

Alberto Cardona

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.

84
papers

2,534
citations

29
h-index

48
g-index

87
ext. papers

2,877
ext. citations

3.2
avg. IF

5.15
L-index

#	Paper	IF	Citations
84	A General Purpose Formulation for Nonsmooth Dynamics With Finite Rotations: Application to the Woodpecker Toy. <i>Journal of Computational and Nonlinear Dynamics</i> , 2021 , 16,	1.4	2
83	Simulation of Sliding Friction of Spherical Rigid Bodies Subject to Multiple Impact Collisions. <i>Mechanisms and Machine Science</i> , 2021 , 151-158	0.3	
82	A nonsmooth frictional contact formulation for multibody system dynamics. <i>International Journal for Numerical Methods in Engineering</i> , 2020 , 121, 3584-3609	2.4	7
81	On the adaptation of local impact laws for multiple impact problems. <i>Nonlinear Dynamics</i> , 2020 , 102, 1997-2016	5	2
80	A robust nonsmooth generalized-(alpha) scheme for flexible systems with impacts. <i>Multibody System Dynamics</i> , 2020 , 48, 127-149	2.8	7
79	On the Constraints Formulation in the Nonsmooth Generalized-(alpha) Method 2018 , 335-374		5
78	Non-smooth model of a frictionless and dry three-dimensional revolute joint with clearance for multibody system dynamics. <i>Mechanism and Machine Theory</i> , 2018 , 121, 335-354	4	28
77	Global-local HROM for non-linear thermal problems with irreversible changes of material states. <i>Comptes Rendus - Mecanique</i> , 2018 , 346, 539-555	2.1	2
76	GlobalLocal ROM for the solution of parabolic problems with highly concentrated moving sources. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017 , 326, 739-756	5.7	4
75	Unilateral contact condition enhanced with squeeze film modelling in automotive differentials. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2016 , 230, 1243-1257	1.3	
74	Determination of wear in internal combustion engine valves using the finite element method and experimental tests. <i>Mechanism and Machine Theory</i> , 2016 , 104, 81-99	4	4
73	General treatment of essential boundary conditions in reduced order models for non-linear problems. <i>Advanced Modeling and Simulation in Engineering Sciences</i> , 2016 , 3,	2.7	6
72	A Lie Algebra Approach to Lie Group Time Integration of Constrained Systems. <i>CISM International Centre for Mechanical Sciences, Courses and Lectures</i> , 2016 , 91-158	0.6	5
71	Validation of flexible multibody dynamics beam formulations using benchmark problems. <i>Multibody System Dynamics</i> , 2016 , 37, 29-48	2.8	32
70	Numerical solution of frictional contact problems based on a mortar algorithm with an augmented Lagrangian technique. <i>Multibody System Dynamics</i> , 2015 , 35, 353-375	2.8	9
69	Order reduction in time integration caused by velocity projection. <i>Journal of Mechanical Science and Technology</i> , 2015 , 29, 2579-2585	1.6	3
68	Error analysis of generalized-(alpha) Lie group time integration methods for constrained mechanical systems. <i>Numerische Mathematik</i> , 2015 , 129, 149-179	2.2	26

