Eduardo Bayo

List of Publications by Year in Descending Order

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	Stiffness metamodelling of 2D bolted extended end-plate steel connections using modal decomposition. *Journal of Building Engineering*, **2021**, 34, 101925	5.2	0
89	Major axis steel joint with additional plates subjected to torsion: Stiffness characterization. *Engineering Structures*, **2020**, 220, 111021	4.7	2
88	Axial-moment interaction for 2D welded steel joints using FEA: An initial investigation. *Journal of Constructional Steel Research*, **2020**, 168, 106001	3.8	0
87	Metamodelling of stiffness matrices for 2D welded asymmetric steel joints. *Journal of Constructional Steel Research*, **2019**, 162, 105703	3.8	2
86	Major axis steel joint under torsion: Stiffness and strength characterization. *Engineering Structures*, **2019**, 180, 586-602	4.7	3
85	Stiffness modelling of 2D welded joints using metamodels based on mode shapes. *Journal of Constructional Steel Research*, **2019**, 156, 242-251	3.8	4
84	Experimental behaviour of 3D end-plate beam-to-column bolted steel joints. *Engineering Structures*, **2019**, 188, 277-289	4.7	16
83	Characterization of the behaviour of welded steel joints through modal components. *Ce/Papers*, **2019**, 3, 331-336	0.3	
82	An effective and user-friendly web application for the collaborative analysis of steel joints. *Advances in Engineering Software*, **2018**, 119, 60-67	3.6	4
81	Initial stiffness and strength characterization of minor axis T-stub under out-of-plane bending. *Journal of Constructional Steel Research*, **2018**, 140, 208-221	3.8	9
80	General component based cruciform finite elements to model 2D steel joints with beams of equal and different depths. *Engineering Structures*, **2017**, 152, 698-708	4.7	9
79	03.28: Performance of cruciform finite elements that model 2D steel joints with beams of unequal depth in frame analysis. *Ce/Papers*, **2017**, 1, 729-738	0.3	
78	Robust design to optimize client□erver bi-directional communication for structural analysis web applications or services. *Advances in Engineering Software*, **2017**, 112, 136-146	3.6	2
77	An efficient and direct method for buckling analysis of tubular steel frame structures **2017**, 571-576		
76	An assessment of the rotation capacity required by structural hollow sections for plastic analysis **2017**, 277-284		1
75	Shear behaviour of stiffened double rectangular column panels: Characterization and cruciform element. *Journal of Constructional Steel Research*, **2016**, 117, 126-138	3.8	10
74	Mechanical model for 2D steel joints with beams of different depth without web stiffeners **2016**,		2

73	T-stub behavior under out-of-plane bending. II: Parametric study and analytical characterization. *Engineering Structures*, **2015**, 98, 241-250	4.7	14
72	Shear behaviour of trapezoidal column panels. II: Parametric study and cruciform element. *Journal of Constructional Steel Research*, **2015**, 108, 70-81	3.8	12
71	Shear behaviour of trapezoidal column panels. I: Experiments and finite element modelling. *Journal of Constructional Steel Research*, **2015**, 108, 60-69	3.8	16
70	Experimental and numerical validation of a new design for three-dimensional semi-rigid composite joints. *Engineering Structures*, **2013**, 48, 55-69	4.7	32
69	Integrated 3D Web Application for Structural Analysis Software as a Service. *Journal of Computing in Civil Engineering*, **2013**, 27, 159-166	5	6
68	An efficient cruciform element to model semirigid composite connections for frame analysis. *Journal of Constructional Steel Research*, **2012**, 72, 97-104	3.8	14
67	Seismic performance of semi-rigid composite joints with a double-sided extended end-plate. Part II: Seismic simulations. *Engineering Structures*, **2010**, 32, 397-408	4.7	3
66	The seismic performance of a semi-rigid composite joint with a double-sided extended end-plate. Part I: Experimental research. *Engineering Structures*, **2010**, 32, 385-396	4.7	12
65	Simple efficient architecture **2010**, 393-394		
64	Stream Sockets versus Web Services for High-Performance and Secure Structural Analysis in Internet Environments. *Journal of Computing in Civil Engineering*, **2009**, 23, 47-56	5	3
63	An alternative design for internal and external semi-rigid composite joints. Part I: Experimental research. *Engineering Structures*, **2008**, 30, 218-231	4.7	7
62	An alternative design for internal and external semi-rigid composite joints. Part II: Finite element modelling and analytical study. *Engineering Structures*, **2008**, 30, 232-246	4.7	21
61	The semi-rigid behaviour of three-dimensional steel beam-to-column joints subjected to proportional loading. Part I. Experimental evaluation. *Journal of Constructional Steel Research*, **2007** , 63, 1241-1253	3.8	40
60	The semi-rigidbehaviour of three-dimensional steel beam-to-column steel joints subjected to proportional loading. Part II: Theoretical model and validation. *Journal of Constructional Steel Research*, **2007**, 63, 1254-1267	3.8	19
59	Practical and efficient approaches for semi-rigid design of composite frames. *Steel and Composite Structures*, **2007**, 7, 161-184		1
58	An effective component-based method to model semi-rigid connections for the global analysis of steel and composite structures. *Engineering Structures*, **2006**, 28, 97-108	4.7	57
57	Topological Mapping for Tension Structures. *Journal of Structural Engineering*, **2006**, 132, 970-977	3	18
56	A new method to assess the rotation capacity of structural hollow sections based in multibody theory **2006**, 694-694		0

