Ramon Zaera

List of Publications by Year
in descending order

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111	4,333	101543	118850
papers	citations	36 h-index	62 g-index

111	111	111	2551
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nonstandard continualization of 1D lattice with next-nearest interactions. Low order ODEs and enhanced prediction of the dispersive behavior. Mechanics of Advanced Materials and Structures, 2022, 29, 923-932.	2.6	12
2	Low order nonstandard continualization of a beam lattice with next-nearest interactions: Enhanced prediction of the dynamic behavior. Mechanics of Advanced Materials and Structures, 2022, 29, 6216-6230.	2.6	6
3	Dynamic analysis and non-standard continualization of a Timoshenko beam lattice. International Journal of Mechanical Sciences, 2022, 214, 106873.	6.7	8
4	Novel Enriched Kinetic Energy continuum model for the enhanced prediction of a 1D lattice with next-nearest interactions. Composite Structures, 2022, 281, 115003.	5.8	5
5	Dynamic identification of pretensile forces in a spider orb-web. Mechanical Systems and Signal Processing, 2022, 169, 108703.	8.0	1
6	Natural frequencies of vibration in cracked Timoshenko beams within an elastic medium. Theoretical and Applied Fracture Mechanics, 2022, 118, 103257.	4.7	12
7	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
8	Low-order non-classical continuum models for the improved prediction of an anisotropic membrane latticeâ€™s dynamics. Thin-Walled Structures, 2022, 179, 109632.	5.3	5
9	The preyâ€™s catching problem in an elastically supported spider orb-web. Mechanical Systems and Signal Processing, 2021, 151, 107310.	8.0	7
10	Analysis of low order non-standard continualization methods for enhanced prediction of the dispersive behaviour of a beam lattice. International Journal of Mechanical Sciences, 2021, 196, 106296.	6.7	16
11	Detecting a Prey in a Spider Orb-Web from In-Plane Vibration. SIAM Journal on Applied Mathematics, 2021, 81, 2297-2322.	1.8	4
12	Hearing distributed mass in nanobeam resonators. International Journal of Solids and Structures, 2020, 193-194, 568-592.	2.7	20
13	Non-standard and constitutive boundary conditions in nonlocal strain gradient elasticity. Meccanica, 2020, 55, 469-479.	2.0	28
14	Mass detection in nanobeams from bending resonant frequency shifts. Mechanical Systems and Signal Processing, 2019, 116, 261-276.	8.0	29
15	Monitoring mass changes using nanoresonator sensors. Procedia Structural Integrity, 2019, 17, 98-104.	0.8	1
16	Identification of general added mass distribution in nanorods from two-spectra finite data. Mechanical Systems and Signal Processing, 2019, 134, 106286.	8.0	6
17	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
18	Recovering added mass in nanoresonator sensors from finite axial eigenfrequency data. Mechanical Systems and Signal Processing, 2019, 130, 122-151.	8.0	16

