

Frederic Collin

List of Publications by Year in descending order

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84
papers

1,802
citations

218592

26
h-index

289141

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. <i>Finite Elements in Analysis and Design</i> , 2022, 204, 103732.	1.7	2
2	Transfer properties in recycled aggregates concrete: Experimental and numerical approaches. <i>Construction and Building Materials</i> , 2022, 326, 126778.	3.2	5
3	Hydro-Mechanical Modelling of Multiphase Flow in Coalbed by Computational Homogenization. <i>Lecture Notes in Civil Engineering</i> , 2021, , 600-607.	0.3	0
4	Improvement of lifetime of compressed earth blocks by adding limestone, sandstone and porphyry aggregates. <i>Journal of Building Engineering</i> , 2020, 29, 101155.	1.6	10
5	Coupled hydro-mechanical analysis of expansive soils: Parametric identification and calibration. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2020, 12, 620-629.	3.7	6
6	Numerical simulation of a water infiltration test on a proposed backfill material in nuclear waste repositories. <i>E3S Web of Conferences</i> , 2020, 195, 04001.	0.2	0
7	Hydro-mechanical modelling of multiphase flow in naturally fractured coalbed using a multiscale approach. <i>Journal of Natural Gas Science and Engineering</i> , 2020, 78, 103303.	2.1	13
8	Modelling the multiscale behaviour of claystone: deformation, rupture, and hydro-mechanical phenomena around underground galleries. <i>E3S Web of Conferences</i> , 2020, 205, 10003.	0.2	2
9	Hydro-mechanical behaviour of a pellets based bentonite seal: Numerical modelling of lab scale experiments. <i>E3S Web of Conferences</i> , 2020, 195, 04009.	0.2	4
10	Modelling of Short-Term Interactions Between Concrete Support and the Excavated Damage Zone Around Galleries Drilled in Callovo-Oxfordian Claystone. <i>International Journal of Civil Engineering</i> , 2019, 17, 1-18.	0.9	9
11	Cleat-scale modelling of the coal permeability evolution due to sorption-induced strain. <i>International Journal of Coal Geology</i> , 2019, 216, 103320.	1.9	18
12	Using a penalty term to deal with spurious oscillations in second gradient finite elements. <i>International Journal of Damage Mechanics</i> , 2019, 28, 346-366.	2.4	3
13	Evaluation of Belgian clays for manufacturing compressed earth blocks. <i>Geologica Belgica</i> , 2019, 22, 139-148.	0.9	5
14	Evaluation des Sols de Fondation de l'Évacuateur de Crue du Petit Barrage de Youmban (Tillabéry-Niger). <i>European Scientific Journal</i> , 2019, 15, .	0.0	0
15	The influence of clay composition and lithology on the industrial potential of earthenware. <i>Construction and Building Materials</i> , 2018, 172, 650-659.	3.2	17
16	Cyclic and Fatigue Behaviour of Rock Materials: Review, Interpretation and Research Perspectives. <i>Rock Mechanics and Rock Engineering</i> , 2018, 51, 391-414.	2.6	231
17	Comprehensive study of the drying behavior of Boom clay: Experimental investigation and numerical modeling. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2018, 42, 211-230.	1.7	4
18	Modelling the influence of strain localisation and viscosity on the behaviour of underground drifts drilled in claystone. <i>Computers and Geotechnics</i> , 2017, 85, 351-367.	2.3	44

