

Ignacio Romero

List of Publications by Year in descending order

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61
papers

1,365
citations

471061

17
h-index

344852

36
g-index

63
all docs

63
docs citations

63
times ranked

701
citing authors

#	ARTICLE	IF	CITATIONS
1	Multiscale simulation of powder-bed fusion processing of metallic alloys. <i>Computational Materials Science</i> , 2022, 209, 111383.	1.4	22
2	Dimensionally reduced nonlinear solids with general loads and constitutive laws: Theory and finite element formulation for rod-like bodies. <i>International Journal of Solids and Structures</i> , 2021, 210-211, 273-288.	1.3	1
3	Energy-momentum conserving integration schemes for molecular dynamics. <i>Computational Mechanics</i> , 2021, 67, 915-935.	2.2	4
4	On a nonlinear rod exhibiting only axial and bending deformations: mathematical modeling and numerical implementation. <i>Acta Mechanica</i> , 2021, 232, 3825-3847.	1.1	3
5	Variational updates for general thermo-chemo-mechanical processes of inelastic solids. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021, 385, 114013.	3.4	5
6	A data-driven method for dissipative thermomechanics. <i>IFAC-PapersOnLine</i> , 2021, 54, 315-320.	0.5	0
7	Anisotropic meta-models for computationally expensive simulations in nonlinear mechanics. <i>International Journal for Numerical Methods in Engineering</i> , 2020, 121, 904-924.	1.5	3
8	A new conservative/dissipative time integration scheme for nonlinear mechanical systems. <i>Computational Mechanics</i> , 2020, 65, 405-427.	2.2	11
9	Variational principles for nonlinear Kirchhoff rods. <i>Acta Mechanica</i> , 2020, 231, 625-647.	1.1	10
10	The Rotating Rigid Body Model Based on a Non-twisting Frame. <i>Journal of Nonlinear Science</i> , 2020, 30, 3199-3233.	1.0	1
11	A Methodology for the Statistical Calibration of Complex Constitutive Material Models: Application to Temperature-Dependent Elasto-Visco-Plastic Materials. <i>Materials</i> , 2020, 13, 4402.	1.3	6
12	Structural models based on 3D constitutive laws: Variational structure and numerical solution. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 362, 112872.	3.4	5
13	Development of a thermo-mechanically coupled crystal plasticity modeling framework: Application to polycrystalline homogenization. <i>International Journal of Plasticity</i> , 2019, 119, 313-330.	4.1	31
14	A sample-based approach to estimate the dynamic loads of components with nonlinear uncertain interfaces. <i>Aerospace Science and Technology</i> , 2019, 87, 369-378.	2.5	3
15	A robust asymmetrical contact algorithm for explicit solid dynamics. <i>Computational Mechanics</i> , 2019, 64, 15-32.	2.2	1
16	Coupling nonlinear beams and continua: Variational principles and finite element approximations. <i>International Journal for Numerical Methods in Engineering</i> , 2018, 114, 1192-1212.	1.5	5
17	Performance Assessment of Variational Integrators for Thermomechanical Problems. <i>Journal of Theoretical and Applied Mechanics (Bulgaria)</i> , 2018, 48, 3-23.	0.6	0
18	MUESLI - a Material UnivErSal Library. <i>Advances in Engineering Software</i> , 2017, 105, 1-8.	1.8	10

#	ARTICLE	IF	CITATIONS
19	Energy-entropy-momentum integration schemes for general discrete non-smooth dissipative problems in thermomechanics. <i>International Journal for Numerical Methods in Engineering</i> , 2017, 112, 776-802.	1.5	17
20	A generalization of Castigliano's theorems for structures with eigenstrains. <i>Archive of Applied Mechanics</i> , 2017, 87, 1727-1737.	1.2	0
21	Formulation and numerical solution of non-smooth elasto-visco-plasticity models. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 324, 457-475.	3.4	1
22	A new approach for the solution of the neighborhood problem in meshfree methods. <i>Engineering With Computers</i> , 2017, 33, 239-247.	3.5	4
23	Influence of cerebral blood vessel movements on the position of perivascular synapses. <i>PLoS ONE</i> , 2017, 12, e0172368.	1.1	4
24	A numerical method for the time coarsening of transport processes at the atomistic scale. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2016, 24, 045011.	0.8	6
25	High Frequency Dissipative Integration Schemes for Linear and Nonlinear Elastodynamics. <i>CISM International Centre for Mechanical Sciences, Courses and Lectures</i> , 2016, , 1-30.	0.3	0
26	Variational Integrators for Thermo-Viscoelastic Discrete Systems. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2015, 15, 55-56.	0.2	1
27	A stable X-FEM in cohesive transition from closed to open crack. <i>International Journal for Numerical Methods in Engineering</i> , 2015, 101, 540-570.	1.5	14
28	Multiscale modeling of defect formation during solid-phase epitaxy regrowth of silicon. <i>Acta Materialia</i> , 2015, 82, 115-122.	3.8	10
29	Atomistic long-term simulation of heat and mass transport. <i>Journal of the Mechanics and Physics of Solids</i> , 2014, 73, 242-268.	2.3	39
30	A torsion-free non-linear beam model. <i>International Journal of Non-Linear Mechanics</i> , 2014, 58, 1-10.	1.4	10
31	Energy-consistent time integration for nonlinear viscoelasticity. <i>Computational Mechanics</i> , 2014, 54, 473-488.	2.2	11
32	A thermodynamically consistent numerical method for a phase field model of solidification. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2014, 19, 2309-2323.	1.7	16
33	A Characterization of Conserved Quantities in Non-Equilibrium Thermodynamics. <i>Entropy</i> , 2013, 15, 5580-5596.	1.1	8
34	An analysis of the stress formula for energy-momentum methods in nonlinear elastodynamics. <i>Computational Mechanics</i> , 2012, 50, 603-610.	2.2	39
35	HotQC simulation of nanovoid growth under tension in copper. <i>International Journal of Fracture</i> , 2012, 174, 75-85.	1.1	41
36	B free. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2012, 217-220, 226-235.	3.4	9

