

Alessandro Tengattini

List of Publications by Year in descending order

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47
papers

1,004
citations

516561

16
h-index

454834

30
g-index

50
all docs

50
docs citations

50
times ranked

867
citing authors

#	ARTICLE	IF	CITATIONS
1	Micromechanically inspired investigation of cemented granular materials: part II – from experiments to modelling and back. <i>Acta Geotechnica</i> , 2023, 18, 57-75.	2.9	3
2	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
3	Compact and versatile neutron imaging detector with sub-4 μ m spatial resolution based on a single-crystal thin-film scintillator. <i>Optics Express</i> , 2022, 30, 14461.	1.7	8
4	Experimental proof of moisture clog through neutron tomography in a porous medium under truly one-directional drying. <i>Journal of the American Ceramic Society</i> , 2022, 105, 3534-3543.	1.9	6
5	The scale of a martian hydrothermal system explored using combined neutron and x-ray tomography. <i>Science Advances</i> , 2022, 8, eabn3044.	4.7	4
6	Drying of mortar at ambient temperature studied using high resolution neutron tomography and numerical modeling. <i>Cement and Concrete Composites</i> , 2022, 131, 104586.	4.6	1
7	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
8	Neutron imaging for geomechanics: A review. <i>Geomechanics for Energy and the Environment</i> , 2021, 27, 100206.	1.2	46
9	Visualising water vapour condensation in cracked concrete with dynamic neutron radiography. <i>Materials Letters</i> , 2021, 283, 128755.	1.3	7
10	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
11	Contact evolution in granular materials with inherently anisotropic fabric. <i>EPJ Web of Conferences</i> , 2021, 249, 06015.	0.1	1
12	Neutron microtomography to investigate the bone-implant interface – comparison with histological analysis. <i>Physics in Medicine and Biology</i> , 2021, 66, 105006.	1.6	8
13	Tomography Imaging of Lithium Electrodeposits Using Neutron, Synchrotron X-Ray, and Laboratory X-Ray Sources: A Comparison. <i>Frontiers in Energy Research</i> , 2021, 9, .	1.2	10
14	Neutron imaging of operando proton exchange membrane fuel cell with novel membrane. <i>Journal of Power Sources</i> , 2021, 496, 229836.	4.0	7
15	A closer look at corrosion of steel reinforcement bars in concrete using 3D neutron and X-ray computed tomography. <i>Cement and Concrete Research</i> , 2021, 144, 106439.	4.6	39
16	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
17	Simultaneous x-ray and neutron 4D tomographic study of drying-driven hydro-mechanical behavior of cement-based materials at moderate temperatures. <i>Cement and Concrete Research</i> , 2021, 147, 106503.	4.6	6
18	Neutron radiography for local modelling of thermochemical heat storage reactors: Case study on SrCl ₂ ·NH ₃ . <i>International Journal of Heat and Mass Transfer</i> , 2021, 178, 121287.	2.5	4

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19	Characterisation of Single-Phase Fluid-Flow Heterogeneity Due to Localised Deformation in a Porous Rock Using Rapid Neutron Tomography. <i>Journal of Imaging</i> , 2021, 7, 275.	1.7	3
20	Quantification of evolving moisture profiles in concrete samples subjected to temperature gradient by means of rapid neutron tomography: Influence of boundary conditions, hydro-thermal loading history and spalling mitigation additives. <i>Strain</i> , 2020, 56, e12371.	1.4	7
21	Dynamic Fluid Ingress Detection in Geomaterials Using K-Band Frequency Modulated Continuous Wave Radar. <i>IEEE Access</i> , 2020, 8, 111027-111041.	2.6	12
22	Boron-Based Neutron Scintillator Screens for Neutron Imaging. <i>Journal of Imaging</i> , 2020, 6, 124.	1.7	8
23	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
24	4D imaging of lithium-batteries using correlative neutron and X-ray tomography with a virtual unrolling technique. <i>Nature Communications</i> , 2020, 11, 777.	5.8	104
25	Some Observations on Testing Conditions of High-Temperature Experiments on Concrete: An Insight from Neutron Tomography. <i>Transport in Porous Media</i> , 2020, 132, 299-310.	1.2	6
26	Influence of common simplifications on the drying of cement-based materials up to moderate temperatures. <i>International Journal of Heat and Mass Transfer</i> , 2020, 150, 119254.	2.5	2
27	NeXT-Grenoble, the Neutron and X-ray tomograph in Grenoble. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2020, 968, 163939.	0.7	78
28	Editors' Choice 4D Neutron and X-ray Tomography Studies of High Energy Density Primary Batteries: Part II. Multi-Modal Microscopy of LiSOCl ₂ Cells. <i>Journal of the Electrochemical Society</i> , 2020, 167, 140509.	1.3	7
29	spam: Software for Practical Analysis of Materials. <i>Journal of Open Source Software</i> , 2020, 5, 2286.	2.0	97
30	Combined Operando High Resolution SANS and Neutron Imaging Reveals in-Situ Local Water Distribution in an Operating Fuel Cell. <i>ACS Applied Energy Materials</i> , 2019, 2, 8425-8433.	2.5	16
31	What comes NeXT? " High-Speed Neutron Tomography at ILL. <i>Optics Express</i> , 2019, 27, 28640.	1.7	39
32	Fast 4D Imaging of Fluid Flow in Rock by High-Speed Neutron Tomography. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 3557-3569.	1.4	24
33	Neutron Imaging of Cadmium Sorption and Transport in Porous Rocks. <i>Frontiers in Earth Science</i> , 2019, 7, .	0.8	7
34	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
35	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
36	Neutron imaging: a new possibility for laboratory observation of hydraulic fractures in shale?. <i>Geotechnique Letters</i> , 2018, 8, 316-323.	0.6	12

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37	Analysis of moisture migration in concrete at high temperature through in-situ neutron tomography. Cement and Concrete Research, 2018, 111, 41-55.	4.6	63
38	An extension of digital volume correlation for multimodality image registration. Measurement Science and Technology, 2017, 28, 095401.	1.4	23
39	A constitutive modelling framework predicting critical state in sand undergoing crushing and dilation. Geotechnique, 2016, 66, 695-710.	2.2	77
40	Kalisphera: an analytical tool to reproduce the partial volume effect of spheres imaged in 3D. Measurement Science and Technology, 2015, 26, 095606.	1.4	20
41	A thermomechanical constitutive model for cemented granular materials with quantifiable internal variables. Part II – Validation and localization analysis. Journal of the Mechanics and Physics of Solids, 2014, 70, 382-405.	2.3	59
42	A thermomechanical constitutive model for cemented granular materials with quantifiable internal variables. Part I – Theory. Journal of the Mechanics and Physics of Solids, 2014, 70, 281-296.	2.3	76
43	A theory predicting breakage dependence of critical state in sand. , 2014, , 695-698.		1
44	Experimental evidence of "Granulence". AIP Conference Proceedings, 2013, , .	0.3	10
45	A Micromechanics Based Model for Cemented Granular Materials. Springer Series in Geomechanics and Geoengineering, 2013, , 527-534.	0.0	5
46	Corrosion of Steel in Concrete Seen through Neutron and X-Ray Tomography. Neutron News, 0, , 1-2.	0.1	0
47	The Hydration State of Bone Tissue Affects Contrast in Neutron Tomographic Images. Frontiers in Bioengineering and Biotechnology, 0, 10, .	2.0	4