Zhengshou Lai

List of Publications by Year
in descending order

23 papers	318 citations	1163065 8 h-index	888047 17 g-index
23 all docs	23 docs citations	23 times ranked	256 citing authors

#	Article	IF	Citations
1	Machine‐learning‐enabled discrete element method: Contact detection and resolution of irregular‐shaped particles. International Journal for Numerical and Analytical Methods in Geomechanics, 2022, 46, 113-140.	3.3	5
2	An extension of the Fourier series-based particle model to the GJK-based contact detection and resolution framework for DEM. Computational Particle Mechanics, 2022, 9, 381-391.	3.0	3
3	Optimization of mechanical strength of biocemented Martian regolith simulant soil columns. Construction and Building Materials, 2022, 315, 125741.	7.2	5
4	Hydromechanical modelling of CO_2 sequestration using a component-based multiphysics code. Environmental Geotechnics, 2021, 8, 38-54.	2.3	2
5	A semianalytical Hertzian frictional contact model in 2D. Applied Mathematical Modelling, 2021, 92, 546-564.	4.2	7
6	A polybézier-based particle model for the DEM modeling of granular media. Computers and Geotechnics, 2021, 134, 104052.	4.7	11
7	Evaluating the hydromechanical responses of seabed–pipelines with rotated anisotropic heterogeneous seabed properties. Ocean Engineering, 2021, 234, 109226.	4.3	3
8	Revisiting the GJK and shape erosion method for contact resolution in DEM. Powder Technology, 2021, 394, 363-371.	4.2	6
9	Temporal and spatial distribution of the grout pressure and its effects on lining segments during synchronous grouting in shield tunnelling. European Journal of Environmental and Civil Engineering, 2020, 24, 79-96.	2.1	20
10	On an energy-based criterion for defining slope failure considering spatially varying soil properties. Engineering Geology, 2020, 264, 105323.	6.3	10
11	On the optimization of site investigation programs using centroidal Voronoi tessellation and random field theory. Computers and Geotechnics, 2020, 118, 103331.	4.7	26
12	X-Ray CT Imaging-Based and Machine Learning-Enabled Characterization of Multi-Constituent Granular Materials. , 2020, , .		1
13	The effective flexural stiffness of segment joints in large‐diameter tunnel under various loading conditions. Structural Concrete, 2020, 21, 2824-2835.	3.1	7
14	Fourier series-based discrete element method for computational mechanics of irregular-shaped particles. Computer Methods in Applied Mechanics and Engineering, 2020, 362, 112873.	6.6	49
15	Microalga-induced biocementation of martian regolith simulant: Effects of biogrouting methods and calcium sources. Construction and Building Materials, 2019, 229, 116885.	7.2	18
16	Modeling dynamic responses of heterogeneous seabed with embedded pipeline through multiresolution random field and coupled hydromechanical simulations. Ocean Engineering, 2019, 173, 556-570.	4.3	8
17	Discrete element modeling of deformable pinewood chips in cyclic loading test. Powder Technology, 2019, 345, 1-14.	4.2	39
18	Reconstructing granular particles from X-ray computed tomography using the TWS machine learning tool and the level set method. Acta Geotechnica, 2019, 14, 1-18.	5.7	62

#	Article	IF	Citations
19	Integration of Heterogeneous Data for Multiscale Regional Liquefaction Settlement Mapping. , 2018, , .		0
20	Image-Based Shape Characterization and Three-Dimensional Discrete Element Modeling of a Granular Martian Regolith Simulant. , 2018, , 811-818.		0
21	Particle swarm optimization for numerical bifurcation analysis in computational inelasticity. International Journal for Numerical and Analytical Methods in Geomechanics, 2017, 41, 442-468.	3.3	4
22	Characterization and discrete element simulation of grading and shape-dependent behavior of JSC-1A Martian regolith simulant. Granular Matter, 2017, 19, 1.	2.2	25
23	A Cartesian parametrization for the numerical analysis of material instability. International Journal for Numerical Methods in Engineering, 2016, 108, 156-180.	2.8	7