

# Ahmed Benallal

## List of Publications by Year in Descending Order

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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	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> , <b>2021</b> , 144, 103028	7.6	7
74	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> , <b>2020</b> , 169, 107452	3.1	
73	A Numerical Study on Ductile Failure of Porous Ductile Solids With Rate-Dependent Matrix Behavior. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2020</b> , 87,	2.7	2
72	Effective behaviour of porous ductile solids with a non-quadratic isotropic matrix yield surface. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2019</b> , 130, 56-81	5	6
71	A thermo-elasto-viscoplastic constitutive model for polymers. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2019</b> , 124, 681-701	5	20
70	Numerical study of ductile failure under non-proportional loading. <i>European Journal of Mechanics, A/Solids</i> , <b>2019</b> , 74, 221-241	3.7	10
69	On some features of the effective behaviour of porous solids with J2- and J3-dependent yielding matrix behaviour. <i>Comptes Rendus - Mecanique</i> , <b>2018</b> , 346, 77-88	2.1	1
68	On the description of ductile fracture in metals by the strain localization theory. <i>International Journal of Fracture</i> , <b>2018</b> , 209, 27-51	2.3	13
67	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> , <b>2018</b> , 69, 99-112	3.7	10
66	Constitutive equations for porous solids with matrix behaviour dependent on the second and third stress invariants. <i>International Journal of Impact Engineering</i> , <b>2017</b> , 108, 47-62	4	3
65	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> , <b>2015</b> , 95, 3278-3304	1.6	14
64	Quasi-static and Dynamic Fracture of High-strength Aluminium Alloy <b>2014</b> , 3, 51-56		3
63	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> , <b>2014</b> , 47, 400-414	3.7	20
62	Anisotropic failure modes of high-strength aluminium alloy under various stress states. <i>International Journal of Plasticity</i> , <b>2013</b> , 48, 34-53	7.6	57
61	BEM modeling of saturated porous media susceptible to damage. <i>Engineering Analysis With Boundary Elements</i> , <b>2012</b> , 36, 147-153	2.6	3
60	Experimental and numerical study on the behaviour of PVC and HDPE in biaxial tension. <i>Mechanics of Materials</i> , <b>2012</b> , 54, 18-31	3.3	23
59	Effect of strain rate and dynamic strain ageing on work-hardening for aluminium alloy AA5182-O. <i>International Journal of Materials Research</i> , <b>2012</b> , 103, 1035-1041	0.5	7

