

Edward AndÃ²

List of Publications by Year in descending order

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Version: 2024-02-01

111
papers

5,528
citations

156536

32
h-index

93651

72
g-index

126
all docs

126
docs citations

126
times ranked

3064
citing authors

#	ARTICLE	IF	CITATIONS
1	Influence of depositional fabric on mechanical properties of naturally deposited sands. <i>Geotechnique</i> , 2024, 74, 250-264.	2.2	3
2	Deformation and failure mechanisms of granular soil around pressurised shallow cavities. <i>Geotechnique</i> , 2023, 73, 265-280.	2.2	2
3	Experimental quantification of 3D deformations in sensitive clay during stress-probing. <i>Geotechnique</i> , 2023, 73, 655-666.	2.2	5
4	Micromechanically inspired investigation of cemented granular materials: part I – from X-ray micro tomography to measurable model variables. <i>Acta Geotechnica</i> , 2023, 18, 35-55.	2.9	3
5	A glimpse into rapid freezing processes in clay with x-ray tomography. <i>Acta Geotechnica</i> , 2022, 17, 327-338.	2.9	8
6	Modeling Combined Fabric Evolution in an Anisometric Granular Material Driven by Particle-Scale X-Ray Measurements. <i>Journal of Engineering Mechanics - ASCE</i> , 2022, 148, .	1.6	10
7	Fabric Investigation of Natural Sensitive Clay from 3D Nano- and Microtomography Data. <i>Journal of Engineering Mechanics - ASCE</i> , 2022, 148, .	1.6	0
8	Biotite supports long-range diffusive transport in dissolution-precipitation creep in halite through small porosity fluctuations. <i>Solid Earth</i> , 2022, 13, 41-64.	1.2	2
9	DIC Challenge 2.0: Developing Images and Guidelines for Evaluating Accuracy and Resolution of 2D Analyses. <i>Experimental Mechanics</i> , 2022, 62, 639-654.	1.1	34
10	Tensile Damage Mechanisms of Concrete Using X-Ray: In Situ Experiments and Mesoscopic Modeling. , 2022, , 453-488.		0
11	The effect of high relative humidity on a network of water-sensitive particles (couscous) as revealed by <i>in situ</i> X-ray tomography. <i>Soft Matter</i> , 2022, 18, 4747-4755.	1.2	4
12	Freezing-induced stiffness and strength anisotropy in freezing clayey soil: Theory, numerical modeling, and experimental validation. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2022, 46, 2087-2114.	1.7	8
13	The contribution of swelling to self-sealing of claystone studied through x-ray tomography. <i>Physics and Chemistry of the Earth</i> , 2022, 127, 103191.	1.2	4
14	Neutron imaging for geomechanics: A review. <i>Geomechanics for Energy and the Environment</i> , 2021, 27, 100206.	1.2	46
15	X-ray tomographies of a water-sensitive granular material (couscous) exposed to high relative humidity: an experimental study. <i>EPJ Web of Conferences</i> , 2021, 249, 08012.	0.1	0
16	Tensile Damage Mechanisms of Concrete Using X-Ray: In Situ Experiments and Mesoscopic Modeling. , 2021, , 1-36.		0
17	Contact evolution in granular materials with inherently anisotropic fabric. <i>EPJ Web of Conferences</i> , 2021, 249, 06015.	0.1	1
18	Image-based calibration of rolling resistance in discrete element models of sand. <i>Computers and Geotechnics</i> , 2021, 131, 103929.	2.3	36

