Luis Baeza

List of Publications by Year
in descending order

44 papers	879 citations	471371 17 h-index	477173 29 g-index
44 all docs	44 docs citations	44 times ranked	521 citing authors

#	Article	IF	Citations
1	A 3D absolute nodal coordinate finite element model to compute the initial configuration of a railway catenary. Engineering Structures, 2014, 71, 234-243.	2.6	98
2	High frequency railway vehicle-track dynamics through flexible rotating wheelsets. Vehicle System Dynamics, 2008, 46, 647-659.	2.2	67
3	A railway track dynamics model based on modal substructuring and a cyclic boundary condition. Journal of Sound and Vibration, 2011, 330, 75-86.	2.1	59
4	Prediction of rail corrugation using a rotating flexible wheelset coupled with a flexible track model and a non-Hertzian/non-steady contact model. Journal of Sound and Vibration, 2011, 330, 4493-4507.	2.1	56
5	Numerical estimation of stresses in railway axles using a trainâ€“track interaction model. International Journal of Fatigue, 2013, 47, 18-30.	2.8	47
6	Railway vehicle/track interaction analysis using a modal substructuring approach. Journal of Sound and Vibration, 2006, 293, 112-124.	2.1	46
7	Railway Train-Track Dynamics for Wheelflats with Improved Contact Models. Nonlinear Dynamics, 2006, 45, 385-397.	2.7	45
8	Dynamic trainâ€“track interaction at high vehicle speedsâ€”Modelling of wheelset dynamics and wheel rotation. Journal of Sound and Vibration, 2011, 330, 5309-5321.	2.1	37
9	A comprehensive model of the railway wheelsetâ€“track interaction in curves. Journal of Sound and Vibration, 2014, 333, 4152-4169.	2.1	37
10	Improved railway wheelsetâ€“track interaction model in the high-frequency domain. Journal of Computational and Applied Mathematics, 2017, 309, 642-653.	1.1	33
11	An Eulerian coordinate-based method for analysing the structural vibrations of a solid of revolution rotating about its main axis. Journal of Sound and Vibration, 2007, 306, 618-635.	2.1	30
12	Rail corrugation growth accounting for the flexibility and rotation of the wheel set and the non-Hertzian and non-steady-state effects at contact patch. Vehicle System Dynamics, 2014, 52, 92-108.	2.2	29
13	Prediction of corrugation in rails using a non-stationary wheel-rail contact model. Wear, 2008, 265, 1156-1162.	1.5	25
14	PACDIN statement of methods. Vehicle System Dynamics, 2015, 53, 402-411.	2.2	21
15	Error estimation for the finite element evaluation of and in mixed-mode linear elastic fracture mechanics. Finite Elements in Analysis and Design, 2005, 41, 1079-1104.	1.7	18
16	Simulation of the evolution of rail corrugation using a rotating flexible wheelset model. Vehicle System Dynamics, 2011, 49, 1749-1769.	2.2	18
17	Eulerian models of the rotating flexible wheelset for high frequency railway dynamics. Journal of Sound and Vibration, 2019, 449, 300-314.	2.1	18
18	Dynamics of a truss structure and its moving-oscillator exciter with separation and impactâ€“reattachment. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 2517-2533.	1.0	14

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19	Wheelâ€“rail contact: experimental study of the creep forcesâ€“creepage relationships. Vehicle System Dynamics, 2014, 52, 469-487.	2.2	14
20	Study of railway curve squeal in the time domain using a high-frequency vehicle/track interaction model. Journal of Sound and Vibration, 2018, 431, 177-191.	2.1	14
21	Non-steady state modelling of wheelâ€“rail contact problem. Vehicle System Dynamics, 2013, 51, 91-108.	2.2	13
22	Point collocation scheme in silencers with temperature gradient and mean flow. Journal of Computational and Applied Mathematics, 2016, 291, 127-141.	1.1	13
23	A receptance-based method for predicting latent roots and critical points in friction-induced vibration problems of asymmetric systems. Journal of Sound and Vibration, 2009, 321, 1058-1068.	2.1	12
24	Vibration of a truss structure excited by a moving oscillator. Journal of Sound and Vibration, 2009, 321, 721-734.	2.1	11
25	Acoustic modelling of exhaust devices with nonconforming finite element meshes and transfer matrices. Applied Acoustics, 2012, 73, 713-722.	1.7	11
26	Method for obtaining the wheelâ€“rail contact location and its application to the normal problem calculation through â€˜CONTACTâ€™. Vehicle System Dynamics, 2018, 56, 1734-1746.	2.2	11
27	Technical characteristics and dynamic modelling of Talgo trains. Vehicle System Dynamics, 2008, 46, 301-316.	2.2	10
28	Study of the Falling Friction Effect on Rolling Contact Parameters. Tribology Letters, 2017, 65, 1.	1.2	9
29	Error estimation and h-adaptive refinement in the analysis of natural frequencies. Finite Elements in Analysis and Design, 2001, 38, 137-153.	1.7	7
30	Ana posteriorierror estimator for thep- andhp-versions of the finite element method. International Journal for Numerical Methods in Engineering, 2005, 62, 1-18.	1.5	7
31	3D Acoustic Modelling of Dissipative Silencers with Nonhomogeneous Properties and Mean Flow. Advances in Mechanical Engineering, 2014, 6, 537935.	0.8	7
32	Influence of the wheel-rail contact instationary process on contact parameters. Journal of Strain Analysis for Engineering Design, 2007, 42, 377-387.	1.0	6
33	On the filtering effects of the chord offset method for monitoring track geometry. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2012, 226, 650-654.	1.3	6
34	Dynamics of damped rotating solids of revolution through an Eulerian modal approach. Journal of Sound and Vibration, 2012, 331, 868-882.	2.1	6
35	Method for obtaining the modal properties of articulated trains equipped with independently rotating wheels. Vehicle System Dynamics, 2006, 44, 841-854.	2.2	5
36	Modal Approach for Forced Vibration of Beams with a Breathing Crack. Key Engineering Materials, 2009, 413-414, 39-46.	0.4	5

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37	A framework to predict the airborne noise inside railway vehicles with application to rolling noise. Applied Acoustics, 2021, 179, 108064.	1.7	5
38	Dynamics of an elastic beam and a jumping oscillator moving in the longitudinal direction of the beam. Structural Engineering and Mechanics, 2008, 30, 369-382.	1.0	3
39	Reply to â€œDiscussion on â€˜Eulerian models of the rotating flexible wheelset for high frequency railway dynamicsâ€™ [J. Sound Vib. 449 (2019) 300-314]â€• Journal of Sound and Vibration, 2020, 489, 115665.	2.1	2
40	Modelling of Railway Curve Squeal Including Effects of Wheel Rotation. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2015, , 417-424.	0.2	2
41	Dynamic Model of a Railway Wheelset for Corrugation Problem Analysis. Noise and Vibration Worldwide, 2009, 40, 10-17.	0.4	1
42	Efficient decoupling technique applied to the numerical time integration of advanced interaction models for railway dynamics. Mathematical Methods in the Applied Sciences, 2020, 43, 7915-7933.	1.2	1
43	Precision analysis and dynamic stability in the numerical solution of the two-dimensional wheel/rail tangential contact problem. Vehicle System Dynamics, 2019, 57, 1822-1846.	2.2	0
44	Virtual Test Method of Structure-Borne Sound for a Metro Bogie. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2021, , 186-193.	0.2	0