Antonio J Gil

List of Publications by Year
in descending order

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79 papers	1,928 citations	218592 26 h-index	289141 40 g-index
82 all docs	82 docs citations	82 times ranked	929 citing authors

#	Article	IF	Citations
1	Viscoelastic up-scaling rank-one effects in in-silico modelling of electro-active polymers. Computer Methods in Applied Mechanics and Engineering, 2022, 389, 114358.	3.4	2
2	A thermodynamically consistent time integration scheme for non-linear thermo-electro-mechanics. Computer Methods in Applied Mechanics and Engineering, 2022, 389, 114298.	3.4	6
3	A New Updated Reference Lagrangian Smooth Particle Hydrodynamics algorithm for isothermal elasticity and elasto-plasticity. Computer Methods in Applied Mechanics and Engineering, 2022, 392, 114680.	3.4	5
4	A first order hyperbolic framework for large strain computational solid dynamics. Part III: Thermo-elasticity. Computer Methods in Applied Mechanics and Engineering, 2021, 373, 113505.	3.4	13
5	A Convex Multi-Variable based computational framework for multilayered electro-active polymers. Computer Methods in Applied Mechanics and Engineering, 2021, 374, 113567.	3.4	8
6	Mathematical models of supersonic and intersonic crack propagation in linear elastodynamics. International Journal of Fracture, 2021, 229, 55-75.	1.1	3
7	An entropy-stable Smooth Particle Hydrodynamics algorithm for large strain thermo-elasticity. Computer Methods in Applied Mechanics and Engineering, 2021, 379, 113736.	3.4	10
8	In-silico design of electrode meso-architecture for shape morphing dielectric elastomers. Journal of the Mechanics and Physics of Solids, 2021, 157, 104594.	2.3	9
9	A parameter-free total Lagrangian smooth particle hydrodynamics algorithm applied to problems with free surfaces. Computational Particle Mechanics, 2021, 8, 859-892.	1.5	5
10	A regularised-adaptive Proper Generalised Decomposition implementation for coupled magneto-mechanical problems with application to MRI scanners. Computer Methods in Applied Mechanics and Engineering, 2020, 358, 112640.	3.4	4
11	A staggered high-dimensional Proper Generalised Decomposition for coupled magneto-mechanical problems with application to MRI scanners. Computer Methods in Applied Mechanics and Engineering, 2020, 370, 113271.	3.4	7
12	A stabilisation approach for topology optimisation of hyperelastic structures with the SIMP method. Computer Methods in Applied Mechanics and Engineering, 2020, 364, 112924.	3.4	18
13	A combined reduced orderâ€full order methodology for the solution of 3D magnetoâ€mechanical problems with application to magnetic resonance imaging scanners. International Journal for Numerical Methods in Engineering, 2020, 121, 3529-3559.	1.5	5
14	A new energyâ€“momentum time integration scheme for non-linear thermo-mechanics. Computer Methods in Applied Mechanics and Engineering, 2020, 372, 113395.	3.4	8
15	A new stabilisation approach for level-set based topology optimisation of hyperelastic materials. Structural and Multidisciplinary Optimization, 2019, 60, 2343-2371.	1.7	6
16	Towards an efficient computational strategy for electro-activation in cardiac mechanics. Computer Methods in Applied Mechanics and Engineering, 2019, 356, 220-260.	3.4	7
17	On a family of numerical models for couple stress based flexoelectricity for continua and beams. Journal of the Mechanics and Physics of Solids, 2019, 125, 613-652.	2.3	23
18	An upwind vertex centred finite volume algorithm for nearly and truly incompressible explicit fast solid dynamic applications: Total and Updated Lagrangian formulations. Journal of Computational Physics: X, 2019, 3, 100025.	1.1	6