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19	On the consistency of the nonlocal strain gradient elasticity. International Journal of Engineering Science, 2019, 138, 65-81.	5.0	78
20	Transverse free vibration of resonant nanoplate mass sensors: Identification of an attached point mass. International Journal of Mechanical Sciences, 2019, 150, 217-225.	6.7	25
21	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
22	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
23	Reproducing the nonlinear dynamic behavior of a structured beam with a generalized continuum model. Journal of Sound and Vibration, 2018, 420, 296-314.	3.9	5
24	A continuum mechanics constitutive framework for transverse isotropic soft tissues. Journal of the Mechanics and Physics of Solids, 2018, 112, 209-224.	4.8	44
25	Propagation of solitons in a two-dimensional nonlinear square lattice. International Journal of Non-Linear Mechanics, 2018, 106, 188-204.	2.6	22
26	Material definition to design vehicle components, application to crashworthiness. , 2018, , 63.		0
27	Resonator-based detection in nanorods. Mechanical Systems and Signal Processing, 2017, 93, 645-660.	8.0	28
28	Vibrations of Bernoulli-Euler beams using the two-phase nonlocal elasticity theory. International Journal of Engineering Science, 2017, 119, 232-248.	5.0	153
29	A continuum membrane model for small deformations of a spider orb-web. Mechanical Systems and Signal Processing, 2017, 93, 610-633.	8.0	13
30	Nonlinear continuum models for the dynamic behavior of 1D microstructured solids. International Journal of Solids and Structures, 2017, 117, 111-122.	2.7	19
31	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.	2.7	22
32	A proposal for a membrane model for the small deformations of a spider orb-web. Procedia Engineering, 2017, 199, 212-217.	1.2	0
33	A hyperelastic-thermoviscoplastic constitutive model for semi-crystalline polymers: Application to PEEK under dynamic loading conditions. International Journal of Plasticity, 2017, 88, 27-52.	8.8	84
34	One-dimensional dispersion phenomena in terms of fractional media. European Physical Journal Plus, 2016, 131, 1.	2.6	7
35	Tuning the instrument: sonic properties in the spider's web. Journal of the Royal Society Interface, 2016, 13, 20160341.	3.4	52
36	The secondary frame in spider orb webs: the detail that makes the difference. Scientific Reports, 2016, 6, 31265.	3.3	27

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37	Axisymmetric free vibration of closed thin spherical nanoshells with bending effects. JVC/Journal of Vibration and Control, 2016, 22, 3789-3806.	2.6	10
38	Bending of Eulerâ€“Bernoulli beams using Eringenâ€™s integral formulation: A paradox resolved. International Journal of Engineering Science, 2016, 99, 107-116.	5.0	358
39	Transitioning a unidirectional composite computer model from mesoscale to continuum. EPJ Web of Conferences, 2015, 94, 04048.	0.3	3
40	A theoretical analysis of the free axial vibration of non-local rods with fractional continuum mechanics. Meccanica, 2015, 50, 2309-2323.	2.0	28
41	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.	5.0	29
42	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.	4.8	19
43	Dynamic recrystallization and adiabatic shear localization. Mechanics of Materials, 2015, 81, 41-55.	3.2	25
44	An analysis of microstructural and thermal softening effects in dynamic necking. Mechanics of Materials, 2015, 80, 298-310.	3.2	15
45	Uncovering changes in spider orb-web topology owing to aerodynamic effects. Journal of the Royal Society Interface, 2014, 11, 20140484.	3.4	32
46	Dynamic necking in materials with strain induced martensitic transformation. Journal of the Mechanics and Physics of Solids, 2014, 64, 316-337.	4.8	24
47	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
48	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.	5.0	10
49	Dynamic Necking of Notched Tensile Bars: An Experimental Study. Experimental Mechanics, 2014, 54, 1099-1109.	2.0	13
50	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
51	Dynamic tensile necking: Influence of specimen geometry and boundary conditions. Mechanics of Materials, 2013, 62, 1-13.	3.2	37
52	On the Taylorâ€“Quinney coefficient in dynamically phase transforming materials. Application to 304 stainless steel. International Journal of Plasticity, 2013, 40, 185-201.	8.8	80
53	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.	2.7	46
54	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.	5.0	18

