Ignasi Colominas

List of Publications by Year
in descending order

68 papers	2,121 citations	236833 25 h-index	233338 45 g-index
71 all docs	71 docs citations	71 times ranked	1495 citing authors

#	Article	IF	Citations
1	Numerical analysis and safety design of grounding systems in underground compact substations. Electric Power Systems Research, 2022, 203, 107627.	2.1	2
2	A reduced-dissipation WENO scheme with automatic dissipation adjustment. Journal of Computational Physics, 2021, 425, 109749.	1.9	12
3	The Impact of the Geometry of the Effective Propped Volume on the Economic Performance of Shale Gas Well Production. Energies, 2021, 14, 2475.	1.6	1
4	A Well-Balanced SPH-ALE Scheme for Shallow Water Applications. Journal of Scientific Computing, 2021, 88, 1.	1.1	3
5	Optimization of Offshore Steel Jackets: Review and Proposal of a New Formulation for Time-Dependent Constraints. Archives of Computational Methods in Engineering, 2020, 27, 1049-1069.	6.0	4
6	Very high-order method on immersed curved domains for finite difference schemes with regular Cartesian grids. Computer Methods in Applied Mechanics and Engineering, 2020, 360, 112782.	3.4	15
7	Computer software for analysis and design optimization of power transmission structures by simulated annealing and sensitivity analysis. Engineering With Computers, 2020, 37, 3649.	3.5	3
8	Estimation of long-term fatigue damage of fixed substructures using fully-coupled models and non-linear dynamic analysis. Ocean Engineering, 2020, 204, 107284.	1.9	2
9	DYNAMIC RESPONSE OPTIMIZATION OF STEEL JACKETS FOR OFFSHORE WIND TURBINES WITH FATIGUE AND TIME-DEPENDENT CONSTRAINTS. WIT Transactions on the Built Environment, 2020, , .	0.0	0
10	An a posteriori, efficient, high-spectral resolution hybrid finite-difference method for compressible flows. Computer Methods in Applied Mechanics and Engineering, 2018, 335, 91-127.	3.4	19
11	A Higher-Order Chimera Method for Finite Volume Schemes. Archives of Computational Methods in Engineering, 2018, 25, 691-706.	6.0	17
12	Computational modelling suggests complex interactions between interstitial flow and tumour angiogenesis. Journal of the Royal Society Interface, 2018, 15, 20180415.	1.5	29
13	A very accurate Arbitrary Lagrangian–Eulerian meshless method for Computational Aeroacoustics. Computer Methods in Applied Mechanics and Engineering, 2018, 342, 116-141.	3.4	12
14	A mathematical model of tumour angiogenesis: growth, regression and regrowth. Journal of the Royal Society Interface, 2017, 14, 20160918.	1.5	58
15	Computational Modeling of Tumor-Induced Angiogenesis. Archives of Computational Methods in Engineering, 2017, 24, 1071-1102.	6.0	33
16	High-accurate SPH method with Multidimensional Optimal Order Detection limiting. Computer Methods in Applied Mechanics and Engineering, 2016, 310, 134-155.	3.4	34
17	Structural optimization of lattice steel transmission towers. Engineering Structures, 2016, 117, 274-286.	2.6	26
18	A high-order density-based finite volume method for the computation of all-speed flows. Computer Methods in Applied Mechanics and Engineering, 2016, 298, 229-251.	3.4	17

