

Guillermo A Narsilio

List of Publications by Year in descending order

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Version: 2024-02-01

99
papers

2,164
citations

236612

25
h-index

264894

42
g-index

101
all docs

101
docs citations

101
times ranked

1626
citing authors

#	ARTICLE	IF	CITATIONS
1	Emerging geothermal energy technologies. <i>KSCE Journal of Civil Engineering</i> , 2011, 15, 643-653.	0.9	137
2	Upscaling of Navier–Stokes equations in porous media: Theoretical, numerical and experimental approach. <i>Computers and Geotechnics</i> , 2009, 36, 1200-1206.	2.3	105
3	Impact of particle shape on breakage of recycled construction and demolition aggregates. <i>Powder Technology</i> , 2017, 308, 1-12.	2.1	102
4	Economic analysis of vertical ground source heat pump systems in Melbourne. <i>Energy</i> , 2017, 125, 107-117.	4.5	96
5	Heat exchange mechanisms in energy tunnel systems. <i>Geomechanics for Energy and the Environment</i> , 2018, 16, 83-95.	1.2	83
6	Energy geostructures: A review of analysis approaches, in situ testing and model scale experiments. <i>Geomechanics for Energy and the Environment</i> , 2020, 22, 100173.	1.2	79
7	The importance of surface air temperature fluctuations on long-term performance of vertical ground heat exchangers. <i>Geomechanics for Energy and the Environment</i> , 2016, 6, 35-44.	1.2	73
8	Hydraulic conductivity in spatially varying media-a pore-scale investigation. <i>Geophysical Journal International</i> , 2011, 184, 1167-1179.	1.0	70
9	Machine learning framework for analysis of transport through complex networks in porous, granular media: A focus on permeability. <i>Physical Review E</i> , 2016, 94, 022904.	0.8	68
10	Model predictive control for a solar assisted ground source heat pump system. <i>Energy</i> , 2018, 152, 974-984.	4.5	64
11	A machine learning approach to energy pile design. <i>Computers and Geotechnics</i> , 2018, 97, 189-203.	2.3	52
12	Development of genetic-based models for predicting the resilient modulus of cohesive pavement subgrade soils. <i>Soils and Foundations</i> , 2020, 60, 398-412.	1.3	46
13	Physical characterization of core samples recovered from Gulf of Mexico. <i>Marine and Petroleum Geology</i> , 2006, 23, 893-900.	1.5	45
14	Comparative study of methods used to estimate ionic diffusion coefficients using migration tests. <i>Cement and Concrete Research</i> , 2007, 37, 1152-1163.	4.6	44
15	Thermal interaction between tunnel ground heat exchangers and borehole heat exchangers. <i>Geomechanics for Energy and the Environment</i> , 2017, 10, 29-41.	1.2	42
16	Experimental investigation and modelling the deformation properties of demolition wastes subjected to freeze–thaw cycles using ANN and SVR. <i>Construction and Building Materials</i> , 2020, 258, 119688.	3.2	40
17	Experimental and ANN analysis of temperature effects on the permanent deformation properties of demolition wastes. <i>Transportation Geotechnics</i> , 2020, 24, 100365.	2.0	40
18	The importance of boundary conditions on the modelling of energy retaining walls. <i>Computers and Geotechnics</i> , 2020, 120, 103399.	2.3	33

