Juan JosÃ© RÃ³denas

List of Publications by Year
in descending order

44 papers	784 citations	516561 16 h-index	526166 27 g-index
47 all docs	47 docs citations	47 times ranked	513 citing authors

#	Article	IF	Citations
1	A recoveryâ€type error estimator for the extended finite element method based on <i>singular</i>+<i>smooth</i> stress field splitting. International Journal for Numerical Methods in Engineering, 2008, 76, 545-571.	1.5	84
2	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
3	Direction of crack propagation in a complete contact fretting-fatigue problem. International Journal of Fatigue, 2014, 58, 172-180.	2.8	49
4	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
5	Efficient Finite Element Methodology Based on Cartesian Grids: Application to Structural Shape Optimization. Abstract and Applied Analysis, 2013, 2013, 1-19.	0.3	45
6	Equilibrated patch recovery error estimates: simple and accurate upper bounds of the error. International Journal for Numerical Methods in Engineering, 2007, 69, 2075-2098.	1.5	43
7	Exact 3D boundary representation in finite element analysis based on Cartesian grids independent of the geometry. International Journal for Numerical Methods in Engineering, 2015, 103, 445-468.	1.5	43
8	Mesh adaptivity driven by goal-oriented locally equilibrated superconvergent patch recovery. Computational Mechanics, 2014, 53, 957-976.	2.2	40
9	Certification of projection-based reduced order modelling in computational homogenisation by the constitutive relation error. International Journal for Numerical Methods in Engineering, 2014, 97, 395-422.	1.5	33
10	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
11	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
12	On the role of enrichment and statical admissibility of recovered fields ina posteriorierror estimation for enriched finite element methods. Engineering Computations, 2012, 29, 814-841.	0.7	26
13	Efficient recovery-based error estimation for the smoothed finite element method for smooth and singular linear elasticity. Computational Mechanics, 2013, 52, 37-52.	2.2	24
14	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
15	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
16	Stabilized method of imposing Dirichlet boundary conditions using a recovered stress field. Computer Methods in Applied Mechanics and Engineering, 2015, 296, 352-375.	3.4	17
17	3D analysis of the influence of specimen dimensions on fretting stresses. Finite Elements in Analysis and Design, 2003, 39, 933-949.	1.7	16
18	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

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19	An integration of a low cost adaptive remeshing strategy in the solution of structural shape optimization problems using evolutionary methods. Computers and Structures, 2008, 86, 1563-1578.	2.4	14
20	Imposing Dirichlet boundary conditions in hierarchical Cartesian meshes by means of stabilized Lagrange multipliers. International Journal for Numerical Methods in Engineering, 2014, 98, 399-417.	1.5	14
21	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
22	Robust h-adaptive meshing strategy considering exact arbitrary CAD geometries in a Cartesian grid framework. Computers and Structures, 2017, 193, 87-109.	2.4	11
23	Effect of platform switching on the peri-implant bone: A finite element study. Journal of Clinical and Experimental Dentistry, 2015, 7, e483-e488.	0.5	10
24	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
25	A modified perturbed Lagrangian formulation for contact problems. Computational Mechanics, 2015, 55, 737-754.	2.2	9
26	Topology and shape optimization of dissipative and hybrid mufflers. Structural and Multidisciplinary Optimization, 2020, 62, 269-284.	1.7	9
27	On the need for the use of errorâ€controlled finite element analyses in structural shape optimization processes. International Journal for Numerical Methods in Engineering, 2011, 87, 1105-1126.	1.5	8
28	Error estimation for the polygonal finite element method for smooth and singular linear elasticity. Computers and Mathematics With Applications, 2021, 92, 109-119.	1.4	7
29	Strength and deformation of arbitrary beam sections using adaptive FEM. Computers and Structures, 2007, 85, 15-29.	2.4	6
30	Large deformation frictional contact analysis with immersed boundary method. Computational Mechanics, 2018, 62, 853-870.	2.2	5
31	On the use of stabilization techniques in the Cartesian grid finite element method framework for iterative solvers. International Journal for Numerical Methods in Engineering, 2020, 121, 3004-3020.	1.5	5
32	Allying topology and shape optimization through machine learning algorithms. Finite Elements in Analysis and Design, 2022, 204, 103719.	1.7	5
33	Improvement in 3D topology optimization with <i>h</i>â€adaptive refinement using the Cartesian grid Finite Element Method. International Journal for Numerical Methods in Engineering, 2022, 123, 3045-3072.	1.5	4
34	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
35	A hierarchical h adaptivity methodology based on element subdivision. Revista UIS IngenierÃas, 2017, 16, 263-280.	0.1	3
36	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

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37	Structural shape optimization using Cartesian grids and automatic h-adaptive mesh projection. Structural and Multidisciplinary Optimization, 2018, 58, 61-81.	1.7	2
38	An extension of shape sensitivity analysis to an immersed boundary method based on Cartesian grids. Computational Mechanics, 2018, 62, 701-723.	2.2	2
39	3D Topology Optimization with h-adaptive Refinement Using Cartesian Grids Finite Element Method (cgFEM). , 2019, , 778-788.		2
40	Control of the finite element discretization error during the convergence of structural shape optimization algorithms. International Journal for Simulation and Multidisciplinary Design Optimization, 2009, 3, 363-369.	0.6	1
41	Highâ€order discontinuous Galerkin method for timeâ€domain electromagnetics on geometryâ€independent Cartesian meshes. International Journal for Numerical Methods in Engineering, 2021, 122, 7632-7663.	1.5	1
42	Fundaments of Recovery-Based Error Estimation and Bounding. SpringerBriefs in Applied Sciences and Technology, 2016, , 33-57.	0.2	0
43	Stress-Based Femur Fracture Risk Evaluation from Bone Densitometry. Lecture Notes in Computational Vision and Biomechanics, 2018, , 645-649.	0.5	0
44	ASSESSMENT OF THE USE OF TECHNICAL SOFTWARE BY THE STUDENTS IN THE CONTEXT OF MECHANICAL ENGINEERING. , 2020, , .		0