

Eduardo Bayo

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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.

90
papers

2,547
citations

25
h-index

49
g-index

97
ext. papers

2,904
ext. citations

3.1
avg, IF

4.77
L-index

#	Paper	IF	Citations
90	Kinematic and Dynamic Simulation of Multibody Systems. <i>Mechanical Engineering Series</i> , 1994 ,	0.3	462
89	A replacement for the srss method in seismic analysis. <i>Earthquake Engineering and Structural Dynamics</i> , 1981 , 9, 187-192	4	230
88	A finite-element approach to control the end-point motion of a single-link flexible robot. <i>Journal of Field Robotics</i> , 1987 , 4, 63-75		205
87	A modified lagrangian formulation for the dynamic analysis of constrained mechanical systems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1988 , 71, 183-195	5.7	163
86	Inverse Dynamics and Kinematics of Multi- Link Elastic Robots: An Iterative Frequency Domain Approach. <i>International Journal of Robotics Research</i> , 1989 , 8, 49-62	5.7	154
85	Augmented lagrangian and mass-orthogonal projection methods for constrained multibody dynamics. <i>Nonlinear Dynamics</i> , 1996 , 9, 113-130	5	136
84	Piezoelectric actuator design for vibration suppression - Placement and sizing. <i>Journal of Guidance, Control, and Dynamics</i> , 1993 , 16, 859-864	2.1	90
83	Modeling and Solution Methods for Efficient Real-Time Simulation of Multibody Dynamics. <i>Multibody System Dynamics</i> , 1997 , 1, 259-280	2.8	61
82	An effective component-based method to model semi-rigid connections for the global analysis of steel and composite structures. <i>Engineering Structures</i> , 2006 , 28, 97-108	4.7	57
81	Intelligent Simulation of Multibody Dynamics: Space-State and Descriptor Methods in Sequential and Parallel Computing Environments. <i>Multibody System Dynamics</i> , 2000 , 4, 55-73	2.8	54
80	Exponentially Stable Tracking Control for Multijoint Flexible-Link Manipulators. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1993 , 115, 53-59	1.6	48
79	Development of practical design methods for steel structures with semi-rigid connections. <i>Engineering Structures</i> , 2005 , 27, 1125-1137	4.7	47
78	An efficient computational method for real time multibody dynamic simulation in fully cartesian coordinates. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1991 , 92, 377-395	5.7	46
77	The semi-rigid behaviour of three-dimensional steel beam-to-column joints subjected to proportional loading. Part I. Experimental evaluation. <i>Journal of Constructional Steel Research</i> , 2007 , 63, 1241-1253	3.8	40
76	Dynamics of flexible multibody systems using cartesian co-ordinates and large displacement theory. <i>International Journal for Numerical Methods in Engineering</i> , 1991 , 32, 1543-1563	2.4	39
75	On trajectory generation for flexible robots. <i>Journal of Field Robotics</i> , 1987 , 4, 229-235		38
74	A Systematic Design Procedure to Minimize a Performance Index for Robot Force Sensors. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1991 , 113, 388-394	1.6	36

73	Use of Special Ritz Vectors in Dynamic Substructure Analysis. <i>Journal of Structural Engineering</i> , 1986 , 112, 1944-1954	3	33
72	Experimental and numerical validation of a new design for three-dimensional semi-rigid composite joints. <i>Engineering Structures</i> , 2013 , 48, 55-69	4-7	32
71	Use of ritz vectors in wave propagation and foundation response. <i>Earthquake Engineering and Structural Dynamics</i> , 1984 , 12, 499-505	4	32
70	A simple and highly parallelizable method for real-time dynamic simulation based on velocity transformations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1993 , 107, 313-339	5-7	31
69	On the Accuracy of End-Point Trajectory Tracking for Flexible Arms by Noncausal Inverse Dynamic Solutions. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1991 , 113, 320-324	1.6	30
68	Six-axis force sensor evaluation and a new type of optimal frame truss design for robotic applications. <i>Journal of Field Robotics</i> , 1989 , 6, 191-208		30
67			29
66	An alternative design for internal and external semi-rigid composite joints. Part II: Finite element modelling and analytical study. <i>Engineering Structures</i> , 2008 , 30, 232-246	4-7	21
65	The semi-rigidbehaviour of three-dimensional steel beam-to-column steel joints subjected to proportional loading. Part II: Theoretical model and validation. <i>Journal of Constructional Steel Research</i> , 2007 , 63, 1254-1267	3.8	19
64	Topological Mapping for Tension Structures. <i>Journal of Structural Engineering</i> , 2006 , 132, 970-977	3	18
63			17
62	A Close Look at the Embedment of Optical Fibers into Composite Structures. <i>Journal of Composites Technology and Research</i> , 1989 , 11, 106		17
61	Experimental behaviour of 3D end-plate beam-to-column bolted steel joints. <i>Engineering Structures</i> , 2019 , 188, 277-289	4-7	16
60	Shear behaviour of trapezoidal column panels. I: Experiments and finite element modelling. <i>Journal of Constructional Steel Research</i> , 2015 , 108, 60-69	3.8	16
59	T-stub behavior under out-of-plane bending. II: Parametric study and analytical characterization. <i>Engineering Structures</i> , 2015 , 98, 241-250	4-7	14
58	An efficient cruciform element to model semirigid composite connections for frame analysis. <i>Journal of Constructional Steel Research</i> , 2012 , 72, 97-104	3.8	14
57	A simple and efficient computational approach for the forward dynamics of elastic robots. <i>Journal of Field Robotics</i> , 1989 , 6, 363-382		14
56	Shear behaviour of trapezoidal column panels. II: Parametric study and cruciform element. <i>Journal of Constructional Steel Research</i> , 2015 , 108, 70-81	3.8	12

