

Javier Bonet

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101
papers

4,484
citations

36
h-index

65
g-index

109
ext. papers

5,021
ext. citations

4
avg, IF

5.76
L-index

#	Paper	IF	Citations
101	Variational and momentum preservation aspects of Smooth Particle Hydrodynamic formulations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1999 , 180, 97-115	5.7	503
100	Correction and stabilization of smooth particle hydrodynamics methods with applications in metal forming simulations. <i>International Journal for Numerical Methods in Engineering</i> , 2000 , 47, 1189-1214	2.4	343
99	Nonlinear Continuum Mechanics for Finite Element Analysis 2008 ,		322
98	An alternating digital tree (ADT) algorithm for 3D geometric searching and intersection problems. <i>International Journal for Numerical Methods in Engineering</i> , 1991 , 31, 1-17	2.4	293
97	Dynamic refinement and boundary contact forces in SPH with applications in fluid flow problems. <i>International Journal for Numerical Methods in Engineering</i> , 2007 , 72, 295-324	2.4	150
96	Discontinuous Galerkin solution of the Navier-Stokes equations on deformable domains. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2009 , 198, 1585-1595	5.7	143
95	Mesh adaptive computation of upper and lower bounds in limit analysis. <i>International Journal for Numerical Methods in Engineering</i> , 2008 , 75, 899-944	2.4	141
94	Finite element analysis of air supported membrane structures. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2000 , 190, 579-595	5.7	109
93	A variational formulation based contact algorithm for rigid boundaries in two-dimensional SPH applications. <i>Computational Mechanics</i> , 2004 , 33, 316-325	4	107
92	An averaged nodal deformation gradient linear tetrahedral element for large strain explicit dynamic applications. <i>Communications in Numerical Methods in Engineering</i> , 2001 , 17, 551-561		98
91	A simple orthotropic, transversely isotropic hyperelastic constitutive equation for large strain computations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1998 , 162, 151-164	5.7	92
90	A corrected smooth particle hydrodynamics formulation of the shallow-water equations. <i>Computers and Structures</i> , 2005 , 83, 1396-1410	4.5	87
89	A computational framework for polyconvex large strain elasticity. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2015 , 283, 1061-1094	5.7	79
88	Large strain viscoelastic constitutive models. <i>International Journal of Solids and Structures</i> , 2001 , 38, 2953-2968	7.7	
87	Upper and lower bounds in limit analysis: Adaptive meshing strategies and discontinuous loading. <i>International Journal for Numerical Methods in Engineering</i> , 2009 , 77, 471-501	2.4	74
86	Remarks on tension instability of Eulerian and Lagrangian corrected smooth particle hydrodynamics (CSPH) methods. <i>International Journal for Numerical Methods in Engineering</i> , 2001 , 52, 1203-1220	2.4	74
85	The computation of bounds for linear-functional outputs of weak solutions to the two-dimensional elasticity equations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006 , 195, 406-429	5.7	66