58	On the plastic anisotropy of an aluminium alloy and its influence on constrained multiaxial flow. <i>International Journal of Plasticity</i> , <b>2011</b> , 27, 2005-2025	7.6	50
57	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> , <b>2011</b> , 42, 3358-3369	2.3	31
56	Failure criteria with unilateral conditions for simulation of plate perforation. <i>European Journal of Mechanics, A/Solids</i> , <b>2011</b> , 30, 468-476	3.7	21
55	Computational aspects in presence of negative strain-rate sensitivity with application to aluminium alloys exhibiting the Portevinâlle Chatelier effect. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2011</b> , 19, 015007	2	1
54	Influence of specimen geometry on the Portevinâlle Châtelier effect due to dynamic strain aging for the AA5083-H116 aluminum alloy. <i>Journal of Mechanics of Materials and Structures</i> , <b>2011</b> , 6, 951-968	1.2	7
53	Strain-Rate Sensitivity of Aluminum Alloys AA1200 and AA3103. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , <b>2010</b> , 132,	1.8	10
52	BEM applied to damage phenomena in saturated porous media. <i>IOP Conference Series: Materials Science and Engineering</i> , <b>2010</b> , 10, 012049	0.4	
51	On the fracture locus of AA7075-T651. <i>EPJ Web of Conferences</i> , <b>2010</b> , 6, 02006	0.3	1
50	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> , <b>2010</b> , 84, 864-882	2.4	14
49	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> , <b>2009</b> , 1, 29-40	4	43
48	Effects of strain rate on the characteristics of PLC deformation bands for AA5083-H116 aluminium alloy. <i>Philosophical Magazine</i> , <b>2008</b> , 88, 3311-3338	1.6	22
47	A note on ill-posedness for rate-dependent problems and its relation to the rate-independent case. <i>Computational Mechanics</i> , <b>2008</b> , 42, 261-269	4	10
46	Consolidation of elasticâplastic saturated porous media by the boundary element method. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2008</b> , 197, 4626-4644	5.7	4
45	Aspects of bifurcation in an isotropic elastic continuum with orthotropic inelastic interface. <i>European Journal of Mechanics, A/Solids</i> , <b>2008</b> , 27, 532-547	3.7	9
44	An experimental and numerical investigation of the behaviour of AA5083 aluminium alloy in presence of the Portevinâlle Chatelier effect. <i>International Journal of Plasticity</i> , <b>2008</b> , 24, 1916-1945	7.6	126
43	On the Measurement and Evaluation of the Width of Portevinâlle Chatelier Deformation Bands with Application to AA5083-H116 Aluminium Alloy. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , <b>2008</b> , 329-338	0.3	
42	A numerical study on the influence of the Portevinâlle Chatelier effect on necking in an aluminium alloy. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2007</b> , 15, 747-772	2	38
41	Bifurcation and stability issues in gradient theories with softening. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2007</b> , 15, S283-S295	2	61

40	Instabilities across the scales. <i>Philosophical Magazine</i> , <b>2006</b> , 86, 3115-3116		1.6
39	The Uncanny Valley and the Search for Human Skin-Like Materials for a Prosthetic Fingertip <b>2006</b> ,		14
38	Finite element simulations of the PortevinâLe Chatelier effect in aluminium alloy. <i>European Physical Journal Special Topics</i> , <b>2006</b> , 134, 435-441		3
37	Dynamic strain aging and related instabilities: experimental, theoretical and numerical aspects. <i>European Journal of Mechanics, A/Solids</i> , <b>2006</b> , 25, 397-424	3.7	60
36	On the description of localization and failure phenomena by the boundary element method. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2006</b> , 195, 5833-5856	5.7	20
35	Gradient constitutive relations: numerical aspects and application to gradient damage. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2005</b> , 194, 5191-5220	5.7	29
34	On interfacial properties in gradient damaging continua. <i>Comptes Rendus - Mecanique</i> , <b>2005</b> , 333, 319-324	4.1	3
33	On localization modes in coupled thermo-hydro-mechanical problems. <i>Comptes Rendus - Mecanique</i> , <b>2005</b> , 333, 557-564	2.1	3
32	BEM applied to damage models emphasizing localization and associated regularization techniques. <i>Engineering Analysis With Boundary Elements</i> , <b>2005</b> , 29, 814-827	2.6	24
31	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> , <b>2004</b> , 52, 725-753	5	41
30	Flow and fracture characteristics of aluminium alloy AA5083âH116 as function of strain rate, temperature and triaxiality. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2004</b> , 364, 260-272	5.3	249
29	On numerical analyses in the presence of unstable saturated porous materials. <i>International Journal for Numerical Methods in Engineering</i> , <b>2003</b> , 56, 883-910	2.4	10
28	Perturbation growth and localization in fluid-saturated inelastic porous media under quasi-static loadings. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2003</b> , 51, 851-899	5	24
27	An implicit BEM formulation for gradient plasticity and localization phenomena. <i>International Journal for Numerical Methods in Engineering</i> , <b>2002</b> , 53, 1853-1869	2.4	27
26	Quasi-static versus dynamic failure instabilities in fluid-saturated porous media. <i>Comptes Rendus - Mecanique</i> , <b>2002</b> , 330, 339-345	2.1	1
25	Material instabilities in inelastic saturated porous media under dynamic loadings. <i>International Journal of Solids and Structures</i> , <b>2002</b> , 39, 3693-3716	3.1	17
24	Some aspects of a gradient damage formulation. <i>Revue Europeenne Des Elements</i> , <b>2001</b> , 10, 157-172		
23	Theoretical and computational aspects of a thermodynamically consistent framework for geometrically linear gradient damage. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2001</b> , 190, 6555-6576	5.7	72