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37	Energy-Entropy-Momentum integration of discrete thermo-visco-elastic dynamics. European Journal of Mechanics, A/Solids, 2012, 32, 76-87.	2.1	18
38	Modeling and Simulations of the Dynamics of Growing Cell Clusters. , 2011, , 1-25.		1
39	Algorithms for coupled problems that preserve symmetries and the laws of thermodynamics. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 1841-1858.	3.4	55
40	Algorithms for coupled problems that preserve symmetries and the laws of thermodynamics. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 2235-2248.	3.4	29
41	Thermodynamically consistent time-stepping algorithms for non-linear thermomechanical systems. International Journal for Numerical Methods in Engineering, 2009, 79, 706-732.	1.5	95
42	A simple method to impose rotations and concentrated moments on ANC beams. Multibody System Dynamics, 2009, 21, 307-323.	1.7	6
43	A comparison of finite elements for nonlinear beams: the absolute nodal coordinate and geometrically exact formulations. Multibody System Dynamics, 2008, 20, 51-68.	1.7	96
44	Formulation and performance of variational integrators for rotating bodies. Computational Mechanics, 2008, 42, 825-836.	2.2	12
45	Dislocation dynamics in non-convex domains using finite elements with embedded discontinuities. Modelling and Simulation in Materials Science and Engineering, 2008, 16, 035008.	0.8	10
46	Computational issues in the simulation of two-dimensional discrete dislocation mechanics. Modelling and Simulation in Materials Science and Engineering, 2007, 15, S361-S375.	0.8	16
47	A generalization of the method of incompatible modes. International Journal for Numerical Methods in Engineering, 2007, 69, 1851-1868.	1.5	22
48	Incompatible Bubbles: A non-conforming finite element formulation for linear elasticity. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 1662-1672.	3.4	15
49	Error estimation for the HHT method in non-linear solid dynamics. Computers and Structures, 2007, 85, 158-169.	2.4	6
50	Analysis of error estimators for the semidiscrete equations of linear solid and structural dynamics. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 2674-2696.	3.4	4
51	A methodology for the formulation of error estimators for time integration in linear solid and structural dynamics. International Journal for Numerical Methods in Engineering, 2006, 66, 635-660.	1.5	10
52	The interpolation of rotations and its application to finite element models of geometrically exact rods. Computational Mechanics, 2004, 34, 121.	2.2	129
53	Stability analysis of linear multistep methods for classical elastodynamics. Computer Methods in Applied Mechanics and Engineering, 2004, 193, 2169-2189.	3.4	7
54	Energy-dissipative momentum-conserving time-stepping algorithms for the dynamics of nonlinear Cosserat rods. Computational Mechanics, 2003, 31, 3-26.	2.2	35

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55	Numerical integration of the stiff dynamics of geometrically exact shells: an energy-dissipative momentum-conserving scheme. <i>International Journal for Numerical Methods in Engineering</i> , 2002, 54, 1043-1086.	1.5	36
56	An objective finite element approximation of the kinematics of geometrically exact rods and its use in the formulation of an energy-momentum conserving scheme in dynamics. <i>International Journal for Numerical Methods in Engineering</i> , 2002, 54, 1683-1716.	1.5	176
57	On the stability and convergence of fully discrete solutions in linear elastodynamics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2002, 191, 3857-3882.	3.4	10
58	On the formulation of high-frequency dissipative time-stepping algorithms for nonlinear dynamics. Part I: low-order methods for two model problems and nonlinear elastodynamics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2001, 190, 2603-2649.	3.4	112
59	On the formulation of high-frequency dissipative time-stepping algorithms for nonlinear dynamics. Part II: second-order methods. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2001, 190, 6783-6824.	3.4	108
60	Finite Temperature Nanovoids Evolution in FCC Metals Using Quasicontinuum Method. <i>Key Engineering Materials</i> , 0, 488-489, 387-390.	0.4	3
61	Strategy and algorithms for the parallel solution of the nearest neighborhood problem in shared-memory processors. <i>Engineering With Computers</i> , 0, , 1.	3.5	0