55	The seismic performance of a semi-rigid composite joint with a double-sided extended end-plate. Part I: Experimental research. <i>Engineering Structures</i> , 2010 , 32, 385-396	4.7	12
54	Flexible Multibody Dynamics Based on a Fully Cartesian System of Support Coordinates. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 1993 , 115, 294-299	3	12
53	Penalty Formulations for the Dynamic Analysis of Elastic Mechanisms. <i>Journal of Mechanisms, Transmissions, and Automation in Design</i> , 1989 , 111, 321-327		12
52	A non-recursive Lagrangian solution of the non-causal inverse dynamics of flexible multibody systems: The planar case. <i>International Journal for Numerical Methods in Engineering</i> , 1993 , 36, 2725-2741	2.4	11
51	Shear behaviour of stiffened double rectangular column panels: Characterization and cruciform element. <i>Journal of Constructional Steel Research</i> , 2016 , 117, 126-138	3.8	10
50	A Lagrangian approach to the non-causal inverse dynamics of flexible multibody systems: The three-dimensional case. <i>International Journal for Numerical Methods in Engineering</i> , 1994 , 37, 3343-3361	2.4	10
49	General component based cruciform finite elements to model 2D steel joints with beams of equal and different depths. <i>Engineering Structures</i> , 2017 , 152, 698-708	4.7	9
48	Inverse Dynamics of Flexible Manipulators with Coulomb Friction or Backlash and Non-Zero Initial Conditions. <i>Journal of Dynamical and Control Systems</i> , 1999 , 9, 173-195		9
47	WELL-CONDITIONED NUMERICAL APPROACH FOR THE SOLUTION OF THE INVERSE HEAT CONDUCTION PROBLEM. <i>Numerical Heat Transfer, Part B: Fundamentals</i> , 1992 , 21, 79-98	1.3	9
46	Initial stiffness and strength characterization of minor axis T-stub under out-of-plane bending. <i>Journal of Constructional Steel Research</i> , 2018 , 140, 208-221	3.8	9
45			8
44	An alternative design for internal and external semi-rigid composite joints. Part I: Experimental research. <i>Engineering Structures</i> , 2008 , 30, 218-231	4.7	7
43	Exponentially Stable Tracking Control for Multi-Joint Flexible-Link Manipulators 1990 ,		7
42	Integrated 3D Web Application for Structural Analysis Software as a Service. <i>Journal of Computing in Civil Engineering</i> , 2013 , 27, 159-166	5	6
41	Inverse Dynamics of Non-Minimum Phase Systems with Non-Zero Initial Conditions. <i>Journal of Dynamical and Control Systems</i> , 1997 , 7, 49-71		6
40	Penalty based Hamiltonian equations for the dynamic analysis of constrained mechanical systems. <i>Mechanism and Machine Theory</i> , 1994 , 29, 725-737	4	6
39	Accuracy of Discrete Models for the Solution of the Inverse Dynamics Problem for Flexible Arms, Feasible Trajectories. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1997 , 119, 396-404	1.6	5
38	An efficient and direct method for buckling analysis of steel frame structures. <i>Journal of Constructional Steel Research</i> , 2001 , 57, 1321-1336	3.8	5

