Alessandro Tengattini

List of Publications by Year
in descending order

47	1,004	516561 16	454834 30
papers	citations	h-index	g-index

50	50	50	867
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	4D imaging of lithium-batteries using correlative neutron and X-ray tomography with a virtual unrolling technique. Nature Communications, 2020, 11, 777.	5.8	104
2	spam: Software for Practical Analysis of Materials. Journal of Open Source Software, 2020, 5, 2286.	2.0	97
3	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
4	A constitutive modelling framework predicting critical state in sand undergoing crushing and dilation. Geotechnique, 2016, 66, 695-710.	2.2	77
5	A thermomechanical constitutive model for cemented granular materials with quantifiable internal variables. Part Iâ€"Theory. Journal of the Mechanics and Physics of Solids, 2014, 70, 281-296.	2.3	76
6	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
7	A thermomechanical constitutive model for cemented granular materials with quantifiable internal variables. Part II â€“ Validation and localization analysis. Journal of the Mechanics and Physics of Solids, 2014, 70, 382-405.	2.3	59
8	Neutron imaging for geomechanics: A review. Geomechanics for Energy and the Environment, 2021, 27, 100206.	1.2	46
9	What comes NeXT? â€“ High-Speed Neutron Tomography at ILL. Optics Express, 2019, 27, 28640.	1.7	39
10	A closer look at corrosion of steel reinforcement bars in concrete using 3D neutron and X-ray computed tomography. Cement and Concrete Research, 2021, 144, 106439.	4.6	39
11	Liquid water uptake in unconfined Callovo Oxfordian clay-rock studied with neutron and X-ray imaging. Acta Geotechnica, 2019, 14, 19-33.	2.9	31
12	Dynamics of Water Absorption in Callovo-Oxfordian Claystone Revealed With Multimodal X-Ray and Neutron Tomography. Frontiers in Earth Science, 2020, 8, .	0.8	26
13	Fast 4â€D Imaging of Fluid Flow in Rock by Highâ€Speed Neutron Tomography. Journal of Geophysical Research: Solid Earth, 2019, 124, 3557-3569.	1.4	24
14	An extension of digital volume correlation for multimodality image registration. Measurement Science and Technology, 2017, 28, 095401.	1.4	23
15	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
16	Combined Operando High Resolution SANS and Neutron Imaging Reveals in-Situ Local Water Distribution in an Operating Fuel Cell. ACS Applied Energy Materials, 2019, 2, 8425-8433.	2.5	16
17	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.	0.7	14
18	Neutron imaging: a new possibility for laboratory observation of hydraulic fractures in shale?. Geotechnique Letters, 2018, 8, 316-323.	0.6	12

#	Article	IF	Citations
19	Dynamic Fluid Ingress Detection in Geomaterials Using K-Band Frequency Modulated Continuous Wave Radar. IEEE Access, 2020, 8, 111027-111041.	2.6	12
20	Experimental evidence of "Granulence". AIP Conference Proceedings, 2013, , .	0.3	10
21	Tomography Imaging of Lithium Electrodeposits Using Neutron, Synchrotron X-Ray, and Laboratory X-Ray Sources: A Comparison. Frontiers in Energy Research, 2021, 9, .	1.2	10
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.	1.6	9
23	Boron-Based Neutron Scintillator Screens for Neutron Imaging. Journal of Imaging, 2020, 6, 124.	1.7	8
24	Neutron microtomography to investigate the bone-implant interfaceâ€"comparison with histological analysis. Physics in Medicine and Biology, 2021, 66, 105006.	1.6	8
25	Compact and versatile neutron imaging detector with sub-4Î¼m spatial resolution based on a single-crystal thin-film scintillator. Optics Express, 2022, 30, 14461.	1.7	8
26	Neutron Imaging of Cadmium Sorption and Transport in Porous Rocks. Frontiers in Earth Science, 2019, 7, .	0.8	7
27	Quantification of evolving moisture profiles in concrete samples subjected to temperature gradient by means of rapid neutron tomography: Influence of boundary conditions, hygroâ€thermal loading history and spalling mitigation additives. Strain, 2020, 56, e12371.	1.4	7
28	Visualising water vapour condensation in cracked concrete with dynamic neutron radiography. Materials Letters, 2021, 283, 128755.	1.3	7
29	Neutron imaging of operando proton exchange membrane fuel cell with novel membrane. Journal of Power Sources, 2021, 496, 229836.	4.0	7
30	Editorsâ€™ Choiceâ€"4D Neutron and X-ray Tomography Studies of High Energy Density Primary Batteries: Part II. Multi-Modal Microscopy of LiSOCl2 Cells. Journal of the Electrochemical Society, 2020, 167, 140509.	1.3	7
31	Some Observations on Testing Conditions of High-Temperature Experiments on Concrete: An Insight from Neutron Tomography. Transport in Porous Media, 2020, 132, 299-310.	1.2	6
32	Simultaneous x-ray and neutron 4D tomographic study of drying-driven hydro-mechanical behavior of cement-based materials at moderate temperatures. Cement and Concrete Research, 2021, 147, 106503.	4.6	6
33	Experimental proof of moisture clog through neutron tomography in a porous medium under truly oneâ€directional drying. Journal of the American Ceramic Society, 2022, 105, 3534-3543.	1.9	6
34	A Micromechanics Based Model for Cemented Granular Materials. Springer Series in Geomechanics and Geoengineering, 2013, , 527-534.	0.0	5
35	Neutron radiography for local modelling of thermochemical heat storage reactors: Case study on SrCl2â€NH3. International Journal of Heat and Mass Transfer, 2021, 178, 121287.	2.5	4
36	The scale of a martian hydrothermal system explored using combined neutron and x-ray tomography. Science Advances, 2022, 8, eabn3044.	4.7	4

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37	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.	1.2	4
38	The Hydration State of Bone Tissue Affects Contrast in Neutron Tomographic Images. Frontiers in Bioengineering and Biotechnology, 0, 10, .	2.0	4
39	Characterisation of Single-Phase Fluid-Flow Heterogeneity Due to Localised Deformation in a Porous Rock Using Rapid Neutron Tomography. Journal of Imaging, 2021, 7, 275.	1.7	3
40	Micromechanically inspired investigation of cemented granular materials: part IIâ€" from experiments to modelling and back. Acta Geotechnica, 2023, 18, 57-75.	2.9	3
41	Micromechanically inspired investigation of cemented granular materials: part Iâ€"from X-ray micro tomography to measurable model variables. Acta Geotechnica, 2023, 18, 35-55.	2.9	3
42	Influence of common simplifications on the drying of cement-based materials up to moderate temperatures. International Journal of Heat and Mass Transfer, 2020, 150, 119254.	2.5	2
43	Contact evolution in granular materials with inherently anisotropic fabric. EPJ Web of Conferences, 2021, 249, 06015.	0.1	1
44	A theory predicting breakage dependence of critical state in sand. , 2014, , 695-698.		1
45	Drying of mortar at ambient temperature studied using high resolution neutron tomography and numerical modeling. Cement and Concrete Composites, 2022, 131, 104586.	4.6	1
46	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.	0.1	0
47	Corrosion of Steel in Concrete Seen through Neutron and X-Ray Tomography. Neutron News, 0, , 1-2.	0.1	0