F Javier Fuenmayor

List of Publications by Year
in descending order

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72 papers	2,083 citations	218592 26 h-index	254106 43 g-index
73 all docs	73 docs citations	73 times ranked	1310 citing authors

#	Article	IF	Citations
1	An Abaqus implementation of the extended finite element method. Engineering Fracture Mechanics, 2009, 76, 347-368.	2.0	283
2	A mortar-based frictional contact formulation for large deformations using Lagrange multipliers. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 2860-2873.	3.4	100
3	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
4	Enhanced blending elements for XFEM applied to linear elastic fracture mechanics. International Journal for Numerical Methods in Engineering, 2009, 77, 126-148.	1.5	85
5	A recoveryâ€type error estimator for the extended finite element method based on singular+smooth stress field splitting. International Journal for Numerical Methods in Engineering, 2008, 76, 545-571.	1.5	84
6	Extended finite element method for fretting fatigue crack propagation. International Journal of Solids and Structures, 2008, 45, 5675-5687.	1.3	81
7	Improvement of the superconvergent patch recovery technique by the use of constraint equations: the SPR-C technique. International Journal for Numerical Methods in Engineering, 2007, 70, 705-727.	1.5	61
8	ACOUSTIC BEHAVIOUR OF ELLIPTICAL CHAMBER MUFFLERS. Journal of Sound and Vibration, 2001, 241, 401-421.	2.1	59
9	Acoustic attenuation performance of perforated dissipative mufflers with empty inlet/outlet extensions. Journal of Sound and Vibration, 2007, 302, 1000-1017.	2.1	59
10	Experimental fatigue testing of a fretting complete contact and numerical life correlation using X-FEM. International Journal of Fatigue, 2011, 33, 811-822.	2.8	52
11	Direction of crack propagation in a complete contact fretting-fatigue problem. International Journal of Fatigue, 2014, 58, 172-180.	2.8	49
12	Crack face contact in Xâ€FEM using a segmentâ€toâ€segment approach. International Journal for Numerical Methods in Engineering, 2010, 82, 1424-1449.	1.5	48
13	Accurate recovery-based upper error bounds for the extended finite element framework. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 2607-2621.	3.4	46
14	Efficient Finite Element Methodology Based on Cartesian Grids: Application to Structural Shape Optimization. Abstract and Applied Analysis, 2013, 2013, 1-19.	0.3	45
15	Domain integral formulation for 3-D curved and non-planar cracks with the extended finite element method. Computer Methods in Applied Mechanics and Engineering, 2013, 264, 129-144.	3.4	44
16	Numerical modelling of the mechanical behaviour of an osteon with microcracks. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 37, 109-124.	1.5	44
17	Mesh adaptivity driven by goal-oriented locally equilibrated superconvergent patch recovery. Computational Mechanics, 2014, 53, 957-976.	2.2	40
18	Fretting fatigue life prediction using the extended finite element method. International Journal of Mechanical Sciences, 2011, 53, 217-225.	3.6	39