22	Conditions for Localization in Plasticity and Rate-Independent Materials <b>2001</b> , 274-280		
21	On localization in saturated porous continua. <i>Comptes Rendus Mecanique</i> , <b>2000</b> , 328, 847-853		
20	Some remarks on gradient and nonlocal damage theories. <i>Studies in Applied Mechanics</i> , <b>1998</b> , 223-236	2	
19	A Gradient-Enhanced Damage Approach to Fracture. <i>European Physical Journal Special Topics</i> , <b>1996</b> , 06, C6-491-C6-502		8
18	Localization analysis via a geometrical method. <i>International Journal of Solids and Structures</i> , <b>1996</b> , 33, 99-119	3.1	36
17	Nonlocal continuum effects on bifurcation in the plane strain tension-compression test. <i>Journal of the Mechanics and Physics of Solids</i> , <b>1995</b> , 43, 741-770	5	48
16	A two-field finite element formulation for elasticity coupled to damage. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>1994</b> , 114, 193-212	5.7	12
15	Strain localization and bifurcation in a nonlocal continuum. <i>International Journal of Solids and Structures</i> , <b>1993</b> , 30, 1761-1775	3.1	104
14	Bifurcation and Localization in Rate-Independent Materials. Some General Considerations <b>1993</b> , 1-44		21
13	Lifetime prediction of structures in anisothermal viscoplasticity coupled to damage. <i>Nuclear Engineering and Design</i> , <b>1992</b> , 133, 345-360	1.8	9
12	Continuum damage mechanics and local approach to fracture: Numerical procedures. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>1991</b> , 92, 141-155	5.7	56
11	Validation of structural computation codes in elastoviscoplasticity. <i>International Journal for Numerical Methods in Engineering</i> , <b>1990</b> , 29, 1109-1130	2.4	6
10	An experimental investigation of cyclic hardening of 316 stainless steel and of 2024 aluminium alloy under multiaxial loadings. <i>Nuclear Engineering and Design</i> , <b>1989</b> , 114, 345-353	1.8	71
9	The Role of Mean Strain on the Stress Response in Nonproportional Cyclic Plasticity <b>1989</b> , 203-206		1
8	An integration algorithm and the corresponding consistent tangent operator for fully coupled elastoplastic and damage equations. <i>Communications in Applied Numerical Methods</i> , <b>1988</b> , 4, 731-740		69
7	Effects of non-proportional loadings in cyclic elasto-viscoplasticity: experimental, theoretical and numerical aspects. <i>Engineering Computations</i> , <b>1988</b> , 5, 241-247	1.4	5
6	Plasticity and Viscoplasticity Under Cyclic Complex Loadings <b>1988</b> , 545-548		
5	Constitutive Equations for Nonproportional Cyclic Elasto-Viscoplasticity. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , <b>1987</b> , 109, 326-336	1.8	180

4	On the stability of some time-integration schemes in quasi-static hardening elasto-viscoplasticity. <i>Engineering Analysis</i> , <b>1987</b> , 4, 95-99		4
3	Structural analysis in quasi-static elasto-viscoplasticity. <i>Engineering Computations</i> , <b>1986</b> , 3, 323-330	1.4	9
2	FAILURE ANALYSIS OF STRUCTURES BY CONTINUUM DAMAGE MECHANICS <b>1984</b> , 3669-3676		6
1	The Conformance Test for Robotic/Prosthetic Fingertip Skins		14