#	Article	IF	Citations
19	An accurate and efficient threeâ€dimensional highâ€order finite element methodology for the simulation of magnetoâ€mechanical coupling in MRI scanners. International Journal for Numerical Methods in Engineering, 2019, 119, 1185-1215.	1.5	4
20	A mixed variational framework for the design of energyâ€“momentum integration schemes based on convex multi-variable electro-elastodynamics. Computer Methods in Applied Mechanics and Engineering, 2019, 351, 109-152.	3.4	11
21	A new computational framework for electro-activation in cardiac mechanics. Computer Methods in Applied Mechanics and Engineering, 2019, 348, 796-845.	3.4	9
22	Mixed frameworks and structure preserving integration for coupled electroâ€elastodynamics. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900014.	0.2	0
23	A Total Lagrangian upwind Smooth Particle Hydrodynamics algorithm for large strain explicit solid dynamics. Computer Methods in Applied Mechanics and Engineering, 2019, 344, 209-250.	3.4	29
24	Transient solutions to nonlinear acoustoâ€magnetoâ€mechanical coupling for axisymmetric MRI scanner design. International Journal for Numerical Methods in Engineering, 2018, 115, 209-237.	1.5	5
25	An energyâ€“momentum time integration scheme based on a convex multi-variable framework for non-linear electro-elastodynamics. Computer Methods in Applied Mechanics and Engineering, 2018, 339, 1-35.	3.4	21
26	Unified oneâ€fluid formulation for incompressible flexible solids and multiphase flows: Application to hydrodynamics using the immersed structural potential method (ISPM). International Journal for Numerical Methods in Fluids, 2018, 86, 78-106.	0.9	12
27	A curvilinear high order finite element framework for electromechanics: From linearised electro-elasticity to massively deformable dielectric elastomers. Computer Methods in Applied Mechanics and Engineering, 2018, 329, 75-117.	3.4	29
28	An upwind cell centred Total Lagrangian finite volume algorithm for nearly incompressible explicit fast solid dynamic applications. Computer Methods in Applied Mechanics and Engineering, 2018, 340, 684-727.	3.4	18
29	A firstâ€order hyperbolic framework for large strain computational solid dynamics: An upwind cell centred Total Lagrangian scheme. International Journal for Numerical Methods in Engineering, 2017, 109, 407-456.	1.5	24
30	A high-order stabilised ALE finite element formulation for the Euler equations on deformable domains. Computers and Structures, 2017, 181, 89-102.	2.4	7
31	A framework for polyconvex large strain phase-field methods to fracture. Computer Methods in Applied Mechanics and Engineering, 2017, 317, 649-683.	3.4	53
32	Editorial for Computers and Structures. Computers and Structures, 2017, 181, 1-2.	2.4	1
33	A computational framework for incompressible electromechanics based on convex multi-variable strain energies for geometrically exact shell theory. Computer Methods in Applied Mechanics and Engineering, 2017, 317, 792-816.	3.4	15
34	A high performance data parallel tensor contraction framework: Application to coupled electro-mechanics. Computer Physics Communications, 2017, 216, 35-52.	3.0	21
35	A variationally consistent Streamline Upwind Petrovâ€“Galerkin Smooth Particle Hydrodynamics algorithm for large strain solid dynamics. Computer Methods in Applied Mechanics and Engineering, 2017, 318, 514-536.	3.4	26
36	A linearisedhp-finite element framework for acousto-magneto-mechanical coupling in axisymmetric MRI scanners. International Journal for Numerical Methods in Engineering, 2017, 112, 1323-1352.	1.5	11

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37	hp-Finite element solution of coupled stationary magnetohydrodynamics problems including magnetostrictive effects. Computers and Structures, 2016, 164, 161-180.	2.4	8
38	A new Jamesonâ€“Schmidtâ€“Turkel Smooth Particle Hydrodynamics algorithm for large strain explicit fast dynamics. Computer Methods in Applied Mechanics and Engineering, 2016, 311, 71-111.	3.4	43
39	A computational framework for large strain nearly and truly incompressible electromechanics based on convex multi-variable strain energies. Computer Methods in Applied Mechanics and Engineering, 2016, 310, 297-334.	3.4	28
40	A new framework for large strain electromechanics based on convex multi-variable strain energies: Conservation laws, hyperbolicity and extension to electro-magneto-mechanics. Computer Methods in Applied Mechanics and Engineering, 2016, 309, 202-242.	3.4	45
41	A unified approach for a posteriori high-order curved mesh generation using solid mechanics. Computational Mechanics, 2016, 58, 457-490.	2.2	40
42	Solution of an industrially relevant coupled magnetoâ€“mechanical problem set on an axisymmetric domain. Applied Mathematical Modelling, 2016, 40, 1959-1971.	2.2	10
43	On a tensor cross product based formulation of large strain solid mechanics. International Journal of Solids and Structures, 2016, 84, 49-63.	1.3	58
44	A computational framework for polyconvex large strain elasticity for geometrically exact beam theory. Computational Mechanics, 2016, 57, 277-303.	2.2	19
45	A new framework for large strain electromechanics based on convex multi-variable strain energies: Finite Element discretisation and computational implementation. Computer Methods in Applied Mechanics and Engineering, 2016, 302, 329-360.	3.4	48
46	A new framework for large strain electromechanics based on convex multi-variable strain energies: Variational formulation and material characterisation. Computer Methods in Applied Mechanics and Engineering, 2016, 302, 293-328.	3.4	61
47	A first order hyperbolic framework for large strain computational solid dynamics. Part II: Total Lagrangian compressible, nearly incompressible and truly incompressible elasticity. Computer Methods in Applied Mechanics and Engineering, 2016, 300, 146-181.	3.4	49
48	A STABILISED TOTAL LAGRANGIAN CORRECTED SMOOTH PARTICLE HYDRODYNAMICS TECHNIQUE IN LARGE STRAIN EXPLICIT FAST SOLID DYNAMICS. , 2016, , .		1
49	A CONSISTENTLY LINEARISED SOLID MECHANICS BASED MESH DEFORMATION TECHNIQUE FOR HIGH ORDER CURVED ELEMENTS. , 2016, , .		0
50	A computational framework for the analysis of linear piezoelectric beams using hp-FEM. Computers and Structures, 2015, 152, 155-172.	2.4	16
51	An upwind vertex centred Finite Volume solver for Lagrangian solid dynamics. Journal of Computational Physics, 2015, 300, 387-422.	1.9	44
52	A computational framework for polyconvex large strain elasticity. Computer Methods in Applied Mechanics and Engineering, 2015, 283, 1061-1094.	3.4	108
53	A first order hyperbolic framework for large strain computational solid dynamics. Part I: Total Lagrangian isothermal elasticity. Computer Methods in Applied Mechanics and Engineering, 2015, 283, 689-732.	3.4	71
54	Development of a stabilised Petrovâ€“Galerkin formulation for conservation laws in Lagrangian fast solid dynamics. Computer Methods in Applied Mechanics and Engineering, 2014, 268, 40-64.	3.4	52

