Edward AndÃ²

List of Publications by Year
in descending order

111 papers	5,528 citations	136950 32 h-index	82547 72 g-index
126 all docs	126 docs citations	126 times ranked	2754 citing authors

#	Article	IF	Citations
1	Influence of depositional fabric on mechanical properties of naturally deposited sands. Geotechnique, 2024, 74, 250-264.	4.0	3
2	Deformation and failure mechanisms of granular soil around pressurised shallow cavities. Geotechnique, 2023, 73, 265-280.	4.0	2
3	Experimental quantification of 3D deformations in sensitive clay during stress-probing. Geotechnique, 2023, 73, 655-666.	4.0	5
4	Micromechanically inspired investigation of cemented granular materials: part Iâ€"from X-ray micro tomography to measurable model variables. Acta Geotechnica, 2023, 18, 35-55.	5.7	3
5	A glimpse into rapid freezing processes in clay with x-ray tomography. Acta Geotechnica, 2022, 17, 327-338.	5.7	8
6	Modeling Combined Fabric Evolution in an Anisometric Granular Material Driven by Particle-Scale X-Ray Measurements. Journal of Engineering Mechanics - ASCE, 2022, 148, .	2.9	10
7	Fabric Investigation of Natural Sensitive Clay from 3D Nano- and Microtomography Data. Journal of Engineering Mechanics - ASCE, 2022, 148, .	2.9	0
8	Biotite supports long-range diffusive transport in dissolutionâ€"precipitation creep in halite through small porosity fluctuations. Solid Earth, 2022, 13, 41-64.	2.8	2
9	DIC Challenge 2.0: Developing Images and Guidelines for Evaluating Accuracy and Resolution of 2D Analyses. Experimental Mechanics, 2022, 62, 639-654.	2.0	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 in situ X-ray tomography. Soft Matter, 2022, 18, 4747-4755.	2.7	4
12	Freezingâ€induced stiffness and strength anisotropy in freezing clayey soil: Theory, numerical modeling, and experimental validation. International Journal for Numerical and Analytical Methods in Geomechanics, 2022, 46, 2087-2114.	3.3	8
13	The contribution of swelling to self-sealing of claystone studied through x-ray tomography. Physics and Chemistry of the Earth, 2022, 127, 103191.	2.9	4
14	Neutron imaging for geomechanics: A review. Geomechanics for Energy and the Environment, 2021, 27, 100206.	2.5	46
15	X-ray tomographies of a water-sensitive granular material (couscous) exposed to high relative humidity: an experimental study. EPJ Web of Conferences, 2021, 249, 08012.	0.3	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. EPJ Web of Conferences, 2021, 249, 06015.	0.3	1
18	Image-based calibration of rolling resistance in discrete element models of sand. Computers and Geotechnics, 2021, 131, 103929.	4.7	36

