0
26	Study of the Drying Behavior of Resorcinol Formaldehyde Hydrogels: Experimental Investigation and Numerical Framework. , 2017, , .		0
27	Modelling an in-situ ventilation test in the Andra Underground Research Facilities. E3S Web of Conferences, 2016, 9, 04003.	0.5	0
28	Water retention behaviour of compacted bentonites: experimental observations and constitutive model. E3S Web of Conferences, 2016, 9, 11012.	0.5	5
29	Suitability of soils and river deposits from Marrakech for the manufacturing of earthenware. Applied Clay Science, 2016, 129, 108-115.	5.2	12
30	Formulation of a 1D finite element of heat exchanger for accurate modelling of the grouting behaviour: Application to cyclic thermal loading. Renewable Energy, 2016, 96, 65-79.	8.9	6
31	Numerical modelling of transient cyclic vertical loading of suction caissons in sand. Geotechnique, 2016, 66, 121-136.	4.0	21
32	A FE2 modelling approach to hydromechanical coupling in cracking-induced localization problems. International Journal of Solids and Structures, 2016, 97-98, 475-488.	2.7	33
33	Numerical modeling of coupled thermal-hydro-mechanical behavior of GMZ bentonite in the China-Mock-up test. Engineering Geology, 2016, 214, 116-126.	6.3	21
34	Permeability evolution and water transfer in the excavation damaged zone of a ventilated gallery. International Journal of Rock Mechanics and Minings Sciences, 2016, 85, 192-208.	5.8	38
35	Modeling of granular solids with computational homogenization: Comparison with Biot×³s theory. Finite Elements in Analysis and Design, 2016, 119, 45-62.	3.2	17
36	Competing effects of volume change and water uptake on the water retention behaviour of a compacted MX-80 bentonite/sand mixture. Applied Clay Science, 2016, 121-122, 57-62.	5.2	45

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37	Numerical modeling of the long term behavior of Municipal Solid Waste in a bioreactor landfill. Computers and Geotechnics, 2016, 72, 152-170.	4.7	42
38	Drying-induced shrinkage of Boom clay: an experimental investigation. Canadian Geotechnical Journal, 2016, 53, 396-409.	2.8	9
39	Detailed characterization of the Late Pleistocene loess sequence stratigraphy of Remicourt (Hesbaye) Tj ETQq1 1 0.784314 rgBT /Overl	1.1	6
40	Hydromechanical modelling of shaft sealing for CO2 storage. Engineering Geology, 2015, 193, 97-105.	6.3	11
41	3D zero-thickness coupled interface finite element: Formulation and application. Computers and Geotechnics, 2015, 69, 124-140.	4.7	49
42	Shear banding modelling in cross-anisotropic rocks. International Journal of Solids and Structures, 2015, 72, 63-87.	2.7	35
43	Coupled modeling of Excavation Damaged Zone in Boom clay: Strain localization in rock and distribution of contact pressure on the gallery's lining. Computers and Geotechnics, 2015, 69, 396-410.	4.7	30
44	Using Local Second Gradient Model and Shear Strain Localisation to Model the Excavation Damaged Zone in Unsaturated Claystone. Rock Mechanics and Rock Engineering, 2015, 48, 691-714.	5.4	40
45	Using Shear Strain Localisation to Model the Fracturing Around Gallery in Unsaturated Callovo-Oxfordian Claystone. Springer Series in Geomechanics and Geoengineering, 2015, , 285-291.	0.1	4
46	Modelling of localised gas preferential pathways in claystone. International Journal of Rock Mechanics and Minings Sciences, 2014, 67, 104-114.	5.8	50
47	Hollow Cylinder Tests on Boom Clay: Modelling of Strain Localization in the Anisotropic Excavation Damaged Zone. Rock Mechanics and Rock Engineering, 2014, 47, 71-86.	5.4	34
48	Using a second gradient model to simulate the behaviour of concrete structural elements. Finite Elements in Analysis and Design, 2014, 90, 50-60.	3.2	18
49	An elastoplastic model with combined isotropic–kinematic hardening to predict the cyclic behavior of stiff clays. Computers and Geotechnics, 2014, 62, 193-202.	4.7	16
50	Numerical study of shear band instability and effect of cavitation on the response of a specimen under undrained biaxial loading. International Journal of Solids and Structures, 2014, 51, 1686-1696.	2.7	9
51	Gas injection test in the Callovo-Oxfordian claystone: data analysis and numerical modelling. Geological Society Special Publication, 2014, 400, 427-441.	1.3	8
52	A micro–macro approach of permeability evolution in rocks excavation damaged zones. Computers and Geotechnics, 2013, 49, 245-252.	4.7	23
53	On micromechanical damage modeling in geomechanics: Influence of numerical integration scheme. Journal of Computational and Applied Mathematics, 2013, 246, 215-224.	2.0	14
54	An unsaturated hydro-mechanical modelling of two in-situ experiments in Callovo-Oxfordian argillite. Engineering Geology, 2013, 165, 46-63.	6.3	42