55	Development of practical design methods for steel structures with semi-rigid connections. *Engineering Structures*, **2005**, 27, 1125-1137	4.7	47
54	A Direct Method for Buckling Analysis of Single Layer Lattice Structures. *International Journal of Space Structures*, **2002**, 17, 285-292	0.8	3
53	An efficient and direct method for buckling analysis of steel frame structures. *Journal of Constructional Steel Research*, **2001**, 57, 1321-1336	3.8	5
52	Optimal output-trajectory tracking - Application to Mobile Transporter Avionic Breadboard **2000**,		1
51	Cancelling vibrations in flexible articulated structures using non-causal inverse dynamics. *IET Control Theory and Applications*, **2000**, 147, 596-604		4
50	Intelligent Simulation of Multibody Dynamics: Space-State and Descriptor Methods in Sequential and Parallel Computing Environments. *Multibody System Dynamics*, **2000**, 4, 55-73	2.8	54
49	Inverse Dynamics of Flexible Manipulators with Coulomb Friction or Backlash and Non-Zero Initial Conditions. *Journal of Dynamical and Control Systems*, **1999**, 9, 173-195		9
48	A multi-index variable time step method for the dynamic simulation of multibody systems. *International Journal for Numerical Methods in Engineering*, **1999**, 44, 1579-1598	2.4	5
47	Accuracy of Discrete Models for the Solution of the Inverse Dynamics Problem for Flexible Arms, Feasible Trajectories. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1997**, 119, 396-404	1.6	5
46	Inverse Dyamics of Non-Minimum Phase Systems with Non-Zero Initial Conditions. *Journal of Dynamical and Control Systems*, **1997**, 7, 49-71		6
45	Modeling and Solution Methods for Efficient Real-Time Simulation of Multibody Dynamics. *Multibody System Dynamics*, **1997**, 1, 259-280	2.8	61
44	Augmented lagrangian and mass-orthogonal projection methods for constrained multibody dynamics. *Nonlinear Dynamics*, **1996**, 9, 113-130	5	136
43	Kinematic and Dynamic Simulation of Multibody Systems. *Mechanical Engineering Series*, **1994**,	0.3	462
42	Inverse dynamics of articulated flexible structures: Simultaneous trajectory tracking and vibration reduction. *Journal of Dynamical and Control Systems*, **1994**, 4, 299-309		3
41	A Lagrangian approach to the non-causal inverse dynamics of flexible multibody systems: The three-dimensional case. *International Journal for Numerical Methods in Engineering*, **1994**, 37, 3343-3361	2.4	10
40	Inverse dynamics of spatial open-chain flexible manipulators with lumped and distributed actuators. *Journal of Field Robotics*, **1994**, 11, 327-338		5
39	Penalty based Hamiltonian equations for the dynamic analysis of constrained mechanical systems. *Mechanism and Machine Theory*, **1994**, 29, 725-737	4	6
38	Dynamic Analysis. Equations of Motion. *Mechanical Engineering Series*, **1994**, 156-200	0.3	1