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19	Single-projection reconstruction technique for positioning monodisperse spheres in 3D with a divergent x-ray beam. Measurement Science and Technology, 2021, 32, 095405.	2.6	6
20	3D microstructure controls on mineral carbonation. Journal of CO2 Utilization, 2021, 47, 101494.	6.8	3
21	Evolution of fabric anisotropy of granular soils: x-ray tomography measurements and theoretical modelling. Computers and Geotechnics, 2021, 133, 104046.	4.7	25
22	Dual modality neutron and x-ray tomography for enhanced image analysis of the bone-metal interface. Physics in Medicine and Biology, 2021, 66, 135016.	3.0	9
23	Experimental and model-based investigation of the links between snow bidirectional reflectance and snow microstructure. Cryosphere, 2021, 15, 3921-3948.	3.9	11
24	Quantitative 3D imaging of partially saturated granular materials under uniaxial compression. Acta Geotechnica, 2021, 16, 3573-3600.	5.7	9
25	Unearthing real-time 3D ant tunneling mechanics. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	10
26	Fracturing process of micro-concrete under uniaxial and triaxial compression: Insights from in-situ X-ray mechanical tests. Cement and Concrete Research, 2021, 149, 106578.	11.0	18
27	Investigation of Uncertainty in Strength Parameter Identification. Lecture Notes in Civil Engineering, 2021, , 277-284.	0.4	2
28	Imaging local soil kinematics during the first days of maize root growth in sand. Scientific Reports, 2021, 11, 22262.	3.3	7
29	Investigation of particle breakage under one-dimensional compression of sand using X-ray microtomography. Canadian Geotechnical Journal, 2020, 57, 754-762.	2.8	50
30	A micro finite-element model for soil behaviour: experimental evaluation for sand under triaxial compression. Geotechnique, 2020, 70, 931-936.	4.0	11
31	Measuring the evolution of contact fabric in shear bands with X-ray tomography. Acta Geotechnica, 2020, 15, 79-93.	5.7	56
32	Linking shape and rotation of grains during triaxial compression of sand. Granular Matter, 2020, 22, 1.	2.2	11
33	Investigating the incremental behavior of granular materials with the level-set discrete element method. Journal of the Mechanics and Physics of Solids, 2020, 144, 104103.	4.8	28
34	Dynamics of Water Absorption in Callovo-Oxfordian Claystone Revealed With Multimodal X-Ray and Neutron Tomography. Frontiers in Earth Science, 2020, 8, .	1.8	26
35	Can friction replace roughness in the numerical simulation of granular materials?. Granular Matter, 2020, 22, 1.	2.2	45
36	Experimental Study of Cone Penetration in Snow Using X-Ray Tomography. Frontiers in Earth Science, 2020, 8, .	1.8	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.	1.6	78
38	spam: Software for Practical Analysis of Materials. Journal of Open Source Software, 2020, 5, 2286.	4.6	97
39	X-Ray Tomography Experiments on Sand at Different Scales. Advances in Mechanics and Mathematics, 2020, , 1-20.	0.7	2
40	Geostatistical analysis of strain localization in triaxial tests on sand. Geotechnique Letters, 2019, 9, 334-339.	1.2	7
41	Motion of dust particles in dry snow under temperature gradient metamorphism. Cryosphere, 2019, 13, 2345-2359.	3.9	14
42	Grain kinematics during stress relaxation in sand: not a problem for X-ray imaging. E3S Web of Conferences, 2019, 92, 01001.	0.5	2
43	Soil microstructural changes induced by suffusion: x-ray computed tomography characterization. E3S Web of Conferences, 2019, 92, 01010.	0.5	2
44	Measuring the fabric evolution of particulate media during load reversals in triaxial tests. E3S Web of Conferences, 2019, 92, 03001.	0.5	1
45	Root-reinforced sand: kinematic response of the soil. E3S Web of Conferences, 2019, 92, 12011.	0.5	3
46	A benchmark strategy for the experimental measurement of contact fabric. Granular Matter, 2019, 21, 1.	2.2	22
47	The shape of hanging elastic cylinders. Soft Matter, 2019, 15, 5464-5473.	2.7	9
48	Contact Based Hierarchical Segmentation for Granular Materials. Lecture Notes in Computer Science, 2019, , 428-440.	1.3	0
49	The colours of concrete as seen by X-rays and neutrons. Cement and Concrete Composites, 2019, 104, 103336.	10.7	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.	2.2	61
51	Micro-scale investigation of unsaturated sand in mini-triaxial shearing using X-ray CT. Geotechnique Letters, 2019, 9, 269-277.	1.2	10
52	Experimental investigation of microstructural changes in soils eroded by suffusion using X-ray tomography. Acta Geotechnica, 2019, 14, 749-765.	5.7	69
53	Sphericity measures of sand grains. Engineering Geology, 2019, 254, 43-53.	6.3	50
54	Characterisation of the multi-scale fabric features of high plasticity clays. Geotechnique Letters, 2019, 9, 361-368.	1.2	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. Meccanica, 2019, 54, 707-722.	2.0	21
56	A peek into the origin of creep in sand. Granular Matter, 2019, 21, 11.	2.2	20
57	Liquid water uptake in unconfined Callovo Oxfordian clay-rock studied with neutron and X-ray imaging. Acta Geotechnica, 2019, 14, 19-33.	5.7	31
58	Grading evolution and critical state in a discrete numerical model of Fontainebleau sand. Geotechnique, 2019, 69, 1-15.	4.0	85
59	Grain-scale characterization of water retention behaviour of sand using X-ray CT. Acta Geotechnica, 2018, 13, 497-512.	5.7	23
60	Fluid-flow measurements in low permeability media with high pressure gradients using neutron imaging: Application to concrete. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 890, 35-42.	1.6	14
61	Phase segmentation of concrete x-ray tomographic images at meso-scale: Validation with neutron tomography. Cement and Concrete Composites, 2018, 88, 8-16.	10.7	32
62	Evolution of deformation and breakage in sand studied using X-ray tomography. Geotechnique, 2018, 68, 107-117.	4.0	58
63	All you need is shape: Predicting shear banding in sand with LS-DEM. Journal of the Mechanics and Physics of Solids, 2018, 111, 375-392.	4.8	248
64	The Effects of Strain Localization on the Determination of Critical State Seen with Experimental and Numerical Models. Trends in Mathematics, 2018, , 295-307.	0.1	1
65	Particle Shape Distribution Effects on the Triaxial Response of Sands: A DEM Study. Trends in Mathematics, 2018, , 277-286.	0.1	7
66	Neutron imaging: a new possibility for laboratory observation of hydraulic fractures in shale?. Geotechnique Letters, 2018, 8, 316-323.	1.2	12
67	Investigation of Spalling Damage in Ultra-High Performance Concrete Through X-ray Computed Tomography. EPJ Web of Conferences, 2018, 183, 03024.	0.3	2
68	4D porosity evolution during pressure-solution of NaCl in the presence of phyllosilicates. Earth and Planetary Science Letters, 2018, 502, 115-125.	4.4	11
69	Breakage mechanisms of highly porous particles in 1D compression revealed by X-ray tomography. Geotechnique Letters, 2018, 8, 155-160.	1.2	25
70	Validation of Synthetic Images forÂContact Fabric Generated by DEM. Springer Series in Geomechanics and Geoengineering, 2018, , 252-255.	0.1	1
71	Three-dimensional visualization and quantification of the fracture mechanisms in sparse fibre networks using multiscale X-ray microtomography. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180175.	2.1	9
72	How does strain localise in standard triaxial tests on sand: Revisiting the mechanism 20 years on. Mechanics Research Communications, 2018, 92, 142-146.	1.8	24