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19	Ground-source heat pump systems: The effect of variable pipe separation in ground heat exchangers. Computers and Geotechnics, 2018, 100, 97-109.	2.3	32
20	Energy diaphragm wall thermal design: The effects of pipe configuration and spacing. Renewable Energy, 2020, 154, 476-487.	4.3	31
21	Characterisation of conduction phenomena in soils at the particle-scale: Finite element analyses in conjunction with synthetic 3D imaging. Computers and Geotechnics, 2010, 37, 828-836.	2.3	29
22	Investigation of the effect of seasonal variation in ground temperature on thermal response tests. Renewable Energy, 2018, 125, 609-619.	4.3	29
23	Performance evaluation of semi-flexible permeable pavements under cyclic loads. International Journal of Pavement Engineering, 2020, 21, 336-346.	2.2	28
24	A 3D dual pore-system leaching model. Part 1: Study on fluid flow. Hydrometallurgy, 2017, 167, 173-182.	1.8	27
25	Mechanical behaviour and load bearing mechanism of high porosity permeable pavements utilizing recycled tire aggregates. Construction and Building Materials, 2018, 168, 794-804.	3.2	27
26	Predicting effective thermal conductivity in sands using an artificial neural network with multiscale microstructural parameters. International Journal of Heat and Mass Transfer, 2021, 170, 120997.	2.5	26
27	Blast Densification: Multi-Instrumented Case History. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2009, 135, 723-734.	1.5	25
28	Post-breakage changes in particle properties using synchrotron tomography. Powder Technology, 2018, 325, 530-544.	2.1	25
29	Impact of three-dimensional sphericity and roundness on heat transfer in granular materials. Powder Technology, 2019, 355, 770-781.	2.1	25
30	Feasibility and performance analysis of hybrid ground source heat pump systems in fourteen cities. Energy, 2021, 234, 121254.	4.5	24
31	Geothermal energy in loess. Environmental Geotechnics, 2016, 3, 225-236.	1.3	23
32	Thermal Response Testing of Large Diameter Energy Piles. Energies, 2019, 12, 2700.	1.6	23
33	Dynamic characterization of recycled glass-recycled concrete blends using experimental analysis and artificial neural network modeling. Soil Dynamics and Earthquake Engineering, 2021, 142, 106544.	1.9	23
34	Thermal and mechanical properties of demolition wastes in geothermal pavements by experimental and machine learning techniques. Construction and Building Materials, 2021, 280, 122499.	3.2	23
35	Impact of Three-Dimensional Sphericity and Roundness on Coordination Number. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2020, 146, .	1.5	21
36	A computational geometry approach to pore network construction for granular packings. Computers and Geosciences, 2018, 112, 133-143.	2.0	19

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37	Environmental assessment of hybrid ground source heat pump systems. <i>Geothermics</i> , 2020, 87, 101868.	1.5	19
38	Discrete element analysis of recycled concrete aggregate responses during repeated load triaxial testing. <i>Transportation Geotechnics</i> , 2020, 23, 100356.	2.0	19
39	Shakedown analysis of PET blends with demolition waste as pavement base/subbase materials using experimental and neural network methods. <i>Transportation Geotechnics</i> , 2021, 27, 100481.	2.0	19
40	Quantifying the impact of rigid interparticle structures on heat transfer in granular materials using networks. <i>International Journal of Heat and Mass Transfer</i> , 2019, 143, 118514.	2.5	17
41	Numerical estimation of effective diffusion coefficients for charged porous materials based on micro-scale analyses. <i>Computers and Geotechnics</i> , 2010, 37, 280-287.	2.3	16
42	Evaluation of hydraulic conductivity in 3D random and heterogeneous particulate materials using network model. <i>Computers and Geotechnics</i> , 2012, 40, 45-52.	2.3	16
43	Investigating the thermal behaviour of geothermal pavements using Thermal Response Test (TRT). <i>Transportation Geotechnics</i> , 2021, 29, 100576.	2.0	16
44	Uncertainties in the design of ground heat exchangers. <i>Environmental Geotechnics</i> , 2016, 3, 253-264.	1.3	15
45	Shallow geothermal energy: emerging convective phenomena in permeable saturated soils. <i>Geotechnique Letters</i> , 2016, 6, 119-123.	0.6	15
46	Use of high-resolution X-ray computed tomography and 3D image analysis to quantify mineral dissemination and pore space in oxide copper ore particles. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2017, 24, 965-973.	2.4	15
47	Experimental investigation of dry density effects on dielectric properties of soil-water mixtures with different specific surface areas. <i>Acta Geotechnica</i> , 2020, 15, 1153-1172.	2.9	15
48	Comparative costs of ground source heat pump systems against other forms of heating and cooling for different climatic conditions. <i>Sustainable Energy Technologies and Assessments</i> , 2020, 42, 100824.	1.7	15
49	Experimental and numerical studies on an energy piled wall: The effect of thermally activated pile spacing. <i>Geomechanics for Energy and the Environment</i> , 2022, 29, 100276.	1.2	15
50	Preferential flow pathways in a deforming granular material: self-organization into functional groups for optimized global transport. <i>Scientific Reports</i> , 2019, 9, 18231.	1.6	14
51	Network analysis of heat transfer in sphere packings. <i>Powder Technology</i> , 2020, 362, 790-804.	2.1	14
52	A robust prediction model approach to energy geo-structure design. <i>Computers and Geotechnics</i> , 2018, 104, 140-151.	2.3	13
53	Electrodiffusive Transport in Charged Porous Media: From the Particle-Level Scale to the Macroscopic Scale Using Volume Averaging. <i>Journal of Porous Media</i> , 2009, 12, 101-118.	1.0	13
54	Resilient moduli of demolition wastes in geothermal pavements: Experimental testing and ANFIS modelling. <i>Transportation Geotechnics</i> , 2021, 29, 100592.	2.0	11