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55	Excavation Damaged Zone Modelling in Claystone with Coupled Second Gradient Model. Springer Series in Geomechanics and Geoengineering, 2013, , 313-317.	0.1	2
56	Characterization of Gas Transport in Low-Permeability Media: Two-Phase Flow Analysis of an In-Situ Experiment. , 2013, , .		0
57	Hydro and Hydro-Mechanical Modelling of Ventilation Test in Clayey Rocks. , 2012, , 325-332.		0
58	Thermo-Hydro-Mechanical Simulation of a Heating and Hydration Experimental Study (the) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 622 Td		0
59	A two scale anisotropic damage model accounting for initial stresses in microcracked materials. Engineering Fracture Mechanics, 2011, 78, 1945-1956.	4.3	14
60	Analytical Evidence of Shear Band Bifurcations for Softening Materials. Springer Series in Geomechanics and Geoengineering, 2011, , 277-283.	0.1	0
61	Tunnel Excavation Modeling with Micromechanical Approaches. Springer Series in Geomechanics and Geoengineering, 2011, , 185-191.	0.1	0
62	APPLICATIONS TO GEOTECHNICAL PROBLEMS OF A MICROMECHANICAL MODELING OF DAMAGE. Springer Series in Geomechanics and Geoengineering, 2011, , 185-188.	0.1	0
63	Study of the soil–atmosphere moisture exchanges through convective drying tests in non–isothermal conditions. International Journal for Numerical and Analytical Methods in Geomechanics, 2010, 34, 1297-1320.	3.3	22
64	On a class of micromechanical damage models with initial stresses for geomaterials. Mechanics Research Communications, 2010, 37, 38-41.	1.8	7
65	Hydro-mechanical modelling of the excavation damaged zone around an underground excavation at Mont Terri Rock Laboratory. International Journal of Rock Mechanics and Minings Sciences, 2010, 47, 414-425.	5.8	64
66	Analytical solutions for the thick-walled cylinder problem modeled with an isotropic elastic second gradient constitutive equation. International Journal of Solids and Structures, 2009, 46, 3927-3937.	2.7	34
67	Multi-physical processes in geomechanics. European Journal of Environmental and Civil Engineering, 2009, 13, 803-830.	2.1	1
68	Numerical post failure methods in multiphysical problems. European Journal of Environmental and Civil Engineering, 2009, 13, 983-1004.	2.1	11
69	Heat Transfer in Soils. Geotechnical, Geological and Earthquake Engineering, 2009, , 69-79.	0.2	13
70	Numerical post failure methods in multiphysical problems. Revue Européenne De Génie Civil, 2009, 13, 983-1004.	0.0	2
71	Multi-physical processes in geomechanics An introduction to constitutive modelling and coupling aspects. Revue Européenne De Génie Civil, 2009, 13, 803-830.	0.0	0
72	Influence of evaporation and seepage on the convergence of a ventilated cavity. Water Resources Research, 2008, 44, .	4.2	29

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73	Numerical modelling of coupled poromechanics processes. Revue EuropÃ©enne De GÃ©nie Civil, 2006, 10, 669-701.	0.0	2
74	Switching deformation modes in post-localization solutions with a quasibrittle material. Journal of Mechanics of Materials and Structures, 2006, 1, 1115-1134.	0.6	36
75	A finite element method for poro mechanical modelling of geotechnical problems using local second gradient models. International Journal for Numerical Methods in Engineering, 2006, 65, 1749-1772.	2.8	91
76	A deterministic/stochastic model to predict the variation in bulk modulus of chalk. Geotechnique, 2005, 55, 135-141.	4.0	2
77	Modelling chemo-hydro-mechanical behaviour of unsaturated clays: a feasibility study. International Journal for Numerical and Analytical Methods in Geomechanics, 2005, 29, 919-940.	3.3	31
78	Unified approach of coupled constitutive laws. Revue EuropÃ©enne De GÃ©nie Civil, 2005, 9, 713-723.	0.0	2
79	A thermo-hydro-mechanical constitutive model and its numerical modelling for unsaturated soils. Computers and Geotechnics, 2004, 31, 155-167.	4.7	51
80	On the collapse behaviour of oil reservoir chalk. Geotechnique, 2004, 54, 415-420.	4.0	37
81	Mechanical behaviour of Lixhe chalk partly saturated by oil and water: experiment and modelling. International Journal for Numerical and Analytical Methods in Geomechanics, 2002, 26, 897-924.	3.3	64
82	Thermo-hydro-mechanical coupling in clay barriers. Engineering Geology, 2002, 64, 179-193.	6.3	113
83	Numerical modelling of coupled transient phenomena. Revue EuropÃ©enne De GÃ©nie Civil, 2001, 5, 719-741.	0.0	23
84	Gas Migration through Clay Barriers in the Context of Radioactive Waste Disposal: Numerical Modeling of an *In Situ* Gas Injection Test. , 0, , 21-42.		2