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73	Application of microtomography and image analysis to the quantification of fragmentation in ceramics after impact loading. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160166.	3.4	13
74	Localisation Precursors in Geomaterials?. Springer Series in Geomechanics and Geoengineering, 2017, , 3-10.	0.1	8
75	TomoWarp2: A local digital volume correlation code. SoftwareX, 2017, 6, 267-270.	2.6	76
76	3D fibre architecture of fibre-reinforced sand. Granular Matter, 2017, 19, 75.	2.2	29
77	On the metrology of interparticle contacts in sand from x-ray tomography images. Measurement Science and Technology, 2017, 28, 124007.	2.6	80
78	Determination of the critical state of granular materials with triaxial tests. Soils and Foundations, 2017, 57, 733-744.	3.1	38
79	An extension of digital volume correlation for multimodality image registration. Measurement Science and Technology, 2017, 28, 095401.	2.6	23
80	Experimental measurement of granular fabric and its evolution under shearing. EPJ Web of Conferences, 2017, 140, 02020.	0.3	10
81	From computed tomography to mechanics of granular materials via level set bridge. Acta Geotechnica, 2017, 12, 85-95.	5.7	35
82	Evolution of particle breakage studied using x-ray tomography and the discrete element method. EPJ Web of Conferences, 2017, 140, 07013.	0.3	10
83	Micromechanical Study of Cyclically Loaded Sands with x-ray Microtomography and Digital Image Correlation. Procedia Engineering, 2016, 158, 92-97.	1.2	12
84	Level set discrete element method for three-dimensional computations with triaxial case study. Journal of the Mechanics and Physics of Solids, 2016, 91, 1-13.	4.8	194
85	Multiscale characterization and modeling of granular materials through a computational mechanics avatar: a case study with experiment. Acta Geotechnica, 2016, 11, 243-253.	5.7	29
86	Shear bands as bottlenecks in force transmission. Europhysics Letters, 2015, 110, 58005.	2.0	22
87	Kalisphera: an analytical tool to reproduce the partial volume effect of spheres imaged in 3D. Measurement Science and Technology, 2015, 26, 095606.	2.6	20
88	Strain localisation and grain breakage in sand under shearing at high mean stress: insights from in situ X-ray tomography. Acta Geotechnica, 2015, 10, 15-30.	5.7	110
89	An approach to enhance efficiency of DEM modelling of soils with crushable grains. Geotechnique, 2015, 65, 91-110.	4.0	147
90	Strain localisation in granular media. Comptes Rendus Physique, 2015, 16, 26-36.	0.9	62