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55	Impacts of underground climate change on urban geothermal potential: Lessons learnt from a case study in London. <i>Science of the Total Environment</i> , 2021, 778, 146196.	3.9	11
56	Thermal performance of geothermal pavements constructed with demolition wastes. <i>Geomechanics for Energy and the Environment</i> , 2021, 28, 100253.	1.2	11
57	Is natural convection within an aquifer a critical phenomenon in deep borehole heat exchangers' efficiency?. <i>Applied Thermal Engineering</i> , 2022, 212, 118450.	3.0	11
58	An efficient and sustainable approach for cooling underground substations. <i>Tunnelling and Underground Space Technology</i> , 2021, 113, 103986.	3.0	10
59	Key issues in environmental geotechnics: Australiaâ€“New Zealand. <i>Environmental Geotechnics</i> , 2015, 2, 326-330.	1.3	9
60	Cost and performance data for residential buildings fitted with GSHP systems in Melbourne Australia. <i>Data in Brief</i> , 2017, 12, 9-12.	0.5	9
61	Investigating the thermal performance of energy soldier pile walls. <i>Geomechanics for Energy and the Environment</i> , 2022, 30, 100242.	1.2	9
62	Numerical particle-scale study of swelling pressure in clays. <i>KSCE Journal of Civil Engineering</i> , 2009, 13, 273-279.	0.9	8
63	Network analysis of heat transfer in sands. <i>Computers and Geotechnics</i> , 2020, 127, 103773.	2.3	8
64	Geothermal pavements: field observations, numerical modelling and long-term performance. <i>Geotechnique</i> , 2022, 72, 832-846.	2.2	8
65	Ground-Source Heat Pump Systems: The Effects of Variable Trench Separations and Pipe Configurations in Horizontal Ground Heat Exchangers. <i>Energies</i> , 2021, 14, 3919.	1.6	7
66	Reconstructing the microstructure of real gap-graded soils in DEM: Application to internal instability. <i>Powder Technology</i> , 2021, 394, 504-522.	2.1	7
67	Hydraulic and thermal conduction phenomena in soils at the particle-scale: Towards realistic FEM simulations. <i>IOP Conference Series: Materials Science and Engineering</i> , 2010, 10, 012086.	0.3	6
68	A Laboratory Study on Non-Invasive Soil Water Content Estimation Using Capacitive Based Sensors. <i>Sensors</i> , 2019, 19, 651.	2.1	6
69	Impact of particle shape on networks in sands. <i>Computers and Geotechnics</i> , 2021, 137, 104258.	2.3	6
70	Battered minipiles in fine-grained soils: Soil-structure interaction. <i>Computers and Geotechnics</i> , 2022, 147, 104762.	2.3	6
71	Salient comments from an expert panel on energy geotechnics. <i>Environmental Geotechnics</i> , 2017, 4, 135-142.	1.3	5
72	Changes to Grain Properties due to Breakage in a Sand Assembly using Synchrotron Tomography. <i>EPJ Web of Conferences</i> , 2017, 140, 07004.	0.1	5