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19	A Moving Least Squares-Based High-Order-Preserving Sliding Mesh Technique with No Intersections. Springer Tracts in Mechanical Engineering, 2015, , 27-36.	0.1	1
20	Comprehensive Model for Fatigue Analysis of Flexible Pavements considering Effects of Dynamic Axle Loads. Transportation Research Record, 2015, 2524, 110-118.	1.0	7
21	Numerical Modeling of Grounding Systems for Aboveground and Underground Substations. IEEE Transactions on Industry Applications, 2015, 51, 5107-5115.	3.3	4
22	New high-resolution-preserving sliding mesh techniques for higher-order finite volume schemes. Computers and Fluids, 2015, 118, 114-130.	1.3	37
23	Coupling of discrete random walks and continuous modeling for three-dimensional tumor-induced angiogenesis. Computational Mechanics, 2014, 53, 449-464.	2.2	31
24	A new higher-order finite volume method based on Moving Least Squares for the resolution of the incompressible Navier–Stokes equations on unstructured grids. Computer Methods in Applied Mechanics and Engineering, 2014, 278, 883-901.	3.4	28
25	Parallel computing in topology optimization of structures with stress constraints. Computers and Structures, 2013, 125, 62-73.	2.4	25
26	Experimental and computational modeling of oscillatory flow within a baffled tube containing periodic-tri-orifice baffle geometries. Computers and Chemical Engineering, 2013, 49, 1-17.	2.0	31
27	A numerical simulation tool for multilayer grounding analysis integrated in an open-source CAD interface. International Journal of Electrical Power and Energy Systems, 2013, 45, 353-361.	3.3	7
28	Capillary networks in tumor angiogenesis: From discrete endothelial cells to phase–field averaged descriptions via isogeometric analysis. International Journal for Numerical Methods in Biomedical Engineering, 2013, 29, 1015-1037.	1.0	67
29	A NUMERICAL STUDY BASED ON THE FEM OF A MULTISCALE CONTINUUM MODEL FOR TUMOR ANGIOGENESIS. Journal of Biomechanics, 2012, 45, S466.	0.9	4
30	Topology optimization of aeronautical structures with stress constraints: general methodology and applications. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2012, 226, 589-600.	0.7	4
31	Structural optimization of high voltage transmission line towers considering continuum and discrete design variables. WIT Transactions on the Built Environment, 2012, , .	0.0	2
32	High-Resolution Finite Volume Methods on Unstructured Grids for Turbulence and Aeroacoustics. Archives of Computational Methods in Engineering, 2011, 18, 315-340.	6.0	13
33	Toward a higher order unsteady finite volume solver based on reproducing kernel methods. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 2348-2362.	3.4	27
34	Implicit large-Eddy simulation with a moving least squares-based finite volume method. IOP Conference Series: Materials Science and Engineering, 2010, 10, 012235.	0.3	3
35	On the simulation of wave propagation with a higher-order finite volume scheme based on Reproducing Kernel Methods. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 1471-1490.	3.4	27
36	A Hyperbolic Theory for Advection-Diffusion Problems: Mathematical Foundations and Numerical Modeling. Archives of Computational Methods in Engineering, 2010, 17, 191-211.	6.0	24

