

Ahmed Benallal

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

75
papers

1,905
citations

23
h-index

42
g-index

76
ext. papers

2,081
ext. citations

3.3
avg, IF

4.65
L-index

#	Paper	IF	Citations
75	Flow and fracture characteristics of aluminium alloy AA5083-H116 as function of strain rate, temperature and triaxiality. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 364, 260-272	5.3	249
74	Constitutive Equations for Nonproportional Cyclic Elasto-Viscoplasticity. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 1987 , 109, 326-336	1.8	180
73	An experimental and numerical investigation of the behaviour of AA5083 aluminium alloy in presence of the Portevin-Chatelier effect. <i>International Journal of Plasticity</i> , 2008 , 24, 1916-1945	7.6	126
72	Strain localization and bifurcation in a nonlocal continuum. <i>International Journal of Solids and Structures</i> , 1993 , 30, 1761-1775	3.1	104
71	Theoretical and computational aspects of a thermodynamically consistent framework for geometrically linear gradient damage. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2001 , 190, 6555-6576	5.7	72
70	An experimental investigation of cyclic hardening of 316 stainless steel and of 2024 aluminium alloy under multiaxial loadings. <i>Nuclear Engineering and Design</i> , 1989 , 114, 345-353	1.8	71
69	An integration algorithm and the corresponding consistent tangent operator for fully coupled elastoplastic and damage equations. <i>Communications in Applied Numerical Methods</i> , 1988 , 4, 731-740		69
68	Bifurcation and stability issues in gradient theories with softening. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2007 , 15, S283-S295	2	61
67	Dynamic strain aging and related instabilities: experimental, theoretical and numerical aspects. <i>European Journal of Mechanics, A/Solids</i> , 2006 , 25, 397-424	3.7	60
66	Anisotropic failure modes of high-strength aluminium alloy under various stress states. <i>International Journal of Plasticity</i> , 2013 , 48, 34-53	7.6	57
65	Continuum damage mechanics and local approach to fracture: Numerical procedures. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1991 , 92, 141-155	5.7	56
64	On the plastic anisotropy of an aluminium alloy and its influence on constrained multiaxial flow. <i>International Journal of Plasticity</i> , 2011 , 27, 2005-2025	7.6	50
63	Nonlocal continuum effects on bifurcation in the plane strain tension-compression test. <i>Journal of the Mechanics and Physics of Solids</i> , 1995 , 43, 741-770	5	48
62	Towards Humanlike Social Touch for Sociable Robotics and Prosthetics: Comparisons on the Compliance, Conformance and Hysteresis of Synthetic and Human Fingertip Skins. <i>International Journal of Social Robotics</i> , 2009 , 1, 29-40	4	43
61	Effects of temperature and thermo-mechanical couplings on material instabilities and strain localization of inelastic materials. <i>Journal of the Mechanics and Physics of Solids</i> , 2004 , 52, 725-753	5	41
60	A numerical study on the influence of the Portevin-Chatelier effect on necking in an aluminium alloy. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2007 , 15, 747-772	2	38
59	Localization analysis via a geometrical method. <i>International Journal of Solids and Structures</i> , 1996 , 33, 99-119	3.1	36