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55	On the complete extinction of selected imperfection wavelengths in dynamically expanded ductile rings. Mechanics of Materials, 2013, 60, 107-120.	3.2	23
56	Axisymmetric free vibration of closed thin spherical nano-shell. Composite Structures, 2013, 104, 154-161.	5.8	26
57	Numerical Analysis of the Hydrodynamic Ram Phenomenon in Aircraft Fuel Tanks. AIAA Journal, 2012, 50, 1621-1630.	2.6	33
58	Numerical modelling of partially filled aircraft fuel tanks submitted to Hydrodynamic Ram. Aerospace Science and Technology, 2012, 16, 19-28.	4.8	54
59	A constitutive model for analyzing martensite formation in austenitic steels deforming at high strain rates. International Journal of Plasticity, 2012, 29, 77-101.	8.8	75
60	Numerical modeling of ice behavior under high velocity impacts. International Journal of Solids and Structures, 2012, 49, 1919-1927.	2.7	99
61	Analysis of the strain induced martensitic transformation in austenitic steel subjected to dynamic perforation. EPJ Web of Conferences, 2012, 26, 04036.	0.3	3
62	Ballistic Impacts on Polymer Matrix Composites, Composite Armor, Personal Armor. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2011, , 305-403.	0.6	27
63	A constitutive equation for ceramic materials used in lightweight armors. Computers and Structures, 2011, 89, 2316-2324.	4.4	20
64	Nonlinear orthotropic model of the inhomogeneous assembly compression of PEM fuel cell gas diffusion layers. International Journal of Hydrogen Energy, 2011, 36, 11856-11870.	7.1	100
65	Experimental study of CFRP fluid-filled tubes subjected to high-velocity impact. Composite Structures, 2011, 93, 2598-2609.	5.8	45
66	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.	2.7	22
67	Relationship Between Mesostructure, Mechanical Behaviour and Damage of Cement Composites Under High-Pressure Confinement. Experimental Mechanics, 2009, 49, 613-625.	2.0	14
68	Experimental analysis of fluid-filled aluminium tubes subjected to high-velocity impact. International Journal of Impact Engineering, 2009, 36, 81-91.	5.0	81
69	Numerical modelling of the hydrodynamic ram phenomenon. International Journal of Impact Engineering, 2009, 36, 363-374.	5.0	120
70	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.	5.0	77
71	Analytical modelling of high velocity impacts of cylindrical projectiles on carbon/epoxy laminates. Composites Part A: Applied Science and Manufacturing, 2009, 40, 1223-1230.	7.6	33
72	Free transverse vibrations of cracked nanobeams using a nonlocal elasticity model. Journal of Applied Physics, 2009, 105, .	2.5	98

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73	Residual Stresses in Orthogonal Cutting of Metals: The Effect of Thermomechanical Coupling Parameters and of Friction. Journal of Thermal Stresses, 2009, 32, 269-289.	2.0	49
74	Impact damage in concrete targets subjected to perforation of high velocity metallic fragment. , 2009, , .		3
75	Numerical analysis of the influence of cutting speed in machined induced residual stresses in aero-engine alloys. , 2009, , .		1
76	Experimental and numerical study of high velocity impacts on carbon/epoxy laminates. , 2009, , .		3
77	Role of porosity in controlling the mechanical and impact behaviours of cement-based materials. International Journal of Impact Engineering, 2008, 35, 133-146.	5.0	70
78	Consistent integration of the constitutive equations of Gurson materials under adiabatic conditions. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 1280-1295.	6.6	20
79	Relationship between static bending and compressive behaviour of particle-reinforced cement composites. Composites Part B: Engineering, 2008, 39, 1205-1215.	12.0	14
80	A new tool based on artificial neural networks for the design of lightweight ceramicâ€“metal armour against high-velocity impact of solids. International Journal of Solids and Structures, 2008, 45, 6369-6383.	2.7	18
81	Experimental and numerical analysis of normal and oblique ballistic impacts on thin carbon/epoxy woven laminates. Composites Part A: Applied Science and Manufacturing, 2008, 39, 374-387.	7.6	154
82	Prediction of the behaviour of CFRPs against high-velocity impact of solids employing an artificial neural network methodology. Composites Part A: Applied Science and Manufacturing, 2008, 39, 989-996.	7.6	40
83	Effect of plastic deformation and boundary conditions combined with elastic wave propagation on the collapse site of a crash box. Thin-Walled Structures, 2008, 46, 1143-1163.	5.3	34
84	Cost-effective optoelectronic system to measure the projectile velocity in high-velocity impact testing of aircraft and spacecraft structural elements. Optical Engineering, 2007, 46, 051014.	1.0	17
85	An analytical model for high velocity impacts on thin CFRPs woven laminated plates. International Journal of Solids and Structures, 2007, 44, 2837-2851.	2.7	66
86	An experimental method of measuring the confined compression strength of geomaterials. International Journal of Solids and Structures, 2007, 44, 4291-4317.	2.7	47
87	Constitutive relations in 3-D for a wide range of strain rates and temperatures â€“ Application to mild steels. International Journal of Solids and Structures, 2007, 44, 5611-5634.	2.7	99
88	Finite element simulation of steel ring fragmentation under radial expansion. International Journal of Impact Engineering, 2007, 34, 799-822.	5.0	63
89	Prediction of the response under impact of steel armours using a multilayer perceptron. Neural Computing and Applications, 2007, 16, 147-154.	5.6	11
90	Geometric Scale Effect in Dynamic Tension Tests, a Numerical Analysis. , 2007, , 733-734.		0