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37	Block aggregation of stress constraints in topology optimization of structures. Advances in Engineering Software, 2010, 41, 433-441.	1.8	130
38	Implicit Large Eddy Simulation of non-wall-bounded turbulent flows based on the multiscale properties of a high-order finite volume method. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 615-624.	3.4	12
39	Stress constraints sensitivity analysis in structural topology optimization. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 2110-2122.	3.4	39
40	A new shock-capturing technique based on Moving Least Squares for higher-order numerical schemes on unstructured grids. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 2544-2558.	3.4	283
41	Resolution of computational aeroacoustics problems on unstructured grids with a higher-order finite volume scheme. Journal of Computational and Applied Mathematics, 2010, 234, 2089-2097.	1.1	19
42	Improvements in the treatment of stress constraints in structural topology optimization problems. Journal of Computational and Applied Mathematics, 2010, 234, 2231-2238.	1.1	18
43	Convergence acceleration of computer methods for grounding analysis in stratified soils. IOP Conference Series: Materials Science and Engineering, 2010, 10, 012079.	0.3	2
44	On the accuracy of finite volume and discontinuous Galerkin discretizations for compressible flow on unstructured grids. International Journal for Numerical Methods in Engineering, 2009, 78, 1553-1584.	1.5	27
45	Topology optimization of continuum structures with local and global stress constraints. Structural and Multidisciplinary Optimization, 2009, 39, 419-437.	1.7	181
46	A hyperbolic model for convection-diffusion transport problems in CFD: Numerical analysis and applications. Revista De La Real Academia De Ciencias Exactas, Fisicas Y Naturales - Serie A: Matematicas, 2008, 102, 319-334.	0.6	12
47	A mathematical model and a numerical model for hyperbolic mass transport in compressible flows. Heat and Mass Transfer, 2008, 45, 219-226.	1.2	20
48	High-order Finite Volume Methods and Multiresolution Reproducing Kernels. Archives of Computational Methods in Engineering, 2008, 15, 185-228.	6.0	24
49	A numerical model for the transport of salinity in estuaries. International Journal for Numerical Methods in Fluids, 2008, 56, 507-523.	0.9	5
50	A Higher-Order Finite Volume Method Using Multiresolution Reproducing Kernels. Lecture Notes in Computational Science and Engineering, 2008, , 157-171.	0.1	0
51	Numerical Simulation of Transferred Potentials in Earthing Grids Considering Layered Soil Models. IEEE Transactions on Power Delivery, 2007, 22, 1514-1522.	2.9	26
52	A discontinuous Galerkin method for a hyperbolic model for convection–diffusion problems in CFD. International Journal for Numerical Methods in Engineering, 2007, 71, 1342-1364.	1.5	23
53	A finite element formulation for a convection–diffusion equation based on Cattaneo's law. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 1757-1766.	3.4	28
54	Finite volume solvers and Moving Least-Squares approximations for the compressible Navier–Stokes equations on unstructured grids. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 4712-4736.	3.4	77

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55	Global versus local statement of stress constraints in topology optimization of continuum structures. WIT Transactions on the Built Environment, 2007, , .	0.0	5
56	Block aggregation of stress constraints in topology optimization of structures. WIT Transactions on the Built Environment, 2007, , .	0.0	6
57	High-order finite volume schemes on unstructured grids using moving least-squares reconstruction. Application to shallow water dynamics. International Journal for Numerical Methods in Engineering, 2006, 65, 295-331.	1.5	297
58	Topology optimization of structures: A minimum weight approach with stress constraints. Advances in Engineering Software, 2005, 36, 599-606.	1.8	26
59	Analysis of transferred Earth potentials in grounding systems: a BEM numerical approach. IEEE Transactions on Power Delivery, 2005, 20, 339-345.	2.9	37
60	Resolution of the flow in clarifiers by using a stabilized finite element method. International Journal for Numerical Methods in Fluids, 2004, 44, 115-133.	0.9	2
61	On the Galerkin formulation of the smoothed particle hydrodynamics method. International Journal for Numerical Methods in Engineering, 2004, 60, 1475-1512.	1.5	33
62	Why do computer methods for grounding analysis produce anomalous results?. IEEE Transactions on Power Delivery, 2003, 18, 1192-1202.	2.9	24
63	AplicaciÃ³n de una formulaciÃ³n en elementos finitos a la resoluciÃ³n del flujo en unidades de proceso de aguas residuales. IngenierÃa Del Agua, 2003, 10, 163.	0.2	0
64	A numerical formulation for grounding analysis in stratified soils. IEEE Transactions on Power Delivery, 2002, 17, 587-595.	2.9	41
65	SUPG stabilized finite element resolution of the Navierâ€"Stokes equations. Computer Methods in Applied Mechanics and Engineering, 2002, 191, 5899-5922.	3.4	11
66	Computer analysis of earthing systems in horizontally or vertically layered soils. Electric Power Systems Research, 2001, 59, 149-156.	2.1	26
67	High order shape design sensitivity: a unified approach. Computer Methods in Applied Mechanics and Engineering, 2000, 188, 681-696.	3.4	16
68	A boundary element numerical approach for grounding grid computation. Computer Methods in Applied Mechanics and Engineering, 1999, 174, 73-90.	3.4	39