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19	Homogenized stiffness matrices for mineralized collagen fibrils and lamellar bone using unit cell finite element models. Biomechanics and Modeling in Mechanobiology, 2014, 13, 437-449.	1.4	38
20	Fast simulation of the pantographâ€“catenary dynamic interaction. Finite Elements in Analysis and Design, 2017, 129, 1-13.	1.7	38
21	A transversal substructuring mode matching method applied to the acoustic analysis of dissipative mufflers. Journal of Sound and Vibration, 2007, 303, 614-631.	2.1	36
22	CRITERIA TO ACHIEVE NEARLY OPTIMAL MESHES IN THEh-ADAPTIVE FINITE ELEMENT METHOD. International Journal for Numerical Methods in Engineering, 1996, 39, 4039-4061.	1.5	34
23	Numerical modelling of crackâ€“contact interaction in 2D incomplete fretting contacts using X-FEM. Tribology International, 2009, 42, 1269-1275.	3.0	32
24	Convergence of domain integrals for stress intensity factor extraction in 2â€D curved cracks problems with the extended finite element method. International Journal for Numerical Methods in Engineering, 2013, 94, 740-757.	1.5	30
25	The Proper Generalized Decomposition (PGD) as a numerical procedure to solve 3D cracked plates in linear elastic fracture mechanics. International Journal of Solids and Structures, 2013, 50, 1710-1720.	1.3	30
26	Locally equilibrated stress recovery for goal oriented error estimation in the extended finite element method. Computers and Structures, 2015, 152, 1-10.	2.4	30
27	An approach to geometric optimisation of railway catenaries. Vehicle System Dynamics, 2018, 56, 1162-1186.	2.2	30
28	Influence of the mineral staggering on the elastic properties of the mineralized collagen fibril in lamellar bone. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 42, 243-256.	1.5	28
29	Calculation of the critical energy release rate<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mi>G</mml:mi></mml:mrow><mml:mrow><mml:mtext>c</mml:mte the cement line in cortical bone combining experimental tests and finite element models. Engineering Fracture Mechanics, 2017, 184, 168-182.	2.0	27
30	A finite element approach for the acoustic modeling of perforated dissipative mufflers with non-homogeneous properties. Mathematical and Computer Modelling, 2013, 57, 1970-1978.	2.0	26
31	PACDIN statement of methods. Vehicle System Dynamics, 2015, 53, 402-411.	2.2	21
32	Stochastic Monte Carlo simulations of the pantographâ€“catenary dynamic interaction to allow for uncertainties introduced during catenary installation. Vehicle System Dynamics, 2019, 57, 471-492.	2.2	21
33	2D contact smooth formulation based on the mortar method. Computer Methods in Applied Mechanics and Engineering, 2012, 247-248, 1-14.	3.4	20
34	Real time parameter identification and solution reconstruction from experimental data using the Proper Generalized Decomposition. Computer Methods in Applied Mechanics and Engineering, 2015, 296, 113-128.	3.4	19
35	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
36	EXTENSION OF THE ZIENKIEWICZ-ZHU ERROR ESTIMATOR TO SHAPE SENSITIVITY ANALYSIS. International Journal for Numerical Methods in Engineering, 1997, 40, 1413-1433.	1.5	17

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37	Enhanced error estimator based on a nearly equilibrated moving least squares recovery technique for FEM and XFEM. Computational Mechanics, 2013, 52, 321-344.	2.2	17
38	A numerical methodology to assess the quality of the design velocity field computation methods in shape sensitivity analysis. International Journal for Numerical Methods in Engineering, 2004, 59, 1725-1747.	1.5	16
39	Analytical model of the pantographâ€“catenary dynamic interaction and comparison with numerical simulations. Vehicle System Dynamics, 2022, 60, 132-155.	2.2	15
40	An implementation of the stiffness derivative method as a discrete analytical sensitivity analysis and its application to mixed mode in LEFM. Engineering Fracture Mechanics, 2002, 69, 2051-2071.	2.0	14
41	On the analysis of singular stress fields Part 1: Finite element formulation and application to notches. Journal of Strain Analysis for Engineering Design, 2002, 37, 437-444.	1.0	13
42	Singularity enrichment for complete sliding contact using the partition of unity finite element method. International Journal for Numerical Methods in Engineering, 2008, 76, 1402-1418.	1.5	13
43	A separated representation of an error indicator for the mesh refinement process under the proper generalized decomposition framework. Computational Mechanics, 2015, 55, 251-266.	2.2	12
44	A modal coordinate catenary model for the real-time simulation of the pantograph-catenary dynamic interaction. Finite Elements in Analysis and Design, 2019, 162, 1-12.	1.7	12
45	Analysis of the overlap section in a high-speed railway catenary by means of numerical simulations. Engineering Structures, 2020, 221, 110963.	2.6	12
46	CALCULATION OF THE STRESS INTENSITY FACTOR AND ESTIMATION OF ITS ERROR BY A SHAPE SENSITIVITY ANALYSIS. Fatigue and Fracture of Engineering Materials and Structures, 1997, 20, 813-828.	1.7	11
47	Acoustic modelling of exhaust devices with nonconforming finite element meshes and transfer matrices. Applied Acoustics, 2012, 73, 713-722.	1.7	11
48	Calculation of KII in crack face contacts using X-FEM. Application to fretting fatigue. Engineering Fracture Mechanics, 2011, 78, 428-445.	2.0	10
49	An improvement of the EDI method in linear elastic fracture mechanics by means of ana posteriori error estimator inG. International Journal for Numerical Methods in Engineering, 2004, 59, 533-558.	1.5	9
50	A recovery-explicit error estimator in energy norm for linear elasticity. Computer Methods in Applied Mechanics and Engineering, 2015, 287, 172-190.	3.4	9
51	Parametric model for the simulation of the railway catenary system static equilibrium problem. Finite Elements in Analysis and Design, 2016, 115, 21-32.	1.7	9
52	Computational performance of analytical methods for the acoustic modelling of automotive exhaust devices incorporating monoliths. Journal of Computational and Applied Mathematics, 2018, 330, 995-1006.	1.1	8
53	Explicit expressions for the estimation of the elastic constants of lamellar bone as a function of the volumetric mineral content using a multi-scale approach. Biomechanics and Modeling in Mechanobiology, 2018, 17, 449-464.	1.4	8
54	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