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19	Modeling the strain localization around an underground gallery with a hydro-mechanical double scale model; effect of anisotropy. <i>Computers and Geotechnics</i> , 2017, 85, 384-400.	2.3	28
20	Microstructural Effects on Strain Localization in a Multiscale Model for Hydro-Mechanical Coupling. <i>Springer Series in Geomechanics and Geoengineering</i> , 2017, , 219-224.	0.0	0
21	Anisotropic modelling of Opalinus Clay behaviour: From triaxial tests to gallery excavation application. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2017, 9, 435-448.	3.7	12
22	A fully coupled hydro-mechanical model for the modeling of coalbed methane recovery. <i>Journal of Natural Gas Science and Engineering</i> , 2017, 46, 307-325.	2.1	47
23	Validation of a New Elastoplastic Constitutive Model Dedicated to the Cyclic Behaviour of Brittle Rock Materials. <i>Rock Mechanics and Rock Engineering</i> , 2017, 50, 2677-2694.	2.6	38
24	On the Variable Dilatancy Angle in Rocks Around Underground Galleries. <i>Rock Mechanics and Rock Engineering</i> , 2017, 50, 587-601.	2.6	9
25	Second Gradient Models and Concrete Structures. <i>Springer Series in Geomechanics and Geoengineering</i> , 2017, , 185-191.	0.0	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. <i>E3S Web of Conferences</i> , 2016, 9, 04003.	0.2	0
28	Water retention behaviour of compacted bentonites: experimental observations and constitutive model. <i>E3S Web of Conferences</i> , 2016, 9, 11012.	0.2	5
29	Suitability of soils and river deposits from Marrakech for the manufacturing of earthenware. <i>Applied Clay Science</i> , 2016, 129, 108-115.	2.6	12
30	Formulation of a 1D finite element of heat exchanger for accurate modelling of the grouting behaviour: Application to cyclic thermal loading. <i>Renewable Energy</i> , 2016, 96, 65-79.	4.3	6
31	Numerical modelling of transient cyclic vertical loading of suction caissons in sand. <i>Geotechnique</i> , 2016, 66, 121-136.	2.2	21
32	A FE2 modelling approach to hydromechanical coupling in cracking-induced localization problems. <i>International Journal of Solids and Structures</i> , 2016, 97-98, 475-488.	1.3	33
33	Numerical modeling of coupled thermal-hydro-mechanical behavior of GMZ bentonite in the China-Mock-up test. <i>Engineering Geology</i> , 2016, 214, 116-126.	2.9	21
34	Permeability evolution and water transfer in the excavation damaged zone of a ventilated gallery. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2016, 85, 192-208.	2.6	38
35	Modeling of granular solids with computational homogenization: Comparison with Biot's theory. <i>Finite Elements in Analysis and Design</i> , 2016, 119, 45-62.	1.7	17
36	Competing effects of volume change and water uptake on the water retention behaviour of a compacted MX-80 bentonite/sand mixture. <i>Applied Clay Science</i> , 2016, 121-122, 57-62.	2.6	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.	2.3	42
38	Drying-induced shrinkage of Boom clay: an experimental investigation. Canadian Geotechnical Journal, 2016, 53, 396-409.	1.4	9
39	Detailed characterization of the Late Pleistocene loess sequence stratigraphy of Remicourt (Hesbaye) Tj ETQq1 1 0.784314 rgBT /Ove	0.9	8
40	Hydromechanical modelling of shaft sealing for CO2 storage. Engineering Geology, 2015, 193, 97-105.	2.9	11
41	3D zero-thickness coupled interface finite element: Formulation and application. Computers and Geotechnics, 2015, 69, 124-140.	2.3	49
42	Shear banding modelling in cross-anisotropic rocks. International Journal of Solids and Structures, 2015, 72, 63-87.	1.3	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.	2.3	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.	2.6	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.	0.0	4
46	Modelling of localised gas preferential pathways in claystone. International Journal of Rock Mechanics and Minings Sciences, 2014, 67, 104-114.	2.6	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.	2.6	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.	1.7	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.	2.3	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.	1.3	9
51	Gas injection test in the Callovo-Oxfordian claystone: data analysis and numerical modelling. Geological Society Special Publication, 2014, 400, 427-441.	0.8	8
52	A micro macro approach of permeability evolution in rocks excavation damaged zones. Computers and Geotechnics, 2013, 49, 245-252.	2.3	23
53	On micromechanical damage modeling in geomechanics: Influence of numerical integration scheme. Journal of Computational and Applied Mathematics, 2013, 246, 215-224.	1.1	14
54	An unsaturated hydro-mechanical modelling of two in-situ experiments in Callovo-Oxfordian argillite. Engineering Geology, 2013, 165, 46-63.	2.9	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.	0.0	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		
59	A two scale anisotropic damage model accounting for initial stresses in microcracked materials. Engineering Fracture Mechanics, 2011, 78, 1945-1956.	2.0	14
60	Analytical Evidence of Shear Band Bifurcations for Softening Materials. Springer Series in Geomechanics and Geoengineering, 2011, , 277-283.	0.0	0
61	Tunnel Excavation Modeling with Micromechanical Approaches. Springer Series in Geomechanics and Geoengineering, 2011, , 185-191.	0.0	0
62	APPLICATIONS TO GEOTECHNICAL PROBLEMS OF A MICROMECHANICAL MODELING OF DAMAGE. Springer Series in Geomechanics and Geoengineering, 2011, , 185-188.	0.0	0
63	Study of the soilâ€“atmosphere moisture exchanges through convective drying tests in nonâ€“isothermal conditions. International Journal for Numerical and Analytical Methods in Geomechanics, 2010, 34, 1297-1320.	1.7	22
64	On a class of micromechanical damage models with initial stresses for geomaterials. Mechanics Research Communications, 2010, 37, 38-41.	1.0	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.	2.6	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.	1.3	34
67	Multi-physical processes in geomechanics. European Journal of Environmental and Civil Engineering, 2009, 13, 803-830.	1.0	1
68	Numerical post failure methods in multiphysical problems. European Journal of Environmental and Civil Engineering, 2009, 13, 983-1004.	1.0	11
69	Heat Transfer in Soils. Geotechnical, Geological and Earthquake Engineering, 2009, , 69-79.	0.1	13
70	Numerical post failure methods in multiphysical problems. Revue EuropÃ©enne De GÃ©nie Civil, 2009, 13, 983-1004.	0.0	2
71	Multi-physical processes in geomechanics An introduction to constitutive modelling and coupling aspects. Revue EuropÃ©enne De GÃ©nie 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, .	1.7	29