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19	Single-projection reconstruction technique for positioning monodisperse spheres in 3D with a divergent x-ray beam. <i>Measurement Science and Technology</i> , 2021, 32, 095405.	1.4	6
20	3D microstructure controls on mineral carbonation. <i>Journal of CO2 Utilization</i> , 2021, 47, 101494.	3.3	3
21	Evolution of fabric anisotropy of granular soils: x-ray tomography measurements and theoretical modelling. <i>Computers and Geotechnics</i> , 2021, 133, 104046.	2.3	25
22	Dual modality neutron and x-ray tomography for enhanced image analysis of the bone-metal interface. <i>Physics in Medicine and Biology</i> , 2021, 66, 135016.	1.6	9
23	Experimental and model-based investigation of the links between snow bidirectional reflectance and snow microstructure. <i>Cryosphere</i> , 2021, 15, 3921-3948.	1.5	11
24	Quantitative 3D imaging of partially saturated granular materials under uniaxial compression. <i>Acta Geotechnica</i> , 2021, 16, 3573-3600.	2.9	9
25	Unearthing real-time 3D ant tunneling mechanics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	10
26	Fracturing process of micro-concrete under uniaxial and triaxial compression: Insights from in-situ X-ray mechanical tests. <i>Cement and Concrete Research</i> , 2021, 149, 106578.	4.6	18
27	Investigation of Uncertainty in Strength Parameter Identification. <i>Lecture Notes in Civil Engineering</i> , 2021, , 277-284.	0.3	2
28	Imaging local soil kinematics during the first days of maize root growth in sand. <i>Scientific Reports</i> , 2021, 11, 22262.	1.6	7
29	Investigation of particle breakage under one-dimensional compression of sand using X-ray microtomography. <i>Canadian Geotechnical Journal</i> , 2020, 57, 754-762.	1.4	50
30	A micro finite-element model for soil behaviour: experimental evaluation for sand under triaxial compression. <i>Geotechnique</i> , 2020, 70, 931-936.	2.2	11
31	Measuring the evolution of contact fabric in shear bands with X-ray tomography. <i>Acta Geotechnica</i> , 2020, 15, 79-93.	2.9	56
32	Linking shape and rotation of grains during triaxial compression of sand. <i>Granular Matter</i> , 2020, 22, 1.	1.1	11
33	Investigating the incremental behavior of granular materials with the level-set discrete element method. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 144, 104103.	2.3	28
34	Dynamics of Water Absorption in Callovo-Oxfordian Claystone Revealed With Multimodal X-Ray and Neutron Tomography. <i>Frontiers in Earth Science</i> , 2020, 8, .	0.8	26
35	Can friction replace roughness in the numerical simulation of granular materials?. <i>Granular Matter</i> , 2020, 22, 1.	1.1	45
36	Experimental Study of Cone Penetration in Snow Using X-Ray Tomography. <i>Frontiers in Earth Science</i> , 2020, 8, .	0.8	6

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37	NeXT-Grenoble, the Neutron and X-ray tomograph in Grenoble. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 968, 163939.	0.7	78
38	spam: Software for Practical Analysis of Materials. Journal of Open Source Software, 2020, 5, 2286.	2.0	97
39	X-Ray Tomography Experiments on Sand at Different Scales. Advances in Mechanics and Mathematics, 2020, , 1-20.	0.2	2
40	Geostatistical analysis of strain localization in triaxial tests on sand. Geotechnique Letters, 2019, 9, 334-339.	0.6	7
41	Motion of dust particles in dry snow under temperature gradient metamorphism. Cryosphere, 2019, 13, 2345-2359.	1.5	14
42	Grain kinematics during stress relaxation in sand: not a problem for X-ray imaging. E3S Web of Conferences, 2019, 92, 01001.	0.2	2
43	Soil microstructural changes induced by suffusion: x-ray computed tomography characterization. E3S Web of Conferences, 2019, 92, 01010.	0.2	2
44	Measuring the fabric evolution of particulate media during load reversals in triaxial tests. E3S Web of Conferences, 2019, 92, 03001.	0.2	1
45	Root-reinforced sand: kinematic response of the soil. E3S Web of Conferences, 2019, 92, 12011.	0.2	3
46	A benchmark strategy for the experimental measurement of contact fabric. Granular Matter, 2019, 21, 1.	1.1	22
47	The shape of hanging elastic cylinders. Soft Matter, 2019, 15, 5464-5473.	1.2	9
48	Contact Based Hierarchical Segmentation for Granular Materials. Lecture Notes in Computer Science, 2019, , 428-440.	1.0	0
49	The colours of concrete as seen by X-rays and neutrons. Cement and Concrete Composites, 2019, 104, 103336.	4.6	25
50	Effect of particle morphology and contacts on particle breakage in a granular assembly studied using X-ray tomography. Granular Matter, 2019, 21, 1.	1.1	61
51	Micro-scale investigation of unsaturated sand in mini-triaxial shearing using X-ray CT. Geotechnique Letters, 2019, 9, 269-277.	0.6	10
52	Experimental investigation of microstructural changes in soils eroded by suffusion using X-ray tomography. Acta Geotechnica, 2019, 14, 749-765.	2.9	69
53	Sphericity measures of sand grains. Engineering Geology, 2019, 254, 43-53.	2.9	50
54	Characterisation of the multi-scale fabric features of high plasticity clays. Geotechnique Letters, 2019, 9, 361-368.	0.6	11

