

Mahmoud Mostafavi

List of Publications by Year in descending order

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Version: 2024-02-01

60
papers

1,533
citations

304743

22
h-index

345221

36
g-index

61
all docs

61
docs citations

61
times ranked

1121
citing authors

#	ARTICLE	IF	CITATIONS
1	In-situ X-ray computed tomography characterisation of 3D fracture evolution and image-based numerical homogenisation of concrete. <i>Cement and Concrete Composites</i> , 2017, 75, 74-83.	10.7	161
2	An approach to calculate the J -Integral by digital image correlation displacement field measurement. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2012, 35, 971-984.	3.4	159
3	3D Studies of Indentation by Combined X-Ray Tomography and Digital Volume Correlation. <i>Key Engineering Materials</i> , 0, 592-593, 14-21.	0.4	77
4	Yield behavior beneath hardness indentations in ductile metals, measured by three-dimensional computed X-ray tomography and digital volume correlation. <i>Acta Materialia</i> , 2015, 82, 468-482.	7.9	67
5	Observation and quantification of three-dimensional crack propagation in poly-granular graphite. <i>Engineering Fracture Mechanics</i> , 2013, 110, 410-420.	4.3	64
6	Three-dimensional crack observation, quantification and simulation in a quasi-brittle material. <i>Acta Materialia</i> , 2013, 61, 6276-6289.	7.9	62
7	Fracture of aluminium alloy 2024 under biaxial and triaxial loading. <i>Engineering Fracture Mechanics</i> , 2011, 78, 1705-1716.	4.3	61
8	An autonomous surface discontinuity detection and quantification method by digital image correlation and phase congruency. <i>Optics and Lasers in Engineering</i> , 2017, 96, 94-106.	3.8	49
9	A synchrotron X-ray diffraction study of in situ biaxial deformation. <i>Acta Materialia</i> , 2015, 90, 46-58.	7.9	48
10	J -Integral Calculation by Finite Element Processing of Measured Full-Field Surface Displacements. <i>Experimental Mechanics</i> , 2017, 57, 997-1009.	2.0	47
11	Reduction of measured toughness due to out-of-plane constraint in ductile fracture of aluminium alloy specimens. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2010, 33, 724-739.	3.4	46
12	Synchrotron X-ray characterization of crack strain fields in polygranular graphite. <i>Carbon</i> , 2017, 124, 357-371.	10.3	45
13	Flexural strength and defect behaviour of polygranular graphite under different states of stress. <i>Carbon</i> , 2013, 59, 325-336.	10.3	43
14	Quantitative <i>in situ</i> study of short crack propagation in polygranular graphite by digital image correlation. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2012, 35, 695-707.	3.4	39
15	A quantitative three-dimensional <i>in situ</i> study of a short fatigue crack in a magnesium alloy. <i>International Journal of Fatigue</i> , 2014, 66, 183-193.	5.7	34
16	In situ observation of crack nuclei in poly-granular graphite under ring-on-ring equi-biaxial and flexural loading. <i>Engineering Fracture Mechanics</i> , 2011, 78, 1756-1770.	4.3	32
17	In situ quantitative three-dimensional characterisation of sub-indentation cracking in polycrystalline alumina. <i>Journal of the European Ceramic Society</i> , 2014, 34, 3127-3132.	5.7	30
18	Residual stress in laser clad rail. <i>Tribology International</i> , 2019, 140, 105844.	5.9	28

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19	Fracture behaviour of an anisotropic polygranular graphite (PGA). <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 558, 265-277.	5.6	26
20	A crystal plasticity model that accounts for grain size effects and slip system interactions on the deformation of austenitic stainless steels. <i>International Journal of Plasticity</i> , 2022, 152, 103249.	8.8	26
21	Characterisation of overloads in fatigue by 2D strain mapping at the surface and in the bulk. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2016, 39, 1040-1048.	3.4	25
22	A micromechanical fracture criterion accounting for in-plane and out-of-plane constraint. <i>Computational Materials Science</i> , 2011, 50, 2759-2770.	3.0	24
23	Observation and simulation of indentation damage in a SiC/SiC fibre ceramic matrix composite. <i>Finite Elements in Analysis and Design</i> , 2016, 110, 11-19.	3.2	23
24	Application of neutron imaging to detect and quantify fatigue cracking. <i>International Journal of Mechanical Sciences</i> , 2019, 159, 182-194.	6.7	19
25	Three-dimensional observation and image-based modelling of thermal strains in polycrystalline alumina. <i>Acta Materialia</i> , 2013, 61, 7521-7533.	7.9	18
26	Dynamic contact strain measurement by time-resolved stroboscopic energy dispersive synchrotron X-ray diffraction. <i>Strain</i> , 2017, 53, e12221.	2.4	18
27	3D Studies of Damage by Combined X-ray Tomography and Digital Volume Correlation. , 2014, 3, 1554-1559.		17
28	Influence of prior cyclic plasticity on creep deformation using crystal plasticity modelling. <i>International Journal of Solids and Structures</i> , 2018, 139-140, 129-137.	2.7	17
29	Quantifying yield behaviour in metals by X-ray nanotomography. <i>Scientific Reports</i> , 2016, 6, 34346.	3.3	15
30	A novel methodology for estimating tensile properties in a small punch test employing in-situ DIC based deflection mapping. <i>Journal of Nuclear Materials</i> , 2020, 538, 152260.	2.7	15
31	The sensitivity ranking of ductile material mechanical properties, geometrical factors, friction coefficients and damage parameters for small punch test. <i>International Journal of Pressure Vessels and Piping</i> , 2021, 193, 104468.	2.6	15
32	Correlation study on tensile properties of Cu, CuCrZr and W by small punch test and uniaxial tensile test. <i>Fusion Engineering and Design</i> , 2022, 177, 113061.	1.9	14
33	Three-dimensional displacement mapping of diffused Pt thermal barrier coatings via synchrotron X-ray computed tomography and digital volume correlation. <i>Scripta Materialia</i> , 2016, 115, 100-103.	5.2	13
34	Obtaining the J-integral by diffraction-based crack-field strain mapping. <i>Procedia Structural Integrity</i> , 2016, 2, 2519-2526.	0.8	12
35	Correlative Optical and X-ray Imaging of Strain Evolution During Double-Torsion Fracture Toughness Measurements in Shale. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 10,517.	3.4	12
36	Redistribution of residual stress by thermal shock in reactor pressure vessel steel clad with nickel alloy. <i>International Journal of Pressure Vessels and Piping</i> , 2019, 169, 37-47.	2.6	12

