

Ramon Zaera

List of Publications by Year in descending order

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111
papers

4,333
citations

101543

36
h-index

118850

62
g-index

111
all docs

111
docs citations

111
times ranked

2551
citing authors

#	ARTICLE	IF	CITATIONS
1	Bending of Euler–Bernoulli beams using Eringen’s integral formulation: A paradox resolved. <i>International Journal of Engineering Science</i> , 2016, 99, 107-116.	5.0	358
2	Compression after impact of thin composite laminates. <i>Composites Science and Technology</i> , 2005, 65, 1911-1919.	7.8	206
3	Damage in CFRPs due to low velocity impact at low temperature. <i>Composites Part B: Engineering</i> , 2005, 36, 41-50.	12.0	163
4	Experimental and numerical analysis of normal and oblique ballistic impacts on thin carbon/epoxy woven laminates. <i>Composites Part A: Applied Science and Manufacturing</i> , 2008, 39, 374-387.	7.6	154
5	Vibrations of Bernoulli-Euler beams using the two-phase nonlocal elasticity theory. <i>International Journal of Engineering Science</i> , 2017, 119, 232-248.	5.0	153
6	Analytical modelling of normal and oblique ballistic impact on ceramic/metal lightweight armours. <i>International Journal of Impact Engineering</i> , 1998, 21, 133-148.	5.0	120
7	Numerical modelling of the hydrodynamic ram phenomenon. <i>International Journal of Impact Engineering</i> , 2009, 36, 363-374.	5.0	120
8	The effect of the thickness of the adhesive layer on the ballistic limit of ceramic/metal armours. An experimental and numerical study. <i>International Journal of Impact Engineering</i> , 2005, 32, 321-336.	5.0	113
9	Nonlinear orthotropic model of the inhomogeneous assembly compression of PEM fuel cell gas diffusion layers. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 11856-11870.	7.1	100
10	The effect of low temperatures on the intermediate and high velocity impact response of CFRPs. <i>Composites Part B: Engineering</i> , 2002, 33, 559-566.	12.0	99
11	Constitutive relations in 3-D for a wide range of strain rates and temperatures – Application to mild steels. <i>International Journal of Solids and Structures</i> , 2007, 44, 5611-5634.	2.7	99
12	Numerical modeling of ice behavior under high velocity impacts. <i>International Journal of Solids and Structures</i> , 2012, 49, 1919-1927.	2.7	99
13	Free transverse vibrations of cracked nanobeams using a nonlocal elasticity model. <i>Journal of Applied Physics</i> , 2009, 105, .	2.5	98
14	Modelling of the adhesive layer in mixed ceramic/metal armours subjected to impact. <i>Composites Part A: Applied Science and Manufacturing</i> , 2000, 31, 823-833.	7.6	95
15	Dynamic tensile behaviour at low temperature of CFRP using a split Hopkinson pressure bar. <i>Composites Science and Technology</i> , 2005, 65, 61-71.	7.8	85
16	A hyperelastic-thermoviscoplastic constitutive model for semi-crystalline polymers: Application to PEEK under dynamic loading conditions. <i>International Journal of Plasticity</i> , 2017, 88, 27-52.	8.8	84
17	Experimental analysis of fluid-filled aluminium tubes subjected to high-velocity impact. <i>International Journal of Impact Engineering</i> , 2009, 36, 81-91.	5.0	81
18	On the Taylor–Quinney coefficient in dynamically phase transforming materials. Application to 304 stainless steel. <i>International Journal of Plasticity</i> , 2013, 40, 185-201.	8.8	80