67	Geometrically exact beam finite element formulated on the special Euclidean group. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014 , 268, 451-474	5.7	86
66	Geometric Interpretation of a Non-Linear Beam Finite Element on The Lie Group SE(3). <i>Archive of Mechanical Engineering</i> , 2014 , 61, 305-329		9
65	Improving the k-compressibility of Hyper Reduced Order Models with moving sources: Applications to welding and phase change problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014 , 274, 237-263	5.7	14
64	Numerical and experimental stress analysis of an internal-combustion engine valve during the closing event. <i>Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering</i> , 2014 , 228, 479-489	1.4	6
63	Simultaneous enforcement of constraints at position and velocity levels in the nonsmooth generalized-. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014 , 281, 131-161	5.7	44
62	An augmented Lagrangian technique combined with a mortar algorithm for modelling mechanical contact problems. <i>International Journal for Numerical Methods in Engineering</i> , 2013 , 93, 420-442	2.4	16
61	An enrichment scheme for solidification problems. <i>Computational Mechanics</i> , 2013 , 52, 17-35	4	14
60	Three-dimensional numerical solution for wear prediction using a mortar contact algorithm. <i>International Journal for Numerical Methods in Engineering</i> , 2013 , 96, 467-486	2.4	12
59	Automated sketching of non-fractionated kinematic chains. <i>Mechanism and Machine Theory</i> , 2013 , 68, 67-82	4	16
58	Topological and dimensional synthesis of planar linkages for multiple kinematic tasks. <i>Multibody System Dynamics</i> , 2013 , 29, 189-211	2.8	9
57	Un algoritmo de contacto mortar aplicable a problemas tridimensionales. <i>Revista Internacional De Metodos Numericos Para Calculo Y Diseno En Ingenieria</i> , 2012 , 28, 80-92	1.8	4
56	Lie group generalized-time integration of constrained flexible multibody systems. <i>Mechanism and Machine Theory</i> , 2012 , 48, 121-137	4	86
55	ElectroMechanoFluidic Modeling of Microsystems Using Finite Elements. <i>IEEE Transactions on Magnetics</i> , 2012 , 48, 355-358	2	2
54	Topological Synthesis of Planar Metamorphic Mechanisms for Low-Voltage Circuit Breakers. <i>Mechanics Based Design of Structures and Machines</i> , 2012 , 40, 453-468	1.7	10
53	Finite-element modelling of heat transfer in shaped metal deposition and experimental validation. <i>Acta Materialia</i> , 2012 , 60, 6621-6630	8.4	35
52	Combined Graph Layout Algorithms for Automated Sketching of Kinematic Chains 2012 ,		3
51	Computational modelling of shaped metal deposition. <i>International Journal for Numerical Methods in Engineering</i> , 2011 , 85, 84-106	2.4	61
50	Full numerical quadrature of weakly singular double surface integrals in Galerkin boundary element methods. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2011 , 27, 314-334	2.6	5

49	Analytical solutions of the thermal field induced by moving double-ellipsoidal and double-elliptical heat sources in a semi-infinite body. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2011 , 27, 595-607	2.6	47
48	Finite element modeling of welding processes. <i>Applied Mathematical Modelling</i> , 2011 , 35, 688-707	4.5	79
47	Two Lie Group Formulations for Dynamic Multibody Systems With Large Rotations 2011 ,		12
46	Automated Type and Modular Dimensional Synthesis of Planar Linkages 2010 ,		1
45	On the Use of Lie Group Time Integrators in Multibody Dynamics. <i>Journal of Computational and Nonlinear Dynamics</i> , 2010 , 5,	1.4	57
44	Inverse finite element method for large-displacement beams. <i>International Journal for Numerical Methods in Engineering</i> , 2010 , 84, 1166-1182	2.4	12
43	Design of bistable compliant mechanisms using precision position and rigid-body replacement methods. <i>Mechanism and Machine Theory</i> , 2010 , 45, 304-326	4	60
42	On the calculation of viscous damping of microbeam resonators in air. <i>Journal of Sound and Vibration</i> , 2009 , 327, 249-253	3.9	18
41	Synthesis and Optimization of Flexible Mechanisms 2009 , 81-93		3
40	Synthesis of Planar Multiloop Linkages Starting from Existing Parts or Mechanisms: Enumeration and Initial Sizing # #Communicated by M.Ceccarelli View all notes. <i>Mechanics Based Design of Structures and Machines</i> , 2008 , 36, 364-391	1.7	23
39	Modelling, simulation and control of flexible multibody systems. <i>CISM International Centre for Mechanical Sciences, Courses and Lectures</i> , 2008 , 21-74	0.6	3
38	Finite element modelling of inverse design problems in large deformations anisotropic hyperelasticity. <i>International Journal for Numerical Methods in Engineering</i> , 2008 , 74, 894-910	2.4	32
37	A nonlinear beam element formulation in the framework of an energy preserving time integration scheme for constrained multibody systems dynamics. <i>Computers and Structures</i> , 2008 , 86, 47-63	4.5	24
36	A fixed-mesh Eulerian-Lagrangian approach for stress analysis in continuous casting. <i>International Journal for Numerical Methods in Engineering</i> , 2007 , 70, 728-755	2.4	7
35	An energy preserving/decaying scheme for nonlinearly constrained multibody systems. <i>Multibody System Dynamics</i> , 2007 , 18, 435-470	2.8	13
34	An automated method for type synthesis of planar linkages based on a constrained subgraph isomorphism detection. <i>Multibody System Dynamics</i> , 2007 , 18, 233-258	2.8	40
33	Time-Step-Size-Independent Conditioning and Sensitivity to Perturbations in the Numerical Solution of Index Three Differential Algebraic Equations. <i>SIAM Journal of Scientific Computing</i> , 2007 , 29, 397-414	2.6	30
32	Thermal stress evaluation in the steel continuous casting process. <i>International Journal for Numerical Methods in Engineering</i> , 2006 , 65, 1355-1377	2.4	41