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55	Tensile failure of micro-concrete: from mechanical tests to FE meso-model with the help of X-ray tomography. <i>Meccanica</i> , 2019, 54, 707-722.	1.2	21
56	A peek into the origin of creep in sand. <i>Granular Matter</i> , 2019, 21, 11.	1.1	20
57	Liquid water uptake in unconfined Callovo Oxfordian clay-rock studied with neutron and X-ray imaging. <i>Acta Geotechnica</i> , 2019, 14, 19-33.	2.9	31
58	Grading evolution and critical state in a discrete numerical model of Fontainebleau sand. <i>Geotechnique</i> , 2019, 69, 1-15.	2.2	85
59	Grain-scale characterization of water retention behaviour of sand using X-ray CT. <i>Acta Geotechnica</i> , 2018, 13, 497-512.	2.9	23
60	Fluid-flow measurements in low permeability media with high pressure gradients using neutron imaging: Application to concrete. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2018, 890, 35-42.	0.7	14
61	Phase segmentation of concrete x-ray tomographic images at meso-scale: Validation with neutron tomography. <i>Cement and Concrete Composites</i> , 2018, 88, 8-16.	4.6	32
62	Evolution of deformation and breakage in sand studied using X-ray tomography. <i>Geotechnique</i> , 2018, 68, 107-117.	2.2	58
63	All you need is shape: Predicting shear banding in sand with LS-DEM. <i>Journal of the Mechanics and Physics of Solids</i> , 2018, 111, 375-392.	2.3	248
64	The Effects of Strain Localization on the Determination of Critical State Seen with Experimental and Numerical Models. <i>Trends in Mathematics</i> , 2018, , 295-307.	0.1	1
65	Particle Shape Distribution Effects on the Triaxial Response of Sands: A DEM Study. <i>Trends in Mathematics</i> , 2018, , 277-286.	0.1	7
66	Neutron imaging: a new possibility for laboratory observation of hydraulic fractures in shale?. <i>Geotechnique Letters</i> , 2018, 8, 316-323.	0.6	12
67	Investigation of Spalling Damage in Ultra-High Performance Concrete Through X-ray Computed Tomography. <i>EPJ Web of Conferences</i> , 2018, 183, 03024.	0.1	2
68	4D porosity evolution during pressure-solution of NaCl in the presence of phyllosilicates. <i>Earth and Planetary Science Letters</i> , 2018, 502, 115-125.	1.8	11
69	Breakage mechanisms of highly porous particles in 1D compression revealed by X-ray tomography. <i>Geotechnique Letters</i> , 2018, 8, 155-160.	0.6	25
70	Validation of Synthetic Images for Contact Fabric Generated by DEM. <i>Springer Series in Geomechanics and Geoengineering</i> , 2018, , 252-255.	0.0	1
71	Three-dimensional visualization and quantification of the fracture mechanisms in sparse fibre networks using multiscale X-ray microtomography. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2018, 474, 20180175.	1.0	9
72	How does strain localise in standard triaxial tests on sand: Revisiting the mechanism 20 years on. <i>Mechanics Research Communications</i> , 2018, 92, 142-146.	1.0	24