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91	Numerical modelling of orthogonal cutting: Influence of cutting conditions and separation criterion. European Physical Journal Special Topics, 2006, 134, 417-422.	0.2	15
92	An experimental method of measuring the confined compression strength of high-performance concretes to analyse their ballistic behaviour. European Physical Journal Special Topics, 2006, 134, 629-634.	0.2	9
93	An implicit consistent algorithm for the integration of thermoviscoplastic constitutive equations in adiabatic conditions and finite deformations. International Journal of Solids and Structures, 2006, 43, 1594-1612.	2.7	58
94	The effect of the thickness of the adhesive layer on the ballistic limit of ceramic/metal armours. An experimental and numerical study. International Journal of Impact Engineering, 2005, 32, 321-336.	5.0	113
95	Analysis of inertia and scale effects on dynamic neck formation during tension of sheet steel. Acta Materialia, 2005, 53, 5387-5387.	7.9	65
96	Compression after impact of thin composite laminates. Composites Science and Technology, 2005, 65, 1911-1919.	7.8	206
97	Damage in CFRPs due to low velocity impact at low temperature. Composites Part B: Engineering, 2005, 36, 41-50.	12.0	163
98	Dynamic tensile behaviour at low temperature of CFRP using a split Hopkinson pressure bar. Composites Science and Technology, 2005, 65, 61-71.	7.8	85
99	FabricaciÃ³n y caracterizaciÃ³n mecÃ¡nica de un material compuesto de matriz polimÃ©rica y carga cerÃ¡mica. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2004, 43, 401-405.	1.9	3
100	Numerical modeling of the impact behavior of new particulate-loaded composite materials. Composite Structures, 2003, 61, 151-159.	5.8	42
101	High energy impact on woven laminates. European Physical Journal Special Topics, 2003, 110, 639-644.	0.2	11
102	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
103	An engineering model on penetration of eroding rods into ceramic/polymer composite. European Physical Journal Special Topics, 2003, 110, 609-614.	0.2	1
104	Static behavior of CFRPs at low temperatures. Composites Part B: Engineering, 2002, 33, 383-390.	12.0	39
105	The effect of low temperatures on the intermediate and high velocity impact response of CFRPs. Composites Part B: Engineering, 2002, 33, 559-566.	12.0	99
106	Analytical modelling of metallic circular plates subjected to impulsive loads. International Journal of Solids and Structures, 2002, 39, 659-672.	2.7	29
107	Modelling of the adhesive layer in mixed ceramic/metal armours subjected to impact. Composites Part A: Applied Science and Manufacturing, 2000, 31, 823-833.	7.6	95
108	Analytical modelling of normal and oblique ballistic impact on ceramic/metal lightweight armours. International Journal of Impact Engineering, 1998, 21, 133-148.	5.0	120

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109	Modelling of Fracture Processes in the Ballistic Impact on Ceramic Armours. European Physical Journal Special Topics, 1997, 07, C3-687-C3-692.	0.2	3
110	Eco-localization of a prey in a spider orb web. JVC/Journal of Vibration and Control, 0, , 107754632199354.	2.6	3
111	The role of boundary conditions in resonator-based mass identification in nanorods. Mechanics of Advanced Materials and Structures, 0, , 1-11.	2.6	2