84	Variational formulation for the smooth particle hydrodynamics (SPH) simulation of fluid and solid problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2004 , 193, 1245-1256	5.7	66
83	A first order hyperbolic framework for large strain computational solid dynamics. Part I: Total Lagrangian isothermal elasticity. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2015 , 283, 689-732	5.7	62
82	Multiple-Fluid SPH Simulation Using a Mixture Model. <i>ACM Transactions on Graphics</i> , 2014 , 33, 1-11	7.6	62
81	Development of a cell centred upwind finite volume algorithm for a new conservation law formulation in structural dynamics. <i>Computers and Structures</i> , 2013 , 118, 13-38	4.5	56
80	Stabilized updated Lagrangian corrected SPH for explicit dynamic problems. <i>International Journal for Numerical Methods in Engineering</i> , 2007 , 69, 2687-2710	2.4	55
79	A stabilised Petrov-Galerkin formulation for linear tetrahedral elements in compressible, nearly incompressible and truly incompressible fast dynamics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014 , 276, 659-690	5.7	54
78	Stability and comparison of different linear tetrahedral formulations for nearly incompressible explicit dynamic applications. <i>International Journal for Numerical Methods in Engineering</i> , 2001 , 50, 119-133	2.4	53
77	On a tensor cross product based formulation of large strain solid mechanics. <i>International Journal of Solids and Structures</i> , 2016 , 84, 49-63	3.1	50
76	A vertex centred Finite Volume Jameson-Schmidt-Turkel (JST) algorithm for a mixed conservation formulation in solid dynamics. <i>Journal of Computational Physics</i> , 2014 , 259, 672-699	4.1	49
75	Development of a stabilised Petrov-Galerkin formulation for conservation laws in Lagrangian fast solid dynamics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014 , 268, 40-64	5.7	45
74	Partitioned block-Gauss-Seidel coupling for dynamic fluid-structure interaction. <i>Computers and Structures</i> , 2010 , 88, 1367-1382	4.5	43
73	Simulating superplastic forming. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006 , 195, 6580-6603	5.7	43
72	A simplified approach to enhance the performance of smooth particle hydrodynamics methods. <i>Applied Mathematics and Computation</i> , 2002 , 126, 133-155	2.7	43
71	A first order hyperbolic framework for large strain computational solid dynamics. Part II: Total Lagrangian compressible, nearly incompressible and truly incompressible elasticity. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016 , 300, 146-181	5.7	42
70	Computing Bounds for Linear Functionals of Exact Weak Solutions to Poisson's Equation. <i>SIAM Journal on Numerical Analysis</i> , 2004 , 42, 1610-1630	2.4	42
69	The Immersed Structural Potential Method for haemodynamic applications. <i>Journal of Computational Physics</i> , 2010 , 229, 8613-8641	4.1	39
68	An upwind vertex centred Finite Volume solver for Lagrangian solid dynamics. <i>Journal of Computational Physics</i> , 2015 , 300, 387-422	4.1	38
67	Continuous blending of SPH with finite elements. <i>Computers and Structures</i> , 2005 , 83, 1448-1458	4.5	38

66	Pressure-control algorithms for the numerical simulation of superplastic forming. <i>International Journal of Mechanical Sciences</i> , 1994 , 36, 297-309	5.5	36
65	Numerical simulation of the superplastic forming of thin sheet components using the finite element method. <i>International Journal for Numerical Methods in Engineering</i> , 1990 , 30, 1719-1737	2.4	36
64	A uniform deformation gradient hexahedron element with artificial hourglass control. <i>International Journal for Numerical Methods in Engineering</i> , 1995 , 38, 2809-2828	2.4	34
63	High pressure die casting simulation using a Lagrangian particle method. <i>Communications in Numerical Methods in Engineering</i> , 2003 , 19, 679-687		31
62	A review of the numerical analysis of superplastic forming. <i>Journal of Materials Processing Technology</i> , 1996 , 60, 45-53	5.3	31
61	An enhanced Immersed Structural Potential Method for fluid-structure interaction. <i>Journal of Computational Physics</i> , 2013 , 250, 178-205	4.1	29
60	A new Jameson-Schmidt-Turkel Smooth Particle Hydrodynamics algorithm for large strain explicit fast dynamics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016 , 311, 71-111	5.7	29
59	A mortar approach for Fluid-Structure interaction problems: Immersed strategies for deformable and rigid bodies. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014 , 278, 853-882	5.7	27
58	On continuum immersed strategies for Fluid-Structure Interaction. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2012 , 247-248, 51-64	5.7	27
57	The formation of wrinkles in single-layer graphene sheets under nanoindentation. <i>Journal of Physics Condensed Matter</i> , 2010 , 22, 145302	1.8	27
56	A corrected smooth particle hydrodynamics method for the simulation of debris flows. <i>Numerical Methods for Partial Differential Equations</i> , 2004 , 20, 140-163	2.5	27
55	Alternative techniques for casting process simulation. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2004 , 14, 145-166	4.5	25
54	A curvilinear high order finite element framework for electromechanics: From linearised electro-elasticity to massively deformable dielectric elastomers. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2018 , 329, 75-117	5.7	23
53	A first-order hyperbolic framework for large strain computational solid dynamics: An upwind cell centred Total Lagrangian scheme. <i>International Journal for Numerical Methods in Engineering</i> , 2017 , 109, 407-456	2.4	20
52	Hamiltonian formulation of the variable-h SPH equations. <i>Journal of Computational Physics</i> , 2005 , 209, 541-558	4.1	20
51	A variationally consistent mesh adaptation method for triangular elements in explicit Lagrangian dynamics. <i>International Journal for Numerical Methods in Engineering</i> , 2010 , 82, 1073-1113	2.4	19
50	Optimisation of the superplastic forming of a dental implant for bone augmentation using finite element simulations. <i>Dental Materials</i> , 2004 , 20, 409-18	5.7	18
49	Nonlinear Solid Mechanics for Finite Element Analysis: Statics 2016 ,		18