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19	On the consistency of the nonlocal strain gradient elasticity. <i>International Journal of Engineering Science</i> , 2019, 138, 65-81.	5.0	78
20	Experimental and numerical study on the perforation process of mild steel sheets subjected to perpendicular impact by hemispherical projectiles. <i>International Journal of Impact Engineering</i> , 2009, 36, 565-587.	5.0	77
21	A constitutive model for analyzing martensite formation in austenitic steels deforming at high strain rates. <i>International Journal of Plasticity</i> , 2012, 29, 77-101.	8.8	75
22	Role of porosity in controlling the mechanical and impact behaviours of cement-based materials. <i>International Journal of Impact Engineering</i> , 2008, 35, 133-146.	5.0	70
23	An analytical model for high velocity impacts on thin CFRPs woven laminated plates. <i>International Journal of Solids and Structures</i> , 2007, 44, 2837-2851.	2.7	66
24	Analysis of inertia and scale effects on dynamic neck formation during tension of sheet steel. <i>Acta Materialia</i> , 2005, 53, 5387-5387.	7.9	65
25	Finite element simulation of steel ring fragmentation under radial expansion. <i>International Journal of Impact Engineering</i> , 2007, 34, 799-822.	5.0	63
26	An implicit consistent algorithm for the integration of thermoviscoplastic constitutive equations in adiabatic conditions and finite deformations. <i>International Journal of Solids and Structures</i> , 2006, 43, 1594-1612.	2.7	58
27	Numerical modelling of partially filled aircraft fuel tanks submitted to Hydrodynamic Ram. <i>Aerospace Science and Technology</i> , 2012, 16, 19-28.	4.8	54
28	Tuning the instrument: sonic properties in the spider's web. <i>Journal of the Royal Society Interface</i> , 2016, 13, 20160341.	3.4	52
29	Residual Stresses in Orthogonal Cutting of Metals: The Effect of Thermomechanical Coupling Parameters and of Friction. <i>Journal of Thermal Stresses</i> , 2009, 32, 269-289.	2.0	49
30	An experimental method of measuring the confined compression strength of geomaterials. <i>International Journal of Solids and Structures</i> , 2007, 44, 4291-4317.	2.7	47
31	Experimental and numerical analysis of the martensitic transformation in AISI 304 steel sheets subjected to perforation by conical and hemispherical projectiles. <i>International Journal of Solids and Structures</i> , 2013, 50, 339-351.	2.7	46
32	Experimental study of CFRP fluid-filled tubes subjected to high-velocity impact. <i>Composite Structures</i> , 2011, 93, 2598-2609.	5.8	45
33	A continuum mechanics constitutive framework for transverse isotropic soft tissues. <i>Journal of the Mechanics and Physics of Solids</i> , 2018, 112, 209-224.	4.8	44
34	Numerical modeling of the impact behavior of new particulate-loaded composite materials. <i>Composite Structures</i> , 2003, 61, 151-159.	5.8	42
35	Prediction of the behaviour of CFRPs against high-velocity impact of solids employing an artificial neural network methodology. <i>Composites Part A: Applied Science and Manufacturing</i> , 2008, 39, 989-996.	7.6	40
36	Static behavior of CFRPs at low temperatures. <i>Composites Part B: Engineering</i> , 2002, 33, 383-390.	12.0	39