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55	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
56	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
57	Sound attenuation of a circular multi-chamber hybrid muffler. Noise Control Engineering Journal, 2008, 56, 356.	0.2	6
58	H -ADAPTIVE REFINEMENT STRATEGY FOR ACOUSTIC PROBLEMS WITH A SET OF NATURAL FREQUENCIES. Journal of Sound and Vibration, 2002, 255, 457-479.	2.1	5
59	On the analysis of singular stress fields Part 2: Application to complete slipping contacts. Journal of Strain Analysis for Engineering Design, 2003, 38, 207-217.	1.0	5
60	A domain integral for the calculation of generalized stress intensity factors in sliding complete contacts. International Journal of Solids and Structures, 2009, 46, 938-951.	1.3	5
61	Hardware-in-the-loop pantograph tests using analytical catenary models. Vehicle System Dynamics, 2022, 60, 3504-3518.	2.2	5
62	Numerical modelling of cancellous bone damage using an orthotropic failure criterion and tissue elastic properties as a function of the mineral content and microporosity. Computer Methods and Programs in Biomedicine, 2022, 219, 106764.	2.6	5
63	Extraction of the generalized stress intensity factor in gross sliding complete contacts using a path-independent integral*. Fatigue and Fracture of Engineering Materials and Structures, 2005, 28, 1071-1085.	1.7	4
64	Analytic approach to obtain shear traction in a cylindrical contact with reverse slip. Journal of Strain Analysis for Engineering Design, 2004, 39, 717-727.	1.0	3
65	Complete Elastic Contact Subject to Cyclic Shear in Partial Slip. Journal of Engineering Mechanics - ASCE, 2005, 131, 1146-1156.	1.6	3
66	A contour integral method to compute the generalized stress intensity factor in complete contacts under sliding conditions. Tribology International, 2006, 39, 1074-1083.	3.0	3
67	On the effect of the contact surface definition in the Cartesian grid finite element method. Advanced Modeling and Simulation in Engineering Sciences, 2018, 5, .	0.7	3
68	Influence of bulk stress on contact conditions and stresses during fretting fatigue. Journal of Strain Analysis for Engineering Design, 2002, 37, 479-492.	1.0	2
69	An extension of shape sensitivity analysis to an immersed boundary method based on Cartesian grids. Computational Mechanics, 2018, 62, 701-723.	2.2	2
70	Frictional shakedown in a complete contact. Journal of Strain Analysis for Engineering Design, 2003, 38, 329-338.	1.0	1
71	Crack growth in fretting-fatigue problems using the extended finite element method. , 2006, , 253-253.		0
72	A formulation to define the contact surface in the 2D mortar finite element method. , 2006, , 393-394.		0