37	A multi-index variable time step method for the dynamic simulation of multibody systems. <i>International Journal for Numerical Methods in Engineering</i> , 1999 , 44, 1579-1598	2.4	5
36	Inverse dynamics of spatial open-chain flexible manipulators with lumped and distributed actuators. <i>Journal of Field Robotics</i> , 1994 , 11, 327-338		5
35	Stiffness modelling of 2D welded joints using metamodels based on mode shapes. <i>Journal of Constructional Steel Research</i> , 2019 , 156, 242-251	3.8	4
34	An effective and user-friendly web application for the collaborative analysis of steel joints. <i>Advances in Engineering Software</i> , 2018 , 119, 60-67	3.6	4
33	Cancelling vibrations in flexible articulated structures using non-causal inverse dynamics. <i>IET Control Theory and Applications</i> , 2000 , 147, 596-604		4
32	Major axis steel joint under torsion: Stiffness and strength characterization. <i>Engineering Structures</i> , 2019 , 180, 586-602	4.7	3
31	Stream Sockets versus Web Services for High-Performance and Secure Structural Analysis in Internet Environments. <i>Journal of Computing in Civil Engineering</i> , 2009 , 23, 47-56	5	3
30	Seismic performance of semi-rigid composite joints with a double-sided extended end-plate. Part II: Seismic simulations. <i>Engineering Structures</i> , 2010 , 32, 397-408	4.7	3
29	A Direct Method for Buckling Analysis of Single Layer Lattice Structures. <i>International Journal of Space Structures</i> , 2002 , 17, 285-292	0.8	3
28	Inverse dynamics of articulated flexible structures: Simultaneous trajectory tracking and vibration reduction. <i>Journal of Dynamical and Control Systems</i> , 1994 , 4, 299-309		3
27	WELL-CONDITIONED NUMERICAL METHOD FOR THE NONLINEAR INVERSE HEAT CONDUCTION PROBLEM. <i>Numerical Heat Transfer, Part B: Fundamentals</i> , 1992 , 22, 321-347	1.3	3
26	Metamodelling of stiffness matrices for 2D welded asymmetric steel joints. <i>Journal of Constructional Steel Research</i> , 2019 , 162, 105703	3.8	2
25	Robust design to optimize client-server bi-directional communication for structural analysis web applications or services. <i>Advances in Engineering Software</i> , 2017 , 112, 136-146	3.6	2
24	Existence and uniqueness of solutions of the inverse dynamics of multilink flexible arms: Convergence of a numerical scheme. <i>Journal of Field Robotics</i> , 1993 , 10, 73-102		2
23	1990,		2
22	Mechanical model for 2D steel joints with beams of different depth without web stiffeners 2016,		2
21	Trajectory Shaping for Flexible Manipulators: A Comparative Study 1989 , 159-174		2
20	Major axis steel joint with additional plates subjected to torsion: Stiffness characterization. <i>Engineering Structures</i> , 2020 , 220, 111021	4.7	2

19	Optimal output-trajectory tracking - Application to Mobile Transporter Avionic Breadboard 2000 ,		1
18	Dynamic Analysis. Equations of Motion. <i>Mechanical Engineering Series</i> , 1994 , 156-200	0.3	1
17	Acceleration Profiles for Causal Solutions of the Inverse Dynamics Approach to the Control of Single Link Flexible Arms. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1991 , 113, 752-754	1.6	1
16	Practical and efficient approaches for semi-rigid design of composite frames. <i>Steel and Composite Structures</i> , 2007 , 7, 161-184		1
15	An assessment of the rotation capacity required by structural hollow sections for plastic analysis 2017 , 277-284		1
14	Forward Dynamics of Flexible Multibody Systems. <i>Mechanical Engineering Series</i> , 1994 , 375-408	0.3	1
13	A new method to assess the rotation capacity of structural hollow sections based in multibody theory 2006 , 694-694		0
12	Axial-moment interaction for 2D welded steel joints using FEA: An initial investigation. <i>Journal of Constructional Steel Research</i> , 2020 , 168, 106001	3.8	0
11	Stiffness metamodelling of 2D bolted extended end-plate steel connections using modal decomposition. <i>Journal of Building Engineering</i> , 2021 , 34, 101925	5.2	0
10	03.28: Performance of cruciform finite elements that model 2D steel joints with beams of unequal depth in frame analysis. <i>Ce/Papers</i> , 2017 , 1, 729-738	0.3	
9	Characterization of the behaviour of welded steel joints through modal components. <i>Ce/Papers</i> , 2019 , 3, 331-336	0.3	
8	Improved Formulations for Real-Time Dynamics. <i>Mechanical Engineering Series</i> , 1994 , 271-324	0.3	
7	Discussion: Inverse Dynamics of Flexible Robot Arms: Modeling and Computation for Trajectory Control (Asada, H., Ma, Z.-D., and Tokumaru, H., 1990, ASME J. of Dyn. Syst., Meas., Control, 112, pp. 177-185). <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1991 , 113, 192-193	1.6	
6	Control Structural Interaction Testbed: A Model for University Industry Interaction. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 1991 , 25, 97-102		
5	CONTROL STRUCTURAL INTERACTION TESTBED: A MODEL FOR UNIVERSITY INDUSTRY INTERACTION 1992 , 97-102		
4	Numerical Integration of the Equations of Motion. <i>Mechanical Engineering Series</i> , 1994 , 243-270	0.3	
3	Inverse Dynamics of Flexible Multibodies. <i>Mechanical Engineering Series</i> , 1994 , 409-434	0.3	
2	An efficient and direct method for buckling analysis of tubular steel frame structures 2017 , 571-576		

- 1 Simple efficient architecture **2010**, 393-394