58	Spatial and Temporal Characteristics of Propagating Deformation Bands in AA5182 Alloy at Room Temperature. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011 , 42, 3358-3369	2.3	31
57	Gradient constitutive relations: numerical aspects and application to gradient damage. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2005 , 194, 5191-5220	5.7	29
56	An implicit BEM formulation for gradient plasticity and localization phenomena. <i>International Journal for Numerical Methods in Engineering</i> , 2002 , 53, 1853-1869	2.4	27
55	Perturbation growth and localization in fluid-saturated inelastic porous media under quasi-static loadings. <i>Journal of the Mechanics and Physics of Solids</i> , 2003 , 51, 851-899	5	24
54	BEM applied to damage models emphasizing localization and associated regularization techniques. <i>Engineering Analysis With Boundary Elements</i> , 2005 , 29, 814-827	2.6	24
53	Experimental and numerical study on the behaviour of PVC and HDPE in biaxial tension. <i>Mechanics of Materials</i> , 2012 , 54, 18-31	3.3	23
52	Effects of strain rate on the characteristics of PLC deformation bands for AA5083-H116 aluminium alloy. <i>Philosophical Magazine</i> , 2008 , 88, 3311-3338	1.6	22
51	Failure criteria with unilateral conditions for simulation of plate perforation. <i>European Journal of Mechanics, A/Solids</i> , 2011 , 30, 468-476	3.7	21
50	Bifurcation and Localization in Rate-Independent Materials. Some General Considerations 1993 , 1-44		21
49	An assessment of the role of the third stress invariant in the Gurson approach for ductile fracture. <i>European Journal of Mechanics, A/Solids</i> , 2014 , 47, 400-414	3.7	20
48	On the description of localization and failure phenomena by the boundary element method. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006 , 195, 5833-5856	5.7	20
47	A thermo-elasto-viscoplastic constitutive model for polymers. <i>Journal of the Mechanics and Physics of Solids</i> , 2019 , 124, 681-701	5	20
46	Material instabilities in inelastic saturated porous media under dynamic loadings. <i>International Journal of Solids and Structures</i> , 2002 , 39, 3693-3716	3.1	17
45	A study of the influence of precipitate-free zones on the strain localization and failure of the aluminium alloy AA7075-T651. <i>Philosophical Magazine</i> , 2015 , 95, 3278-3304	1.6	14
44	Uniqueness, loss of ellipticity and localization for the time-discretized, rate-dependent boundary value problem with softening. <i>International Journal for Numerical Methods in Engineering</i> , 2010 , 84, 864-882	2.4	14
43	The Uncanny Valley and the Search for Human Skin-Like Materials for a Prosthetic Fingertip 2006 ,		14
42	The Conformance Test for Robotic/Prosthetic Fingertip Skins		14
41	On the description of ductile fracture in metals by the strain localization theory. <i>International Journal of Fracture</i> , 2018 , 209, 27-51	2.3	13

40	A two-field finite element formulation for elasticity coupled to damage. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1994 , 114, 193-212	5.7	12
39	Strain-Rate Sensitivity of Aluminum Alloys AA1200 and AA3103. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2010 , 132,	1.8	10
38	A note on ill-posedness for rate-dependent problems and its relation to the rate-independent case. <i>Computational Mechanics</i> , 2008 , 42, 261-269	4	10
37	On numerical analyses in the presence of unstable saturated porous materials. <i>International Journal for Numerical Methods in Engineering</i> , 2003 , 56, 883-910	2.4	10
36	Numerical study of ductile failure under non-proportional loading. <i>European Journal of Mechanics, A/Solids</i> , 2019 , 74, 221-241	3.7	10
35	Anisotropic tensile failure of metals by the strain localization theory: An application to a high-strength aluminium alloy. <i>European Journal of Mechanics, A/Solids</i> , 2018 , 69, 99-112	3.7	10
34	Aspects of bifurcation in an isotropic elastic continuum with orthotropic inelastic interface. <i>European Journal of Mechanics, A/Solids</i> , 2008 , 27, 532-547	3.7	9
33	Lifetime prediction of structures in anisothermal viscoplasticity coupled to damage. <i>Nuclear Engineering and Design</i> , 1992 , 133, 345-360	1.8	9
32	Structural analysis in quasi-static elasto-viscoplasticity. <i>Engineering Computations</i> , 1986 , 3, 323-330	1.4	9
31	A Gradient-Enhanced Damage Approach to Fracture. <i>European Physical Journal Special Topics</i> , 1996 , 06, C6-491-C6-502		8
30	Effect of strain rate and dynamic strain ageing on work-hardening for aluminium alloy AA5182-O. <i>International Journal of Materials Research</i> , 2012 , 103, 1035-1041	0.5	7
29	Influence of specimen geometry on the PortevinâLe Châtelier effect due to dynamic strain aging for the AA5083-H116 aluminum alloy. <i>Journal of Mechanics of Materials and Structures</i> , 2011 , 6, 951-968	1.2	7
28	On crystallographic aspects of heterogeneous plastic flow during ductile tearing: 3D measurements and crystal plasticity simulations for AA7075-T651. <i>International Journal of Plasticity</i> , 2021 , 144, 103028	7.6	7
27	Effective behaviour of porous ductile solids with a non-quadratic isotropic matrix yield surface. <i>Journal of the Mechanics and Physics of Solids</i> , 2019 , 130, 56-81	5	6
26	Validation of structural computation codes in elastoviscoplasticity. <i>International Journal for Numerical Methods in Engineering</i> , 1990 , 29, 1109-1130	2.4	6
25	FAILURE ANALYSIS OF STRUCTURES BY CONTINUUM DAMAGE MECHANICS 1984 , 3669-3676		6
24	Effects of non-proportional loadings in cyclic elasto-viscoplasticity: experimental, theoretical and numerical aspects. <i>Engineering Computations</i> , 1988 , 5, 241-247	1.4	5
23	Consolidation of elasticâplastic saturated porous media by the boundary element method. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008 , 197, 4626-4644	5.7	4

