JosÃ© L Escalona

List of Publications by Year
in descending order

50 papers	1,124 citations	516215 16 h-index	414034 32 g-index
50 all docs	50 docs citations	50 times ranked	600 citing authors

#	Article	IF	Citations
1	Development of elastic force model for wheel/rail contact problems. Journal of Sound and Vibration, 2004, 269, 295-325.	2.1	148
2	Formulation of Three-Dimensional Joint Constraints Using the Absolute Nodal Coordinates. Nonlinear Dynamics, 2003, 31, 167-195.	2.7	127
3	Efficient Evaluation of the Elastic Forces and the Jacobian in the Absolute Nodal Coordinate Formulation. Nonlinear Dynamics, 2004, 35, 313-329.	2.7	118
4	A new locking-free shear deformable finite element based on absolute nodal coordinates. Nonlinear Dynamics, 2007, 50, 249-264.	2.7	90
5	Three-dimensional formulation of rigid-flexible multibody systems with flexible beam elements. Multibody System Dynamics, 2008, 20, 1-28.	1.7	60
6	An arbitrary Lagrangianâ€“Eulerian discretization method for modeling and simulation of reeving systems in multibody dynamics. Mechanism and Machine Theory, 2017, 112, 1-21.	2.7	46
7	Multibody model of railway vehicles with weakly coupled vertical and lateral dynamics. Mechanical Systems and Signal Processing, 2019, 115, 570-592.	4.4	40
8	Modelling of structural flexiblity in multibody railroad vehicle systems. Vehicle System Dynamics, 2013, 51, 1027-1058.	2.2	37
9	Multibody simulation of railway vehicles with contact lookup tables. International Journal of Mechanical Sciences, 2019, 155, 571-582.	3.6	35
10	A bicycle model for education in multibody dynamics and real-time interactive simulation. Multibody System Dynamics, 2012, 27, 383-402.	1.7	31
11	Stability analysis of vehicles on circular motions using multibody dynamics. Nonlinear Dynamics, 2008, 53, 237-250.	2.7	27
12	Wheel-rail contact force measurement using strain gauges and distance lasers on a scaled railway vehicle. Mechanical Systems and Signal Processing, 2020, 138, 106555.	4.4	27
13	Artificial neural networks applied to the measurement of lateral wheel-rail contact force: A comparison with a harmonic cancellation method. Mechanism and Machine Theory, 2020, 153, 103968.	2.7	26
14	An approach for modeling long flexible bodies with application to railroad dynamics. Multibody System Dynamics, 2011, 26, 135-152.	1.7	20
15	A touchdown bearing with surface waviness: Friction loss analysis. Mechanism and Machine Theory, 2017, 110, 73-84.	2.7	18
16	Analysis of the two-point wheel-rail contact scenario using the knife-edge-equivalent contact constraint method. Mechanism and Machine Theory, 2020, 148, 103803.	2.7	18
17	On the design of a scaled railroad vehicle for the validation of computational models. Mechanism and Machine Theory, 2017, 115, 60-76.	2.7	16
18	Models for dynamic analysis of backup ball bearings of an AMB-system. Mechanical Systems and Signal Processing, 2017, 95, 324-344.	4.4	16

