J A RodrÃ-guez-MartÃ-nez

List of Publications by Year
in descending order

71 papers	1,688 citations	318942 23 h-index	355658 38 g-index
92 all docs	92 docs citations	92 times ranked	1125 citing authors

#	Article	IF	Citations
1	New insights into the role of porous microstructure on dynamic shear localization. International Journal of Plasticity, 2022, 148, 103150.	4.1	13
2	The effect of voids shape on hypervelocity cylindrical cavity expansion and shock waves formation in transversely isotropic porous materials. Acta Mechanica, 2022, 233, 1413-1434.	1.1	1
3	Theoretical predictions of dynamic necking formability of ductile metallic sheets with evolving plastic anisotropy and tension-compression asymmetry. International Journal of Material Forming, 2022, 15, .	0.9	0
4	Shear band formation in porous thin-walled tubes subjected to dynamic torsion. International Journal of Solids and Structures, 2022, 252, 111837.	1.3	6
5	The combined effect of size, inertia and porosity on the indentation response of ductile materials. Mechanics of Materials, 2021, 153, 103674.	1.7	8
6	A three-pronged approach to predict the effect of plastic orthotropy on the formability of thin sheets subjected to dynamic biaxial stretching. Journal of the Mechanics and Physics of Solids, 2021, 146, 104189.	2.3	10
7	Effect of the third invariant on the formation of necking instabilities in ductile plates subjected to plane strain tension. Meccanica, 2021, 56, 1789-1818.	1.2	1
8	Size effects on the plastic shock formation in steady-state cavity expansion in porous ductile materials. Mechanics Research Communications, 2021, 113, 103690.	1.0	3
9	Finite element analysis to determine the role of porosity in dynamic localization and fragmentation: Application to porous microstructures obtained from additively manufactured materials. International Journal of Plasticity, 2021, 143, 102999.	4.1	18
10	A simple and computationally efficient stress integration scheme based on numerical approximation of the yield function gradients: Application to advanced yield criteria. Finite Elements in Analysis and Design, 2021, 192, 103538.	1.7	8
11	Influence on strain-rate history effects on the development of necking instabilities under dynamic loading conditions. International Journal of Solids and Structures, 2021, 230-231, 111152.	1.3	5
12	Flow and fracture of austenitic stainless steels at cryogenic temperatures. Engineering Fracture Mechanics, 2021, 258, 108042.	2.0	8
13	A new analytical model to predict the formation of necking instabilities in porous plates subjected to dynamic biaxial loading. International Journal of Fracture, 2021, 232, 181.	1.1	1
14	Multiple necking patterns in elasto-plastic rings subjected to rapid radial expansion: The effect of random distributions of geometric imperfections. International Journal of Impact Engineering, 2020, 144, 103661.	2.4	8
15	Dynamic shear instabilities in metallic sheets subjected to shear-compression loading. Journal of the Mechanics and Physics of Solids, 2020, 144, 104108.	2.3	2
16	The effect of tension-compression asymmetry on the formation of dynamic necking instabilities under plane strain stretching. International Journal of Plasticity, 2020, 128, 102656.	4.1	10
17	Modeling dynamic spherical cavity expansion in elasto-viscoplastic media. Acta Mechanica, 2020, 231, 2381-2397.	1.1	8
18	Dynamic cylindrical cavity expansion in orthotropic porous ductile materials. International Journal of Impact Engineering, 2019, 132, 103325.	2.4	8

