Daniel Dopico Dopico

List of Publications by Year
in descending order

39	690	516710 16	580821 25
papers	citations	h-index	g-index

39	39	39	435
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Computation of Direct Sensitivities of Spatial Multibody Systems With Joint Friction. Journal of Computational and Nonlinear Dynamics, 2022, 17, .	1.2	4
2	Computational structural analysis of spatial multibody systems based on mobility criteria. Mechanism and Machine Theory, 2022, 176, 104985.	4.5	2
3	Augmented Lagrangian index-3 semi-recursive formulations with projections. Multibody System Dynamics, 2021, 52, 377-405.	2.7	6
4	Two General Index-3 Semi-Recursive Formulations for the Dynamics of Multibody Systems. Computational Methods in Applied Sciences (Springer), 2020, , 401-408.	0.3	1
5	Simulating the anchor lifting maneuver of ships using contact detection techniques and continuous contact force models. Multibody System Dynamics, 2019, 46, 147-179.	2.7	8
6	Direct Sensitivity Analysis of Multibody Systems: A Vehicle Dynamics Benchmark. Journal of Computational and Nonlinear Dynamics, 2019, 14, .	1.2	11
7	State and force observers based on multibody models and the indirect Kalman filter. Mechanical Systems and Signal Processing, 2018, 106, 210-228.	8.0	33
8	Benchmarking of adjoint sensitivity-based optimization techniques using a vehicle ride case study. Mechanics Based Design of Structures and Machines, 2018, 46, 254-266.	4.7	6
9	Direct sensitivity analysis of multibody systems with holonomic and nonholonomic constraints via an index-3 augmented Lagrangian formulation with projections. Nonlinear Dynamics, 2018, 93, 2039-2056.	5.2	29
10	Behaviour of augmented Lagrangian and Hamiltonian methods for multibody dynamics in the proximity of singular configurations. Nonlinear Dynamics, 2016, 85, 1491-1508.	5.2	28
11	Dynamic Response Optimization of Complex Multibody Systems in a Penalty Formulation Using Adjoint Sensitivity. Journal of Computational and Nonlinear Dynamics, 2015, 10, .	1.2	19
12	Direct and Adjoint Sensitivity Analysis of Ordinary Differential Equation Multibody Formulations. Journal of Computational and Nonlinear Dynamics, 2015, 10, .	1.2	37
13	Determination of Holonomic and Nonholonomic Constraint Reactions in an Index-3 Augmented Lagrangian Formulation With Velocity and Acceleration Projections. Journal of Computational and Nonlinear Dynamics, 2014, 9, .	1.2	34
14	Sensitivity Analysis of Multibody Dynamic Systems Modeled by ODEs and DAEs. Computational Methods in Applied Sciences (Springer), 2014, , 1-32.	0.3	7
15	Computational structural analysis of planar multibody systems with lower and higher kinematic pairs. Mechanism and Machine Theory, 2014, 71, 79-92.	4.5	16
16	Computing Sensitivity Analysis of Vehicle Dynamics Based on Multibody Models. , 2013, , .		1
17	Direct and Adjoint Sensitivity Analysis of Multibody Systems Using Maggiâ€™s Equations. , 2013, , .		3
18	Automotive observers based on multibody models and the extended Kalman filter. Multibody System Dynamics, 2012, 27, 3-19.	2.7	35

#	Article	IF	Citations
19	Dealing with multiple contacts in a human-in-the-loop application. Multibody System Dynamics, 2011, 25, 167-183.	2.7	54
20	An Efficient Unified Method for the Combined Simulation of Multibody and Hydraulic Dynamics: Comparison with Simplified and Co-Integration Approaches. Archive of Mechanical Engineering, 2011, 58, .	0.7	34
21	Efficient and accurate simulation of the ropeâ€“sheave interaction in weight-lifting machines. Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics, 2011, 225, 331-343.	0.8	11
22	Adaptive neurofuzzy ANFIS modeling of laser surface treatments. Neural Computing and Applications, 2010, 19, 85-90.	5.6	16
23	A 3D Physics-Based Hydraulic Excavator Simulator. , 2009, , .		7
24	Real-time state observers based on multibody models and the extended Kalman filter. Journal of Mechanical Science and Technology, 2009, 23, 894-900.	1.5	35
25	Parallel Linear Equation Solvers and OpenMP in the Context of Multibody System Dynamics. , 2009, , .		0
26	On the optimal scaling of index three DAEs in multibody dynamics. Multibody System Dynamics, 2008, 19, 3-20.	2.7	42
27	Performance of an Energy-Conserving Algorithm for Multi-Body Dynamics. Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics, 2008, 222, 243-253.	0.8	0
28	Real-Time Multibody Dynamics and Applications. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2008, , 247-311.	0.6	16
29	Real-time multi-body formulation for virtual-reality-based design and evaluation of automobile controllers. Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics, 2007, 221, 261-276.	0.8	2
30	On the effect of linear algebra implementations in real-time multibody system dynamics. Computational Mechanics, 2007, 41, 607-615.	4.0	22
31	On the Stabilizing Properties of Energy-Momentum Integrators and Coordinate Projections for Constrained Mechanical Systems. , 2007, , 49-67.		11
32	Application Criteria for Conserving Integrators and Projection Methods in Multibody Dynamics. , 2007, , .		0
33	A benchmarking system for MBS simulation software: Problem standardization and performance measurement. Multibody System Dynamics, 2006, 16, 179-190.	2.7	32
34	Two implementations of IRK integrators for real-time multibody dynamics. International Journal for Numerical Methods in Engineering, 2006, 65, 2091-2111.	2.8	7
35	A Combined Penalty and Recursive Real-Time Formulation for Multibody Dynamics. Journal of Mechanical Design, Transactions of the ASME, 2004, 126, 602-608.	2.9	59
36	Penalty, Semi-Recursive and Hybrid Methods for MBS Real-Time Dynamics in the Context of Structural Integrators. Multibody System Dynamics, 2004, 12, 117-132.	2.7	41

#	Article	IF	Citations
37	A Hybrid Global-Topological Real-Time Formulation for Multibody Systems. , 2003, , 115.		3
38	An optimum synthesis for gripping mechanisms by using natural coordinates. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2002, 216, 643-653.	2.1	11
39	Adjoint sensitivity index-3 augmented Lagrangian formulation with projections. Mechanics Based Design of Structures and Machines, 0, , 1-31.	4.7	7