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73	Numerical modelling of coupled poromechanics processes. <i>Revue Européenne De Génie Civil</i> , 2006, 10, 669-701.	0.0	2
74	Switching deformation modes in post-localization solutions with a quasibrittle material. <i>Journal of Mechanics of Materials and Structures</i> , 2006, 1, 1115-1134.	0.4	36
75	A finite element method for poro mechanical modelling of geotechnical problems using local second gradient models. <i>International Journal for Numerical Methods in Engineering</i> , 2006, 65, 1749-1772.	1.5	91
76	A deterministic/stochastic model to predict the variation in bulk modulus of chalk. <i>Geotechnique</i> , 2005, 55, 135-141.	2.2	2
77	Modelling chemo-hydro-mechanical behaviour of unsaturated clays: a feasibility study. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2005, 29, 919-940.	1.7	31
78	Unified approach of coupled constitutive laws. <i>Revue Européenne De Génie Civil</i> , 2005, 9, 713-723.	0.0	2
79	A thermo-hydro-mechanical constitutive model and its numerical modelling for unsaturated soils. <i>Computers and Geotechnics</i> , 2004, 31, 155-167.	2.3	51
80	On the collapse behaviour of oil reservoir chalk. <i>Geotechnique</i> , 2004, 54, 415-420.	2.2	37
81	Mechanical behaviour of Lixhe chalk partly saturated by oil and water: experiment and modelling. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2002, 26, 897-924.	1.7	64
82	Thermo-hydro-mechanical coupling in clay barriers. <i>Engineering Geology</i> , 2002, 64, 179-193.	2.9	113
83	Numerical modelling of coupled transient phenomena. <i>Revue Européenne De Génie Civil</i> , 2001, 5, 719-741.	0.0	23
84	Gas Migration through Clay Barriers in the Context of Radioactive Waste Disposal: Numerical Modeling of an <i>In Situ</i> Gas Injection Test. , 0, , 21-42.		2