22	On the stability of some time-integration schemes in quasi-static hardening elasto-viscoplasticity. <i>Engineering Analysis</i> , 1987 , 4, 95-99		4
21	Constitutive equations for porous solids with matrix behaviour dependent on the second and third stress invariants. <i>International Journal of Impact Engineering</i> , 2017 , 108, 47-62	4	3
20	Quasi-static and Dynamic Fracture of High-strength Aluminium Alloy 2014 , 3, 51-56		3
19	BEM modeling of saturated porous media susceptible to damage. <i>Engineering Analysis With Boundary Elements</i> , 2012 , 36, 147-153	2.6	3
18	Finite element simulations of the Portevin-Chatelier effect in aluminium alloy. <i>European Physical Journal Special Topics</i> , 2006 , 134, 435-441		3
17	On interfacial properties in gradient damaging continua. <i>Comptes Rendus - Mecanique</i> , 2005 , 333, 319-324	4.1	3
16	On localization modes in coupled thermo-hydro-mechanical problems. <i>Comptes Rendus - Mecanique</i> , 2005 , 333, 557-564	2.1	3
15	Some remarks on gradient and nonlocal damage theories. <i>Studies in Applied Mechanics</i> , 1998 , 223-236		2
14	A Numerical Study on Ductile Failure of Porous Ductile Solids With Rate-Dependent Matrix Behavior. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2020 , 87,	2.7	2
13	On some features of the effective behaviour of porous solids with J2- and J3-dependent yielding matrix behaviour. <i>Comptes Rendus - Mecanique</i> , 2018 , 346, 77-88	2.1	1
12	Computational aspects in presence of negative strain-rate sensitivity with application to aluminium alloys exhibiting the Portevin-Chatelier effect. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2011 , 19, 015007	2	1
11	On the fracture locus of AA7075-T651. <i>EPJ Web of Conferences</i> , 2010 , 6, 02006	0.3	1
10	Quasi-static versus dynamic failure instabilities in fluid-saturated porous media. <i>Comptes Rendus - Mecanique</i> , 2002 , 330, 339-345	2.1	1
9	The Role of Mean Strain on the Stress Response in Nonproportional Cyclic Plasticity 1989 , 203-206		1
8	X-ray tomographic image post-processing and a new 2D LBM simulation for the determination of the porosity and the static airflow resistivity of an acoustic fibrous material. <i>Applied Acoustics</i> , 2020 , 169, 107452	3.1	
7	BEM applied to damage phenomena in saturated porous media. <i>IOP Conference Series: Materials Science and Engineering</i> , 2010 , 10, 012049	0.4	
6	Instabilities across the scales. <i>Philosophical Magazine</i> , 2006 , 86, 3115-3116	1.6	
5	Some aspects of a gradient damage formulation. <i>Revue Europeenne Des Elements</i> , 2001 , 10, 157-172		

- 4 On localization in saturated porous continua. *Comptes Rendus Mecanique*, **2000**, 328, 847-853
- 3 Conditions for Localization in Plasticity and Rate-Independent Materials **2001**, 274-280
- 2 On the Measurement and Evaluation of the Width of Portevin-Chatelier Deformation Bands with Application to AA5083-H116 Aluminium Alloy. *IUTAM Symposium on Cellular, Molecular and Tissue Mechanics*, **2008**, 329-338 0.3
- 1 Plasticity and Viscoplasticity Under Cyclic Complex Loadings **1988**, 545-548