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37	Dynamic tensile necking: Influence of specimen geometry and boundary conditions. <i>Mechanics of Materials</i> , 2013, 62, 1-13.	3.2	37
38	Effect of plastic deformation and boundary conditions combined with elastic wave propagation on the collapse site of a crash box. <i>Thin-Walled Structures</i> , 2008, 46, 1143-1163.	5.3	34
39	Analytical modelling of high velocity impacts of cylindrical projectiles on carbon/epoxy laminates. <i>Composites Part A: Applied Science and Manufacturing</i> , 2009, 40, 1223-1230.	7.6	33
40	Numerical Analysis of the Hydrodynamic Ram Phenomenon in Aircraft Fuel Tanks. <i>AIAA Journal</i> , 2012, 50, 1621-1630.	2.6	33
41	Uncovering changes in spider orb-web topology owing to aerodynamic effects. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140484.	3.4	32
42	Analytical modelling of metallic circular plates subjected to impulsive loads. <i>International Journal of Solids and Structures</i> , 2002, 39, 659-672.	2.7	29
43	The role of constitutive relation in the stability of hyper-elastic spherical membranes subjected to dynamic inflation. <i>International Journal of Engineering Science</i> , 2015, 93, 31-45.	5.0	29
44	Mass detection in nanobeams from bending resonant frequency shifts. <i>Mechanical Systems and Signal Processing</i> , 2019, 116, 261-276.	8.0	29
45	A theoretical analysis of the free axial vibration of non-local rods with fractional continuum mechanics. <i>Meccanica</i> , 2015, 50, 2309-2323.	2.0	28
46	Resonator-based detection in nanorods. <i>Mechanical Systems and Signal Processing</i> , 2017, 93, 645-660.	8.0	28
47	Non-standard and constitutive boundary conditions in nonlocal strain gradient elasticity. <i>Meccanica</i> , 2020, 55, 469-479.	2.0	28
48	Ballistic Impacts on Polymer Matrix Composites, Composite Armor, Personal Armor. <i>CISM International Centre for Mechanical Sciences, Courses and Lectures</i> , 2011, , 305-403.	0.6	27
49	The secondary frame in spider orb webs: the detail that makes the difference. <i>Scientific Reports</i> , 2016, 6, 31265.	3.3	27
50	Axisymmetric free vibration of closed thin spherical nano-shell. <i>Composite Structures</i> , 2013, 104, 154-161.	5.8	26
51	Dynamic recrystallization and adiabatic shear localization. <i>Mechanics of Materials</i> , 2015, 81, 41-55.	3.2	25
52	Transverse free vibration of resonant nanoplate mass sensors: Identification of an attached point mass. <i>International Journal of Mechanical Sciences</i> , 2019, 150, 217-225.	6.7	25
53	Dynamic necking in materials with strain induced martensitic transformation. <i>Journal of the Mechanics and Physics of Solids</i> , 2014, 64, 316-337.	4.8	24
54	On the complete extinction of selected imperfection wavelengths in dynamically expanded ductile rings. <i>Mechanics of Materials</i> , 2013, 60, 107-120.	3.2	23

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55	Thermo-mechanical behaviour of TRIP 1000 steel sheets subjected to low velocity perforation by conical projectiles at different temperatures. <i>International Journal of Solids and Structures</i> , 2010, 47, 1268-1284.	2.7	22
56	The critical neck spacing in ductile plates subjected to dynamic biaxial loading: On the interplay between loading path and inertia effects. <i>International Journal of Solids and Structures</i> , 2017, 108, 74-84.	2.7	22
57	Propagation of solitons in a two-dimensional nonlinear square lattice. <i>International Journal of Non-Linear Mechanics</i> , 2018, 106, 188-204.	2.6	22
58	Consistent integration of the constitutive equations of Gurson materials under adiabatic conditions. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008, 197, 1280-1295.	6.6	20
59	A constitutive equation for ceramic materials used in lightweight armors. <i>Computers and Structures</i> , 2011, 89, 2316-2324.	4.4	20
60	Hearing distributed mass in nanobeam resonators. <i>International Journal of Solids and Structures</i> , 2020, 193-194, 568-592.	2.7	20
61	Collective behaviour and spacing of necks in ductile plates subjected to dynamic biaxial loading. <i>Journal of the Mechanics and Physics of Solids</i> , 2015, 85, 245-269.	4.8	19
62	Nonlinear continuum models for the dynamic behavior of 1D microstructured solids. <i>International Journal of Solids and Structures</i> , 2017, 117, 111-122.	2.7	19
63	A new tool based on artificial neural networks for the design of lightweight ceramic-metal armour against high-velocity impact of solids. <i>International Journal of Solids and Structures</i> , 2008, 45, 6369-6383.	2.7	18
64	Finite element analysis of AISI 304 steel sheets subjected to dynamic tension: The effects of martensitic transformation and plastic strain development on flow localization. <i>International Journal of Impact Engineering</i> , 2013, 54, 206-216.	5.0	18
65	Cost-effective optoelectronic system to measure the projectile velocity in high-velocity impact testing of aircraft and spacecraft structural elements. <i>Optical Engineering</i> , 2007, 46, 051014.	1.0	17
66	Recovering added mass in nanoresonator sensors from finite axial eigenfrequency data. <i>Mechanical Systems and Signal Processing</i> , 2019, 130, 122-151.	8.0	16
67	Analysis of low order non-standard continualization methods for enhanced prediction of the dispersive behaviour of a beam lattice. <i>International Journal of Mechanical Sciences</i> , 2021, 196, 106296.	6.7	16
68	Numerical modelling of orthogonal cutting: Influence of cutting conditions and separation criterion. <i>European Physical Journal Special Topics</i> , 2006, 134, 417-422.	0.2	15
69	An analysis of microstructural and thermal softening effects in dynamic necking. <i>Mechanics of Materials</i> , 2015, 80, 298-310.	3.2	15
70	Relationship between static bending and compressive behaviour of particle-reinforced cement composites. <i>Composites Part B: Engineering</i> , 2008, 39, 1205-1215.	12.0	14
71	Relationship Between Mesostructure, Mechanical Behaviour and Damage of Cement Composites Under High-Pressure Confinement. <i>Experimental Mechanics</i> , 2009, 49, 613-625.	2.0	14
72	Dynamic Necking of Notched Tensile Bars: An Experimental Study. <i>Experimental Mechanics</i> , 2014, 54, 1099-1109.	2.0	13