31	Computation of Stress and Strain Evolution During Heat Treatment of Work Rolls. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2006 , 73, 1045-1053	2.7	1
30	Dynamic Analysis of Constrained Nonlinear Multibody Systems with Intermittent Contact 2006 , 572-572		
29	Drag and non-drag force influences in numerical simulations of metallurgical ladles. <i>Journal of Materials Processing Technology</i> , 2005 , 160, 296-305	5.3	26
28	Energy Preserving Time Integration for Constrained Multibody Systems. <i>Multibody System Dynamics</i> , 2004 , 11, 41-61	2.8	39
27	A collocation meshless method based on local optimal point interpolation. <i>International Journal for Numerical Methods in Engineering</i> , 2003 , 57, 509-536	2.4	3
26	Constitutive models of steel under continuous casting conditions. <i>Journal of Materials Processing Technology</i> , 2003 , 135, 30-43	5.3	28
25	Optimal Design of Cams. <i>Multibody System Dynamics</i> , 2002 , 7, 285-305	2.8	20
24	Design of cams using a general purpose mechanism analysis program 2001 , 603-605		
23	Thermomechanical model of a continuous casting process. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2000 , 182, 439-455	5.7	45
22	Visco-plastic constitutive models of steel at high temperature. <i>Journal of Materials Processing Technology</i> , 2000 , 102, 143-152	5.3	17
21	Superelements Modelling in Flexible Multibody Dynamics. <i>Multibody System Dynamics</i> , 2000 , 4, 245-266	2.8	35
20	Evaluation of simple bifurcation points and post-critical path in large finite rotation problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1999 , 175, 137-156	5.7	21
19	A fast convergent and accurate temperature model for phase-change heat conduction. <i>International Journal for Numerical Methods in Engineering</i> , 1999 , 44, 1863-1884	2.4	41
18	Fast Fourier nonlinear vibration analysis. <i>Computational Mechanics</i> , 1998 , 22, 128-142	4	51
17	An Object-Oriented Implementation of the Finite Element Method for Coupled problems. <i>Revue Europeenne Des Elements</i> , 1998 , 7, 469-504		8
16	Continuation methods for tracing the equilibrium path in flexible mechanism analysis. <i>Engineering Computations</i> , 1998 , 15, 190-220	1.4	9
15	THREE-DIMENSIONAL GEARS MODELLING IN MULTIBODY SYSTEMS ANALYSIS. <i>International Journal for Numerical Methods in Engineering</i> , 1997 , 40, 357-381	2.4	10
14	A multiharmonic method for non-linear vibration analysis. <i>International Journal for Numerical Methods in Engineering</i> , 1994 , 37, 1593-1608	2.4	74

13	Kinematic and dynamic analysis of mechanisms with cams. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1993 , 103, 115-134	5-7	34
12	A superelement formulation for mechanism analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1992 , 100, 1-29	5-7	24
11	Rigid and flexible joint modelling in multibody dynamics using finite elements. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1991 , 89, 395-418	5-7	43
10	Modelling of superelements in mechanism analysis. <i>International Journal for Numerical Methods in Engineering</i> , 1991 , 32, 1565-1593	2-4	61
9	Modeling of a hydraulic actuator in flexible machine dynamics simulation. <i>Mechanism and Machine Theory</i> , 1990 , 25, 193-207	4	16
8	Time integration of the equations of motion in mechanism analysis. <i>Computers and Structures</i> , 1989 , 33, 801-820	4-5	128
7	A beam finite element non-linear theory with finite rotations. <i>International Journal for Numerical Methods in Engineering</i> , 1988 , 26, 2403-2438	2-4	443
6	Kinematics and dynamics of rigid and flexible mechanisms using finite elements and quaternion algebra. <i>Computational Mechanics</i> , 1988 , 4, 115-135	4	53
5	Solution of non-linear thermal transient problems by a reduction method. <i>International Journal for Numerical Methods in Engineering</i> , 1986 , 23, 1023-1042	2-4	33
4	Failure internal pressure of spherical steel containments. <i>Nuclear Engineering and Design</i> , 1985 , 90, 209-222		5
3	A reduction method for nonlinear structural dynamic analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1985 , 49, 253-279	5-7	123
2	A load-dependent basis for reduced nonlinear structural dynamics. <i>Computers and Structures</i> , 1985 , 20, 203-210	4-5	65
1	Reduction methods and explicit time integration technique in structural dynamics. <i>Advances in Engineering Software (1978)</i> , 1984 , 6, 36-44		2