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19	Dynamic spherical cavity expansion in Gurson materials with uniform and non-uniform distributions of porosity. Mechanics of Materials, 2019, 134, 115-131.	1.7	6
20	Effects of plastic anisotropy on localization in orthotropic materials: New explicit expressions for the orientation of localization bands in flat specimens subjected to uniaxial tension. Journal of the Mechanics and Physics of Solids, 2019, 126, 272-284.	2.3	12
21	A comparative study of the dynamic fragmentation of non-linear elastic and elasto-plastic rings: The roles of stored elastic energy and plastic dissipation. Mechanics of Materials, 2019, 132, 134-148.	1.7	8
22	The combined effect of plastic orthotropy and tension-compression asymmetry on the development of necking instabilities in flat tensile specimens subjected to dynamic loading. International Journal of Solids and Structures, 2019, 159, 272-288.	1.3	17
23	A one-dimensional model to describe flow localization in viscoplastic slender bars subjected to super critical impact velocities. Mechanics of Time-Dependent Materials, 2019, 23, 75-95.	2.3	1
24	Random distributions of initial porosity trigger regular necking patterns at high strain rates. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20170575.	1.0	11
25	Influence of unobservable overstress in a rate-independent inelastic loading curve on dynamic necking of a bar. Mechanics of Materials, 2018, 116, 158-168.	1.7	1
26	Nonlinear axisymmetric vibrations of a hyperelastic orthotropic cylinder. International Journal of Non-Linear Mechanics, 2018, 99, 131-143.	1.4	15
27	Non-uniform distributions of initial porosity in metallic materials affect the growth rate of necking instabilities in flat tensile samples subjected to dynamic loading. Mechanics Research Communications, 2018, 91, 87-92.	1.0	6
28	Oscillatory behaviour of compressible hyperelastic shells subjected to dynamic inflation: a numerical study. Acta Mechanica, 2017, 228, 2187-2205.	1.1	11
29	Spherical void expansion in rubber-like materials: The stabilizing effects of viscosity and inertia. International Journal of Non-Linear Mechanics, 2017, 92, 118-126.	1.4	15
30	The critical neck spacing in ductile plates subjected to dynamic biaxial loading: On the interplay between loading path and inertia effects. International Journal of Solids and Structures, 2017, 108, 74-84.	1.3	22
31	Nonlinear resonances of an idealized saccular aneurysm. International Journal of Engineering Science, 2017, 121, 154-166.	2.7	11
32	Multiple necking pattern in nonlinear elastic bars subjected to dynamic stretching: The role of defects and inertia. International Journal of Solids and Structures, 2017, 125, 232-243.	1.3	22
33	On the relation between shape imperfections of a specimen and necking growth rate under dynamic conditions. International Journal of Engineering Science, 2017, 119, 278-287.	2.7	3
34	Necking evolution in dynamically stretched bars: New experimental and computational insights. Journal of the Mechanics and Physics of Solids, 2016, 91, 216-239.	2.3	18
35	On the interplay between material flaws and dynamic necking. Mechanics Research Communications, 2016, 72, 53-58.	1.0	2
36	The role of constitutive relation in the stability of hyper-elastic spherical membranes subjected to dynamic inflation. International Journal of Engineering Science, 2015, 93, 31-45.	2.7	29

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37	Constitutive sensitivity of the oscillatory behaviour of hyperelastic cylindrical shells. Journal of Sound and Vibration, 2015, 358, 199-216.	2.1	15
38	The deterministic nature of the fracture location in the dynamic tensile testing of steel sheets. International Journal of Impact Engineering, 2015, 86, 318-335.	2.4	21
39	Collective behaviour and spacing of necks in ductile plates subjected to dynamic biaxial loading. Journal of the Mechanics and Physics of Solids, 2015, 85, 245-269.	2.3	19
40	Dynamic recrystallization and adiabatic shear localization. Mechanics of Materials, 2015, 81, 41-55.	1.7	25
41	An analysis of microstructural and thermal softening effects in dynamic necking. Mechanics of Materials, 2015, 80, 298-310.	1.7	15
42	Experimental Study on the Perforation Process of 5754-H111 and 6082-T6 Aluminium Plates Subjected to Normal Impact by Conical, Hemispherical and Blunt Projectiles. Experimental Mechanics, 2014, 54, 729-742.	1.1	55
43	The effect of radial inertia on flow localization in ductile rods subjected to dynamic extension. International Journal of Impact Engineering, 2014, 69, 157-164.	2.4	4
44	Dynamic necking in materials with strain induced martensitic transformation. Journal of the Mechanics and Physics of Solids, 2014, 64, 316-337.	2.3	24
45	Approaching steady cavitation: The time scale in hypervelocity cavity expansion in work hardening and transformation hardening solids. International Journal of Impact Engineering, 2014, 73, 43-55.	2.4	10
46	Dynamic Necking of Notched Tensile Bars: An Experimental Study. Experimental Mechanics, 2014, 54, 1099-1109.	1.1	13
47	Dynamic tensile necking: Influence of specimen geometry and boundary conditions. Mechanics of Materials, 2013, 62, 1-13.	1.7	37
48	On the Taylorâ€“Quinney coefficient in dynamically phase transforming materials. Application to 304 stainless steel. International Journal of Plasticity, 2013, 40, 185-201.	4.1	80
49	Experimental and numerical analysis of the martensitic transformation in AISI 304 steel sheets subjected to perforation by conical and hemispherical projectiles. International Journal of Solids and Structures, 2013, 50, 339-351.	1.3	46
50	Finite element analysis of AISI 304 steel sheets subjected to dynamic tension: The effects of martensitic transformation and plastic strain development on flow localization. International Journal of Impact Engineering, 2013, 54, 206-216.	2.4	18
51	On the complete extinction of selected imperfection wavelengths in dynamically expanded ductile rings. Mechanics of Materials, 2013, 60, 107-120.	1.7	23
52	Identification of the critical wavelength responsible for the fragmentation of ductile rings expanding at very high strain rates. Journal of the Mechanics and Physics of Solids, 2013, 61, 1357-1376.	2.3	41
53	Compressive Viscoplastic Response of 6082â€T6 and 7075â€T6 Aluminium Alloys Under Wide Range of Strain Rate at Room Temperature: Experiments and Modelling. Strain, 2012, 48, 498-509.	1.4	45
54	A constitutive model for analyzing martensite formation in austenitic steels deforming at high strain rates. International Journal of Plasticity, 2012, 29, 77-101.	4.1	75