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73	Application of microtomography and image analysis to the quantification of fragmentation in ceramics after impact loading. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20160166.	1.6	13
74	Localisation Precursors in Geomaterials?. <i>Springer Series in Geomechanics and Geoengineering</i> , 2017,, 3-10.	0.0	8
75	TomoWarp2: A local digital volume correlation code. <i>SoftwareX</i> , 2017, 6, 267-270.	1.2	76
76	3D fibre architecture of fibre-reinforced sand. <i>Granular Matter</i> , 2017, 19, 75.	1.1	29
77	On the metrology of interparticle contacts in sand from x-ray tomography images. <i>Measurement Science and Technology</i> , 2017, 28, 124007.	1.4	80
78	Determination of the critical state of granular materials with triaxial tests. <i>Soils and Foundations</i> , 2017, 57, 733-744.	1.3	38
79	An extension of digital volume correlation for multimodality image registration. <i>Measurement Science and Technology</i> , 2017, 28, 095401.	1.4	23
80	Experimental measurement of granular fabric and its evolution under shearing. <i>EPJ Web of Conferences</i> , 2017, 140, 02020.	0.1	10
81	From computed tomography to mechanics of granular materials via level set bridge. <i>Acta Geotechnica</i> , 2017, 12, 85-95.	2.9	35
82	Evolution of particle breakage studied using x-ray tomography and the discrete element method. <i>EPJ Web of Conferences</i> , 2017, 140, 07013.	0.1	10
83	Micromechanical Study of Cyclically Loaded Sands with x-ray Microtomography and Digital Image Correlation. <i>Procedia Engineering</i> , 2016, 158, 92-97.	1.2	12
84	Level set discrete element method for three-dimensional computations with triaxial case study. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 91, 1-13.	2.3	194
85	Multiscale characterization and modeling of granular materials through a computational mechanics avatar: a case study with experiment. <i>Acta Geotechnica</i> , 2016, 11, 243-253.	2.9	29
86	Shear bands as bottlenecks in force transmission. <i>Europhysics Letters</i> , 2015, 110, 58005.	0.7	22
87	Kalisphera: an analytical tool to reproduce the partial volume effect of spheres imaged in 3D. <i>Measurement Science and Technology</i> , 2015, 26, 095606.	1.4	20
88	Strain localisation and grain breakage in sand under shearing at high mean stress: insights from in situ X-ray tomography. <i>Acta Geotechnica</i> , 2015, 10, 15-30.	2.9	110
89	An approach to enhance efficiency of DEM modelling of soils with crushable grains. <i>Geotechnique</i> , 2015, 65, 91-110.	2.2	147
90	Strain localisation in granular media. <i>Comptes Rendus Physique</i> , 2015, 16, 26-36.	0.3	62

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91	Structural templates of disordered granular media. <i>International Journal of Solids and Structures</i> , 2015, 54, 20-30.	1.3	6
92	Strain localization in sandstone and its implications for CO ₂ storage. <i>First Break</i> , 2015, 33, .	0.2	19
93	Towards a more accurate characterization of granular media: extracting quantitative descriptors from tomographic images. <i>Granular Matter</i> , 2014, 16, 9-21.	1.1	77
94	Laboratory X-ray Tomography: A Valuable Experimental Tool for Revealing Processes in Soils. <i>Geotechnical Testing Journal</i> , 2014, 38, 20140060.	0.5	36
95	Compaction and shear localization in porous sandstone and sand. , 2014, , 1213-1217.		0
96	Revisiting localized deformation in sand with complex systems. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2013, 469, 20120606.	1.0	33
97	From 3D Tomography to Physics-Based Mechanics of Geomaterials. , 2013, , .		4
98	Experimental micro-mechanics of granular media studied by x-ray tomography: recent results and challenges. <i>Geotechnique Letters</i> , 2013, 3, 142-146.	0.6	125
99	Soil deformation around a penetrating cone in silt. <i>Geotechnique Letters</i> , 2013, 3, 185-191.	0.6	37
100	Identifying and following particle-to-particle contacts in real granular media: An experimental challenge. <i>AIP Conference Proceedings</i> , 2013, , .	0.3	11
101	Estimation of Separating Planes between Touching 3D Objects Using Power Watershed. <i>Lecture Notes in Computer Science</i> , 2013, , 452-463.	1.0	7
102	Experimental micromechanics: grain-scale observation of sand deformation. <i>Geotechnique Letters</i> , 2012, 2, 107-112.	0.6	75
103	Experimental characterisation of (localised) Deformation Phenomena in Granular Geomaterials from Sample Down to Inter-and Intra-grain Scales. <i>Procedia IUTAM</i> , 2012, 4, 54-65.	1.2	24
104	Grain-scale experimental investigation of localised deformation in sand: a discrete particle tracking approach. <i>Acta Geotechnica</i> , 2012, 7, 1-13.	2.9	276
105	Water Retention Behaviour Explored by X-Ray CT Analysis. , 2012, , 81-88.		12
106	Can intergranular force transmission be identified in sand?. <i>Granular Matter</i> , 2011, 13, 251-254.	1.1	51
107	Observing strain localisation processes in bio-cemented sand using x-ray imaging. <i>Granular Matter</i> , 2011, 13, 247-250.	1.1	69
108	Modelling and performance of a small siphonic hydropower system. <i>Renewable Energy</i> , 2011, 36, 2451-2464.	4.3	17

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109	Cone penetration tests in a virtual calibration chamber. Geotechnique, 2011, 61, 525-531.	2.2	126
110	Analyzing the evolution of grains and contacts in sand under load. , 2010, , 375-379.		0
111	A constitutive model for partially saturated soils. Geotechnique, 1990, 40, 405-430.	2.2	1,995