#	Article	IF	Citations
19	A Track Geometry Measuring System Based on Multibody Kinematics, Inertial Sensors and Computer Vision. Sensors, 2021, 21, 683.	2.1	16
20	Flexible multibody modeling of reeving systems including transverse vibrations. Multibody System Dynamics, 2018, 44, 107-133.	1.7	15
21	Dynamics of the coupled railway vehicleâ€“flexible track system with irregularities using a multibody approach with moving modes. Vehicle System Dynamics, 2014, 52, 45-67.	2.2	14
22	A nonlinear approach for modeling rail flexibility using the absolute nodal coordinate formulation. Nonlinear Dynamics, 2016, 83, 463-481.	2.7	14
23	Railway multibody simulation with the knife-edge-equivalent wheelâ€“rail constraint equations. Multibody System Dynamics, 2020, 48, 373-402.	1.7	14
24	On the Use of the Restitution Condition in Flexible Body Dynamics. Nonlinear Dynamics, 2002, 30, 71-86.	2.7	12
25	Dynamic Analysis of a Light Structure in Outer Space: Short Electrodynamic Tether. Multibody System Dynamics, 2003, 10, 125-146.	1.7	11
26	Stability and Bifurcation Analysis of a Spinning Space Tether. Journal of Nonlinear Science, 2006, 16, 507-542.	1.0	11
27	Measurement of railroad track irregularities using an automated recording vehicle. Measurement: Journal of the International Measurement Confederation, 2021, 183, 109765.	2.5	11
28	Stability Analysis of Multibody Systems With Long Flexible Bodies Using the Moving Modes Method and Its Application to Railroad Dynamics. Journal of Computational and Nonlinear Dynamics, 2014, 9, .	0.7	9
29	Experimental measurement of track irregularities using a scaled track recording vehicle and Kalman filtering techniques. Mechanical Systems and Signal Processing, 2022, 169, 108625.	4.4	9
30	Use of Finite Element and Finite Segment Methods in Modeling Rail Flexibility: A Comparative Study. Journal of Computational and Nonlinear Dynamics, 2012, 7, .	0.7	8
31	Application of the trajectory coordinate system and the moving modes method approach to railroad dynamics using Krylov subspaces. Journal of Sound and Vibration, 2013, 332, 5177-5191.	2.1	8
32	Application and Experimental Validation of a Multibody Model with Weakly Coupled Lateral and Vertical Dynamics to a Scaled Railway Vehicle. Sensors, 2020, 20, 3700.	2.1	8
33	Reference motion in deformable bodies under rigid body motion and vibration. Part I: theory. Journal of Sound and Vibration, 2003, 264, 1045-1056.	2.1	7
34	Description of Methods for the Eigenvalue Analysis of Railroad Vehicles Including Track Flexibility. Journal of Computational and Nonlinear Dynamics, 2012, 7, .	0.7	7
35	Track frame approach for heading and attitude estimation in operating railways using on-board MEMS sensor and encoder. Measurement: Journal of the International Measurement Confederation, 2021, 184, 109898.	2.5	7
36	Validation of multibody modeling and simulation using an instrumented bicycle: from the computer to the road. Multibody System Dynamics, 2018, 43, 297-319.	1.7	6

#	Article	IF	Citations
37	Wheelâ€“rail contact simulation with lookup tables and KEC profiles: a comparative study. Multibody System Dynamics, 2021, 52, 339-375.	1.7	6
38	Reference motion in deformable bodies under rigid body motion and vibration. Part II: evaluation of the coefficient of restitution for impacts. Journal of Sound and Vibration, 2003, 264, 1057-1072.	2.1	5
39	Stability and Bifurcation Analysis of a Modified Geometrically Nonlinear Orthotropic Jeffcott Model with Internal Damping. Nonlinear Dynamics, 2005, 42, 137-163.	2.7	5
40	The explanation of two semi-recursive multibody methods for educational purpose. Mechanism and Machine Theory, 2022, 175, 104935.	2.7	5
41	Comparison of numerical and computational aspects between two constraint-based contact methods in the description of wheel/rail contacts. Multibody System Dynamics, 2022, 54, 303-344.	1.7	4
42	Modeling viscous damping for transverse oscillations in reeving systems using the Arbitrary Lagrangianâ€“Eulerian Modal approach. Journal of Sound and Vibration, 2022, 534, 117009.	2.1	4
43	Title is missing!. Multibody System Dynamics, 2002, 7, 209-228.	1.7	3
44	A touchdown bearing with surface waviness: A dynamic model using a multibody approach. Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics, 2017, 231, 658-669.	0.5	3
45	Advances in the modeling and dynamic simulation of reeving systems using the arbitrary Lagrangianâ€“Eulerian modal method. Nonlinear Dynamics, 2022, 108, 3985-4003.	2.7	2
46	Modeling Infinitely Long Flexible Railroad Tracks Using Moving Modes and Krylov Subspaces Techniques. , 2013, , .		0
47	Analytical and Numerical Validation of a Moving Modes Method for Traveling Interaction on Long Structures. Journal of Computational and Nonlinear Dynamics, 2016, 11, .	0.7	0
48	Efficient Wheel-Rail Contact Model for the On-Line Estimation of Contact Forces. , 2018, , .		0
49	On the Double-Point Wheel-Rail Contact Situation Using Simplified Constraints. A Preliminary Study. Lecture Notes in Mechanical Engineering, 2020, , 686-693.	0.3	0
50	Design and manufacture of a scaled railway track with mechanically variable geometry. Scientific Reports, 2022, 12, .	1.6	0