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55	On the interplay between strain rate and strain rate sensitivity on flow localization in the dynamic expansion of ductile rings. International Journal of Solids and Structures, 2012, 49, 481-491.	1.3	31
56	Analysis of the strain induced martensitic transformation in austenitic steel subjected to dynamic perforation. EPJ Web of Conferences, 2012, 26, 04036.	0.1	3
57	A dislocation-based constitutive description for modeling the behavior of FCC metals within wide ranges of strain rate and temperature. Mechanics of Materials, 2011, 43, 901-912.	1.7	31
58	Experimental study on the martensitic transformation in AISI 304 steel sheets subjected to tension under wide ranges of strain rate at room temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 5974-5982.	2.6	61
59	Thermo-viscoplastic behaviour of 2024-T3 aluminium sheets subjected to low velocity perforation at different temperatures. Thin-Walled Structures, 2011, 49, 819-832.	2.7	27
60	Temperature measurements on ES steel sheets subjected to perforation by hemispherical projectiles. International Journal of Impact Engineering, 2010, 37, 828-841.	2.4	20
61	A thermo-viscoplastic constitutive model for FCC metals with application to OFHC copper. International Journal of Mechanical Sciences, 2010, 52, 120-135.	3.6	102
62	Experimental survey on the behaviour of AISI 304 steel sheets subjected to perforation. Thin-Walled Structures, 2010, 48, 966-978.	2.7	26
63	Thermo-mechanical behaviour of TRIP 1000 steel sheets subjected to low velocity perforation by conical projectiles at different temperatures. International Journal of Solids and Structures, 2010, 47, 1268-1284.	1.3	22
64	Modelling of thermo-viscoplastic behaviour of DH-36 and Weldox 460-E structural steels at wide ranges of strain rates and temperatures, comparison of constitutive relations for impact problems. Mechanics of Materials, 2009, 41, 599-621.	1.7	61
65	Experimental and numerical study on the perforation process of mild steel sheets subjected to perpendicular impact by hemispherical projectiles. International Journal of Impact Engineering, 2009, 36, 565-587.	2.4	77
66	Constitutive relation for steels approximating quasi-static and intermediate strain rates at large deformations. Mechanics Research Communications, 2009, 36, 419-427.	1.0	21
67	Analysis of thermo-visco-plastic behaviour of six high strength steels. Materials & Design, 2009, 30, 1748-1761.	5.1	57
68	Extension of Râ€“K constitutive relation to phase transformation phenomena. Materials & Design, 2009, 30, 2513-2520.	5.1	9
69	Thermo-viscoplastic constitutive relation for aluminium alloys, modeling of negative strain rate sensitivity and viscous drag effects. Materials & Design, 2009, 30, 4377-4390.	5.1	79
70	Numerical simulations of impact behaviour of thin steel plates subjected to cylindrical, conical and hemispherical non-deformable projectiles. Engineering Fracture Mechanics, 2008, 75, 1635-1656.	2.0	89
71	Influence of conical projectile diameter on perpendicular impact of thin steel plate. Engineering Fracture Mechanics, 2008, 75, 2946-2967.	2.0	72