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91	Structural templates of disordered granular media. International Journal of Solids and Structures, 2015, 54, 20-30.	2.7	6
92	Strain localization in sandstone and its implications for CO2 storage. First Break, 2015, 33, .	0.4	19
93	Towards a more accurate characterization of granular media: extracting quantitative descriptors from tomographic images. Granular Matter, 2014, 16, 9-21.	2.2	77
94	Laboratory X-ray Tomography: A Valuable Experimental Tool for Revealing Processes in Soils. Geotechnical Testing Journal, 2014, 38, 20140060.	1.0	36
95	Compaction and shear localization in porous sandstone and sand. , 2014, , 1213-1217.		0
96	Revisiting localized deformation in sand with complex systems. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20120606.	2.1	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. Geotechnique Letters, 2013, 3, 142-146.	1.2	125
99	Soil deformation around a penetrating cone in silt. Geotechnique Letters, 2013, 3, 185-191.	1.2	37
100	Identifying and following particle-to-particle contacts in real granular media: An experimental challenge. AIP Conference Proceedings, 2013, , .	0.4	11
101	Estimation of Separating Planes between Touching 3D Objects Using Power Watershed. Lecture Notes in Computer Science, 2013, , 452-463.	1.3	7
102	Experimental micromechanics: grain-scale observation of sand deformation. Geotechnique Letters, 2012, 2, 107-112.	1.2	75
103	Experimental characterisation of (localised) Deformation Phenomena in Granular Geomaterials from Sample Down to Inter-and Intra-grain Scales. Procedia IUTAM, 2012, 4, 54-65.	1.2	24
104	Grain-scale experimental investigation of localised deformation in sand: a discrete particle tracking approach. Acta Geotechnica, 2012, 7, 1-13.	5.7	276
105	Water Retention Behaviour Explored by X-Ray CT Analysis. , 2012, , 81-88.		12
106	Can intergranular force transmission be identified in sand?. Granular Matter, 2011, 13, 251-254.	2.2	51
107	Observing strain localisation processes in bio-cemented sand using x-ray imaging. Granular Matter, 2011, 13, 247-250.	2.2	69
108	Modelling and performance of a small siphonic hydropower system. Renewable Energy, 2011, 36, 2451-2464.	8.9	17

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109	Cone penetration tests in a virtual calibration chamber. Geotechnique, 2011, 61, 525-531.	4.0	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.	4.0	1,995