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37	Quantification of constraint effects in fracture mechanism transition for cracked structures under mixed mode loading. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2009, 32, 5-17.	3.4	11
38	RICH TOMOGRAPHY TECHNIQUES FOR THE ANALYSIS OF MICROSTRUCTURE AND DEFORMATION. <i>International Journal of Computational Methods</i> , 2014, 11, 1343006.	1.3	10
39	Mapping of axial plastic zone for roller bearing overloads using neutron transmission imaging. <i>Materials and Design</i> , 2018, 156, 103-112.	7.0	10
40	Microstructure-informed, predictive crystal plasticity finite element model of fatigue-dwells. <i>Computational Materials Science</i> , 2020, 183, 109823.	3.0	10
41	Temperature driven failure of carbon epoxy composites – A quantitative full-field study. <i>Composites Science and Technology</i> , 2018, 155, 33-40.	7.8	9
42	Investigating the microstructure and mechanical behaviour of simulant –lava-like–fuel containing materials from the Chernobyl reactor unit 4 meltdown. <i>Materials and Design</i> , 2021, 201, 109502.	7.0	9
43	Stress Triaxiality and Lode Angle Parameter Characterization of Flat Metal Specimen with Inclined Notch. <i>Metals</i> , 2021, 11, 1627.	2.3	9
44	Measurement of strain evolution in overloaded roller bearings using energy dispersive X-ray diffraction. <i>Tribology International</i> , 2019, 140, 105893.	5.9	8
45	Measurement of strain evolution in overloaded roller bearings using time-of-flight neutron diffraction. <i>Materials and Design</i> , 2020, 190, 108571.	7.0	7
46	Effects of crack tip blunting and residual stress on a warm pre-stressed crack specimen. <i>Computational Materials Science</i> , 2006, 37, 393-400.	3.0	6
47	Evaluation of fracture toughness and residual stress in AISI 316L electron beam welds. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2021, 44, 2015-2032.	3.4	6
48	Estimating damage parameters of a CuCrZr alloy subjected to two varying heat treatments using small punch test. <i>Journal of Nuclear Materials</i> , 2021, 557, 153263.	2.7	5
49	Validation of BS 7910; assessing the integrity of pipes containing axial flaws. <i>Procedia Structural Integrity</i> , 2018, 13, 868-876.	0.8	3
50	Validating 3D two-parameter fracture mechanics models for structural integrity assessments. <i>Theoretical and Applied Fracture Mechanics</i> , 2019, 103, 102281.	4.7	3
51	The effects of internal stresses on the creep deformation investigated using in-situ synchrotron diffraction and crystal plasticity modelling. <i>International Journal of Solids and Structures</i> , 2021, 229, 111127.	2.7	3
52	Investigating the mechanical behaviour of Fukushima MCCI using synchrotron Xray tomography and digital volume correlation. <i>Npj Materials Degradation</i> , 2022, 6, .	5.8	3
53	Finite element analysis of a center crack specimen warm pre-stressed under different modes of loading. <i>Computational Materials Science</i> , 2007, 38, 847-856.	3.0	2
54	Validating 3D two-parameter fracture mechanics for structural integrity assessments. <i>Procedia Structural Integrity</i> , 2018, 13, 965-970.	0.8	2

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55	Statistical modelling of fracture using cellular automata finite element. Theoretical and Applied Fracture Mechanics, 2021, 115, 103066.	4.7	2
56	Effect of Biaxiality on Engineering Critical Assessments. Procedia Structural Integrity, 2019, 17, 347-354.	0.8	1
57	Validation of BS 7910 fracture assessment procedures; wide plates and cylinders. International Journal of Pressure Vessels and Piping, 2021, 190, 104309.	2.6	1
58	Fracture Characterisation of Reactor Core Graphite under Biaxial Loading. Key Engineering Materials, 0, 577-578, 485-488.	0.4	0
59	Fabrication of micro-scale fracture specimens for nuclear applications by direct laser writing. MRS Advances, 2018, 3, 1771-1775.	0.9	0
60	Influence of Microstructure on Synchrotron X-ray Diffraction Lattice Strain Measurement Uncertainty. Metals, 2021, 11, 774.	2.3	0