37	Improved Formulations for Real-Time Dynamics. *Mechanical Engineering Series*, **1994**, 271-324	0.3	
36	Numerical Integration of the Equations of Motion. *Mechanical Engineering Series*, **1994**, 243-270	0.3	
35	Inverse Dynamics of Flexible Multibodies. *Mechanical Engineering Series*, **1994**, 409-434	0.3	
34	Forward Dynamics of Flexible Multibody Systems. *Mechanical Engineering Series*, **1994**, 375-408	0.3	1
33	A simple and highly parallelizable method for real-time dynamic simulation based on velocity transformations. *Computer Methods in Applied Mechanics and Engineering*, **1993**, 107, 313-339	5.7	31
32	Piezoelectric actuator design for vibration suppression - Placement and sizing. *Journal of Guidance, Control, and Dynamics*, **1993**, 16, 859-864	2.1	90
31	Exponentially Stable Tracking Control for Multijoint Flexible-Link Manipulators. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1993**, 115, 53-59	1.6	48
30	Flexible Multibody Dynamics Based on a Fully Cartesian System of Support Coordinates. *Journal of Mechanical Design, Transactions of the ASME*, **1993**, 115, 294-299	3	12
29	A non-recursive Lagrangian solution of the non-causal inverse dynamics of flexible multibody systems: The planar case. *International Journal for Numerical Methods in Engineering*, **1993**, 36, 2725-2741	2.4	11
28	Existence and uniqueness of solutions of the inverse dynamics of multilink flexible arms: Convergence of a numerical scheme. *Journal of Field Robotics*, **1993**, 10, 73-102		2
27	WELL-CONDITIONED NUMERICAL METHOD FOR THE NONLINEAR INVERSE HEAT CONDUCTION PROBLEM. *Numerical Heat Transfer, Part B: Fundamentals*, **1992**, 22, 321-347	1.3	3
26	WELL-CONDITIONED NUMERICAL APPROACH FOR THE SOLUTION OF THE INVERSE HEAT CONDUCTION PROBLEM. *Numerical Heat Transfer, Part B: Fundamentals*, **1992**, 21, 79-98	1.3	9
25	CONTROL STRUCTURAL INTERACTION TESTBED: A MODEL FOR UNIVERSITY INDUSTRY INTERACTION **1992**, 97-102		
24	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. 177185). *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1991**	1.6	
23	An efficient computational method for real time multibody dynamic simulation in fully cartesian coordinates. *Computer Methods in Applied Mechanics and Engineering*, **1991**, 92, 377-395	5.7	46
22	Dynamics of flexible multibody systems using cartesian co-ordinates and large displacement theory. *International Journal for Numerical Methods in Engineering*, **1991**, 32, 1543-1563	2.4	39
21	Acceleration Profiles for Causal Solutions of the Inverse Dynamics Approach to the Control of Single Link Flexible Arms. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1991**, 113, 752-754	1.6	1
20	On the Accuracy of End-Point Trajectory Tracking for Flexible Arms by Noncausal Inverse Dynamic Solutions. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1991**, 113, 320-324	1.6	30

19	A Systematic Design Procedure to Minimize a Performance Index for Robot Force Sensors. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **1991**, 113, 388-394	1.6	36
18	Control Structural Interaction Testbed: A Model for University Industry Interaction. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **1991**, 25, 97-102		
17	Exponentially Stable Tracking Control for Multi-Joint Flexible-Link Manipulators **1990**,		7
16	**1990**,		2
15	Inverse Dynamics and Kinematics of Multi- Link Elastic Robots: An Iterative Frequency Domain Approach. *International Journal of Robotics Research*, **1989**, 8, 49-62	5.7	154
14	Penalty Formulations for the Dynamic Analysis of Elastic Mechanisms. *Journal of Mechanisms, Transmissions, and Automation in Design*, **1989**, 111, 321-327		12
13	Six-axis force sensor evaluation and a new type of optimal frame truss design for robotic applications. *Journal of Field Robotics*, **1989**, 6, 191-208		30
12	A simple and efficient computational approach for the forward dynamics of elastic robots. *Journal of Field Robotics*, **1989**, 6, 363-382		14
11	A Close Look at the Embedment of Optical Fibers into Composite Structures. *Journal of Composites Technology and Research*, **1989**, 11, 106		17
10	Trajectory Shaping for Flexible Manipulators: A Comparative Study **1989**, 159-174		2
9	A modified lagrangian formulation for the dynamic analysis of constrained mechanical systems. *Computer Methods in Applied Mechanics and Engineering*, **1988**, 71, 183-195	5.7	163
8	A finite-element approach to control the end-point motion of a single-link flexible robot. *Journal of Field Robotics*, **1987**, 4, 63-75		205
7	On trajectory generation for flexible robots. *Journal of Field Robotics*, **1987**, 4, 229-235		38
6	Use of Special Ritz Vectors in Dynamic Substructure Analysis. *Journal of Structural Engineering*, **1986**, 112, 1944-1954	3	33
5	Use of ritz vectors in wave propagation and foundation response. *Earthquake Engineering and Structural Dynamics*, **1984**, 12, 499-505	4	32
4	A replacement for the srss method in seismic analysis. *Earthquake Engineering and Structural Dynamics*, **1981**, 9, 187-192	4	230
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