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73	A continuum membrane model for small deformations of a spider orb-web. <i>Mechanical Systems and Signal Processing</i> , 2017, 93, 610-633.	8.0	13
74	Nonstandard continualization of 1D lattice with next-nearest interactions. Low order ODEs and enhanced prediction of the dispersive behavior. <i>Mechanics of Advanced Materials and Structures</i> , 2022, 29, 923-932.	2.6	12
75	Natural frequencies of vibration in cracked Timoshenko beams within an elastic medium. <i>Theoretical and Applied Fracture Mechanics</i> , 2022, 118, 103257.	4.7	12
76	High energy impact on woven laminates. <i>European Physical Journal Special Topics</i> , 2003, 110, 639-644.	0.2	11
77	Prediction of the response under impact of steel armours using a multilayer perceptron. <i>Neural Computing and Applications</i> , 2007, 16, 147-154.	5.6	11
78	Approaching steady cavitation: The time scale in hypervelocity cavity expansion in work hardening and transformation hardening solids. <i>International Journal of Impact Engineering</i> , 2014, 73, 43-55.	5.0	10
79	Axisymmetric free vibration of closed thin spherical nanoshells with bending effects. <i>JVC/Journal of Vibration and Control</i> , 2016, 22, 3789-3806.	2.6	10
80	An experimental method of measuring the confined compression strength of high-performance concretes to analyse their ballistic behaviour. <i>European Physical Journal Special Topics</i> , 2006, 134, 629-634.	0.2	9
81	Dynamic analysis and non-standard continualization of a Timoshenko beam lattice. <i>International Journal of Mechanical Sciences</i> , 2022, 214, 106873.	6.7	8
82	One-dimensional dispersion phenomena in terms of fractional media. <i>European Physical Journal Plus</i> , 2016, 131, 1.	2.6	7
83	The prey's catching problem in an elastically supported spider orb-web. <i>Mechanical Systems and Signal Processing</i> , 2021, 151, 107310.	8.0	7
84	Identification of general added mass distribution in nanorods from two-spectra finite data. <i>Mechanical Systems and Signal Processing</i> , 2019, 134, 106286.	8.0	6
85	Low order nonstandard continualization of a beam lattice with next-nearest interactions: Enhanced prediction of the dynamic behavior. <i>Mechanics of Advanced Materials and Structures</i> , 2022, 29, 6216-6230.	2.6	6
86	Reproducing the nonlinear dynamic behavior of a structured beam with a generalized continuum model. <i>Journal of Sound and Vibration</i> , 2018, 420, 296-314.	3.9	5
87	Novel Enriched Kinetic Energy continuum model for the enhanced prediction of a 1D lattice with next-nearest interactions. <i>Composite Structures</i> , 2022, 281, 115003.	5.8	5
88	Low-order non-classical continuum models for the improved prediction of an anisotropic membrane lattice's dynamics. <i>Thin-Walled Structures</i> , 2022, 179, 109632.	5.3	5
89	Detecting a Prey in a Spider Orb-Web from In-Plane Vibration. <i>SIAM Journal on Applied Mathematics</i> , 2021, 81, 2297-2322.	1.8	4
90	Modelling of Fracture Processes in the Ballistic Impact on Ceramic Armours. <i>European Physical Journal Special Topics</i> , 1997, 07, C3-687-C3-692.	0.2	3

