

Xevi Roca

List of Publications by Year in descending order

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Version: 2024-02-01

40
papers

567
citations

759233

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21
g-index

42
all docs

42
docs citations

42
times ranked

243
citing authors

#	ARTICLE	IF	CITATIONS
1	Efficiency of high-order elements for continuous and discontinuous Galerkin methods. International Journal for Numerical Methods in Engineering, 2013, 96, 529-560.	2.8	76
2	Optimization of a regularized distortion measure to generate curved high-order unstructured tetrahedral meshes. International Journal for Numerical Methods in Engineering, 2015, 103, 342-363.	2.8	65
3	A surface mesh smoothing and untangling method independent of the CAD parameterization. Computational Mechanics, 2014, 53, 587-609.	4.0	36
4	Distortion and quality measures for validating and generating high-order tetrahedral meshes. Engineering With Computers, 2015, 31, 423-437.	6.1	36
5	Generation of Curved High-order Meshes with Optimal Quality and Geometric Accuracy. Procedia Engineering, 2016, 163, 315-327.	1.2	32
6	Simultaneous untangling and smoothing of quadrilateral and hexahedral meshes using an object-oriented framework. Advances in Engineering Software, 2015, 80, 12-24.	3.8	28
7	A distortion measure to validate and generate curved high-order meshes on CAD surfaces with independence of parameterization. International Journal for Numerical Methods in Engineering, 2016, 106, 1100-1130.	2.8	25
8	High-order mesh curving by distortion minimization with boundary nodes free to slide on a 3D CAD representation. CAD Computer Aided Design, 2016, 72, 52-64.	2.7	25
9	Defining Quality Measures for High-Order Planar Triangles and Curved Mesh Generation. , 2011, , 365-383.		21
10	Optimizing Mesh Distortion by Hierarchical Iteration Relocation of the Nodes on the CAD Entities. Procedia Engineering, 2014, 82, 101-113.	1.2	16
11	An automatic and general least-squares projection procedure for sweep meshing. Engineering With Computers, 2010, 26, 391-406.	6.1	15
12	The receding front method applied to hexahedral mesh generation of exterior domains. Engineering With Computers, 2012, 28, 391-408.	6.1	15
13	Implicit large-eddy simulation of compressible flows using the Interior Embedded Discontinuous Galerkin method. , 2016, , .		15
14	Defining Quality Measures for Validation and Generation of High-Order Tetrahedral Meshes. , 2014, , 109-126.		15
15	Defining Quality Measures for Mesh Optimization on Parameterized CAD Surfaces. , 2013, , 85-102.		13
16	Least-squares approximation of affine mappings for sweep mesh generation: functional analysis and applications. Engineering With Computers, 2013, 29, 1-15.	6.1	12
17	An augmented Lagrangian formulation to impose boundary conditions for distortion based mesh moving and curving. Procedia Engineering, 2017, 203, 362-374.	1.2	11
18	Local dual contributions: Representing dual surfaces for block meshing. International Journal for Numerical Methods in Engineering, 2010, 83, 709-740.	2.8	9

#	ARTICLE	IF	CITATIONS
19	Scalable parallelization of the hybridized discontinuous Galerkin method for compressible flow. , 2013, , .		8
20	A New Procedure to Compute Imprints in Multi-sweeping Algorithms. , 2009, , 281-299.		8
21	Automatic Penalty and Degree Continuation for Parallel Pre-Conditioned Mesh Curving on Virtual Geometry. CAD Computer Aided Design, 2022, 146, 103208.	2.7	8
22	Mesh projection between parametric surfaces. Communications in Numerical Methods in Engineering, 2005, 22, 591-603.	1.3	7
23	Using a computational domain and a three-stage node location procedure for multi-sweeping algorithms. Advances in Engineering Software, 2011, 42, 700-713.	3.8	7
24	Representing Urban Geometries for Unstructured Mesh Generation. Procedia Engineering, 2016, 163, 175-185.	1.2	7
25	Automatically imposing incremental boundary displacements for valid mesh morphing and curving. CAD Computer Aided Design, 2019, 112, 47-62.	2.7	7
26	A new least-squares approximation of affine mappings for sweep algorithms. , 2005, , 433-448.		7
27	An Automatic and General Least-Squares Projection Procedure for Sweep Meshing. , 2006, , 487-506.		7
28	GPU-accelerated sparse matrix-vector product for a hybridizable discontinuous Galerkin method. , 2011, , .		6
29	Defining an 2-disparity Measure to Check and Improve the Geometric Accuracy of Non-interpolating Curved High-order Meshes. Procedia Engineering, 2015, 124, 122-134.	1.2	6
30	Generation of Curved Meshes for the High-Lift Common Research Model. , 2022, , .		5
31	A new least-squares approximation of affine mappings for sweep algorithms. Engineering With Computers, 2010, 26, 327-337.	6.1	4
32	Receding Front Method: A New Approach Applied to Generate Hexahedral Meshes of Outer Domains. , 2010, , 209-225.		4
33	Measuring and improving the geometric accuracy of piece-wise polynomial boundary meshes. Journal of Computational Physics, 2021, 443, 110500.	3.8	3
34	A Hybridized Multiscale Discontinuous Galerkin Method for Compressible Flows. , 2013, , .		2
35	Defining a Stretching and Alignment Aware Quality Measure for Linear and Curved 2D Meshes. Lecture Notes in Computational Science and Engineering, 2019, , 37-55.	0.3	2
36	Preserving isotropic element size functions in adaptivity, quadrilateral and hexahedral mesh generation. Advances in Engineering Software, 2013, 65, 168-181.	3.8	1

#	ARTICLE	IF	CITATIONS
37	Imposing Boundary Conditions to Match a CAD Virtual Geometry for the Mesh Curving Problem. Lecture Notes in Computational Science and Engineering, 2019, , 343-361.	0.3	1
38	Size-preserving size functions and smoothing procedures for adaptive quadrilateral mesh generation. Engineering With Computers, 2015, 31, 483-498.	6.1	0
39	Editorial: IMR2018. CAD Computer Aided Design, 2020, 127, 102919.	2.7	0
40	Interpolation of Subdivision Features for Curved Geometry Modeling. CAD Computer Aided Design, 2022, 145, 103185.	2.7	0