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55	A vertex centred Finite Volume Jamesonâ€“Schmidtâ€“Turkel (JST) algorithm for a mixed conservation formulation in solid dynamics. Journal of Computational Physics, 2014, 259, 672-699.	1.9	60
56	A two-step Taylor-Galerkin formulation for fast dynamics. Engineering Computations, 2014, 31, 366-387.	0.7	18
57	A mortar approach for Fluidâ€“Structure interaction problems: Immersed strategies for deformable and rigid bodies. Computer Methods in Applied Mechanics and Engineering, 2014, 278, 853-882.	3.4	34
58	An hp-fem framework for the simulation of electrostrictive and magnetostrictive materials. Computers and Structures, 2014, 133, 131-148.	2.4	12
59	A stabilised Petrovâ€“Galerkin formulation for linear tetrahedral elements in compressible, nearly incompressible and truly incompressible fast dynamics. Computer Methods in Applied Mechanics and Engineering, 2014, 276, 659-690.	3.4	61
60	An enhanced Immersed Structural Potential Method for fluidâ€“structure interaction. Journal of Computational Physics, 2013, 250, 178-205.	1.9	34
61	Development of a cell centred upwind finite volume algorithm for a new conservation law formulation in structural dynamics. Computers and Structures, 2013, 118, 13-38.	2.4	66
62	On continuum immersed strategies for Fluidâ€“Structure Interaction. Computer Methods in Applied Mechanics and Engineering, 2012, 247-248, 51-64.	3.4	32
63	A coupled hpâ€finite element scheme for the solution of twoâ€dimensional electrostrictive materials. International Journal for Numerical Methods in Engineering, 2012, 91, 1158-1183.	1.5	14
64	Finite element modelling of thin metal sheet forming. , 2011, , 136-153.		1
65	A discrete geometric conservation law (DGCL) for a cell vertex finiteâ€volume algorithm on moving domains. International Journal for Numerical Methods in Biomedical Engineering, 2010, 26, 770-779.	1.0	2
66	Finite element superplastic forming (FEâ€SPF) of patientâ€specific maxillofacial prostheses. International Journal for Numerical Methods in Biomedical Engineering, 2010, 26, 139-155.	1.0	9
67	The Immersed Structural Potential Method for haemodynamic applications. Journal of Computational Physics, 2010, 229, 8613-8641.	1.9	47
68	Partitioned block-Gaussâ€“Seidel coupling for dynamic fluidâ€“structure interaction. Computers and Structures, 2010, 88, 1367-1382.	2.4	53
69	The bending of single layer graphene sheets: the lattice versus continuum approach. Nanotechnology, 2010, 21, 125702.	1.3	105
70	The formation of wrinkles in single-layer graphene sheets under nanoindentation. Journal of Physics Condensed Matter, 2010, 22, 145302.	0.7	31
71	Analysis of a continuum-based beam element in the framework of explicit-FEM. Finite Elements in Analysis and Design, 2009, 45, 583-591.	1.7	11
72	A partitioned coupling approach for dynamic fluidâ€“structure interaction with applications to biological membranes. International Journal for Numerical Methods in Fluids, 2008, 57, 555-581.	0.9	19

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73	The simulation of 3D unsteady incompressible flows with moving boundaries on unstructured meshes. Computers and Fluids, 2008, 37, 620-631.	1.3	28
74	Superplastic forming of dental and maxillofacial prostheses. , 2008, , 428-474.		4
75	Finite element analysis of partly wrinkled reinforced prestressed membranes. Computational Mechanics, 2007, 40, 595-615.	2.2	12
76	Simulating superplastic forming. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 6580-6603.	3.4	48
77	Structural analysis of prestressed Saint Venantâ€“Kirchhoff hyperelastic membranes subjected to moderate strains. Computers and Structures, 2006, 84, 1012-1028.	2.4	13
78	Finite element analysis of prestressed structural membranes. Finite Elements in Analysis and Design, 2006, 42, 683-697.	1.7	19
79	Parallel Multigrid Detached Eddy Simulation Algorithm for Three-Dimensional Unsteady Incompressible Flows on Unstructured Meshes. Journal of Aerospace Engineering, 2006, 19, 271-280.	0.8	11