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91	Transitioning a unidirectional composite computer model from mesoscale to continuum. EPJ Web of Conferences, 2015, 94, 04048.	0.3	3
92	Generalized continuum model for the analysis of nonlinear vibrations of taut strings with microstructure. International Journal of Solids and Structures, 2019, 164, 157-167.	2.7	3
93	Eco-localization of a prey in a spider orb web. JVC/Journal of Vibration and Control, 0, , 107754632199354.	2.6	3
94	Impact damage in concrete targets subjected to perforation of high velocity metallic fragment. , 2009, , .		3
95	Experimental and numerical study of high velocity impacts on carbon/epoxy laminates. , 2009, , .		3
96	Analysis of the strain induced martensitic transformation in austenitic steel subjected to dynamic perforation. EPJ Web of Conferences, 2012, 26, 04036.	0.3	3
97	On the Mechanism of Bandgap Formation in Beams With Periodic Arrangement of Beam-Like Resonators. Journal of Vibration and Acoustics, Transactions of the ASME, 2019, 141, .	1.6	3
98	Fabricaci3n y caracterizaci3n mec3nica de un material compuesto de matriz polim3rica y carga cer3mica. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2004, 43, 401-405.	1.9	3
99	Numerical Study of the Effects of Metallic Plates in the Attenuation of the HRAM Phenomenon. Applied Mechanics and Materials, 2014, 566, 511-516.	0.2	2
100	Band structure analysis of a thin plate with periodic arrangements of slender beams. Journal of Sound and Vibration, 2018, 420, 330-345.	3.9	2
101	The role of boundary conditions in resonator-based mass identification in nanorods. Mechanics of Advanced Materials and Structures, 0, , 1-11.	2.6	2
102	Monitoring mass changes using nanoresonator sensors. Procedia Structural Integrity, 2019, 17, 98-104.	0.8	1
103	Analysis of high-speed impact problems in the aircraft industry. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2014, , 137-207.	0.6	1
104	Numerical analysis of the influence of cutting speed in machined induced residual stresses in aero-engine alloys. , 2009, , .		1
105	An engineering model on penetration of eroding rods into ceramic/polymer composite. European Physical Journal Special Topics, 2003, 110, 609-614.	0.2	1
106	Dynamic identification of pretensile forces in a spider orb-web. Mechanical Systems and Signal Processing, 2022, 169, 108703.	8.0	1
107	Prediction of the effect of temperature on impact damage in carbon/epoxy laminates. European Physical Journal Special Topics, 2003, 110, 699-704.	0.2	0
108	A proposal for a membrane model for the small deformations of a spider orb-web. Procedia Engineering, 2017, 199, 212-217.	1.2	0

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109	Geometric Scale Effect in Dynamic Tension Tests, a Numerical Analysis. , 2007, , 733-734.		0
110	Determination of the prey impact region in a spider orb-web from in-plane vibration. Applied Mathematics and Computation, 2022, 424, 126947.	2.2	0
111	Material definition to design vehicle components, application to crashworthiness. , 2018, , 63.		0