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73	The Application of Retaining Walls and Slabs as Energy Structures in Underground Train Stations. Springer Series in Geomechanics and Geoenvironmental Engineering, 2019, , 43-50.	0.0	5
74	Thermal performance of the ground in geothermal pavements. E3S Web of Conferences, 2020, 205, 06015.	0.2	5
75	DEM simulation of the thermo-geomechanical effect of recycled concrete aggregate assemblies in geothermal pavement bases. Transportation Geotechnics, 2021, 28, 100528.	2.0	5
76	Evaluating the effective thermal conductivity of geothermal pavements constructed using demolition wastes by DEM and 3D printing techniques. Acta Geotechnica, 2022, 17, 1681-1697.	2.9	5
77	Financial assessment of ground source heat pump systems against other selected heating and cooling systems for Australian conditions. , 2018, , .		5
78	Life Cycle Cost Optimization of a Solar Assisted Ground Source Heat Pump System. , 2018, , .		4
79	Carrier fluid temperature data in vertical ground heat exchangers with a varying pipe separation. Data in Brief, 2018, 18, 1466-1470.	0.5	4
80	X-ray computed tomography images and network data of sands under compression. Data in Brief, 2021, 36, 107122.	0.5	4
81	Assessing the performance of geothermal pavement constructed using demolition wastes by experimental and CFD simulation techniques. Geomechanics for Energy and the Environment, 2022, 29, 100271.	1.2	4
82	Evaluation of hydraulic conductivity of reconstructed granular media generated using low-order probability functions. KSCE Journal of Civil Engineering, 2014, 18, 132-141.	0.9	3
83	Discussion of "Fines Classification Based on Sensitivity to Pore-Fluid Chemistry" by Junbong Jang and J. Carlos Santamarina. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2017, 143, .	1.5	3
84	Physical characterisation of soils recovered from the ANZAC battlefield. Near Surface Geophysics, 2017, 15, 85-101.	0.6	3
85	Hybrid Formulation of Resilient Modulus for Cohesive Subgrade Soils Utilizing CPT Test Parameters. Journal of Materials in Civil Engineering, 2020, 32, 06020011.	1.3	3
86	Thermal conductance network model for computerised tomography images of real dry geomaterials. Computers and Geotechnics, 2021, 136, 104093.	2.3	3
87	Estimating vertical and lateral pressures in periodically structured montmorillonite clay particles. Anais Da Academia Brasileira De Ciencias, 2010, 82, 13-24.	0.3	2
88	Editorial: XV Pan-American Conference: Selected papers on energy geotechnics. Environmental Geotechnics, 2017, 4, 67-69.	1.3	2
89	A graph-theory based directed network feature for thermal anisotropy. International Journal of Heat and Mass Transfer, 2022, 194, 122987.	2.5	2
90	A Case Study on the Application of Energy Tunnels in Sydney, Australia. Lecture Notes in Civil Engineering, 2021, , 1077-1084.	0.3	1

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91	Development of a 3D dual pore system leaching model: Application on metal extraction from oxide copper ore. International Journal of Heat and Mass Transfer, 2021, 169, 120895.	2.5	1
92	Estimation of thermal conductivity of cemented sands using thermal network models. Journal of Rock Mechanics and Geotechnical Engineering, 2021, 14, 210-210.	3.7	1
93	Thermal response of energy soldier pile walls. E3S Web of Conferences, 2020, 205, 06003.	0.2	1
94	Using Numerical Model to Predict Hydrocephalus Based on MRI Images. , 2007, , .		0
95	Impact of the Seasonal Variations in Ground Temperature on Thermal Response Test Results. , 2016, , .		0
96	Testing Occam's razor to characterize high-order connectivity in pore networks of granular media: Feature selection in machine learning. EPJ Web of Conferences, 2017, 140, 12006.	0.1	0
97	Optimizing the Operation of a Hybrid Solar Assisted Ground Source Heat Pump System. , 2018, , .		0
98	Effects of Contamination and Dry Density on Dielectric Properties of Soils with Different Specific Surface Area. Lecture Notes in Civil Engineering, 2021, , 311-319.	0.3	0
99	Geothermal Pavements: An Experimental and Numerical Study on Thermal Performance. Sustainable Civil Infrastructures, 2021, , 65-82.	0.1	0