48	Finite element analysis of prestressed structural membranes. <i>Finite Elements in Analysis and Design</i> , 2006 , 42, 683-697	2.2	17
47	A variationally consistent fractional time-step integration method for incompressible and nearly incompressible Lagrangian dynamics. <i>International Journal for Numerical Methods in Engineering</i> , 2005 , 63, 1371-1395	2.4	17
46	A pressure cycle control algorithm for superplastic forming. <i>Communications in Applied Numerical Methods</i> , 1989 , 5, 121-128		17
45	A two-step Taylor-Galerkin formulation for fast dynamics. <i>Engineering Computations</i> , 2014 , 31, 366-387	1.4	16
44	A partitioned coupling approach for dynamic fluid-structure interaction with applications to biological membranes. <i>International Journal for Numerical Methods in Fluids</i> , 2008 , 57, 555-581	1.9	16
43	A variationally consistent Streamline Upwind Petrov-Galerkin Smooth Particle Hydrodynamics algorithm for large strain solid dynamics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017 , 318, 514-536	5.7	15
42	A computational framework for polyconvex large strain elasticity for geometrically exact beam theory. <i>Computational Mechanics</i> , 2016 , 57, 277-303	4	15
41	Form finding of membrane structures by the updated reference method with minimum mesh distortion. <i>International Journal of Solids and Structures</i> , 2001 , 38, 5469-5480	3.1	15
40	An upwind cell centred Total Lagrangian finite volume algorithm for nearly incompressible explicit fast solid dynamic applications. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2018 , 340, 684-727	5.7	14
39	Finite element analysis of the superplastic forming of thick sheet using the incremental flow formulation. <i>International Journal for Numerical Methods in Engineering</i> , 1997 , 40, 3205-3228	2.4	14
38	Error estimators and enrichment procedures for the finite element analysis of thin sheet large deformation processes. <i>International Journal for Numerical Methods in Engineering</i> , 1994 , 37, 1573-1591	2.4	14
37	The incremental flow formulation for the numerical analysis of plane stress and thin sheet viscous forming processes. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1994 , 114, 103-122	5.7	14
36	A Total Lagrangian upwind Smooth Particle Hydrodynamics algorithm for large strain explicit solid dynamics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019 , 344, 209-250	5.7	14
35	A note on upper bound formulations in limit analysis. <i>International Journal for Numerical Methods in Engineering</i> , 2012 , 91, 896-908	2.4	11
34	The incremental flow formulation for the numerical analysis of 3-dimensional viscous deformation processes: continuum formulation and computational aspects. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1995 , 122, 51-68	5.7	11
33	Unified one-fluid formulation for incompressible flexible solids and multiphase flows: Application to hydrodynamics using the immersed structural potential method (ISPM). <i>International Journal for Numerical Methods in Fluids</i> , 2018 , 86, 78-106	1.9	10
32	Finite element analysis of partly wrinkled reinforced prestressed membranes. <i>Computational Mechanics</i> , 2007 , 40, 595-615	4	10
31	A High Order Discontinuous Galerkin Method for Fluid-Structure Interaction 2007 ,		10

30	Numerical simulation of the superplastic forming of dental and medical prostheses. <i>Biomechanics and Modeling in Mechanobiology</i> , 2002 , 1, 177-96	3.8	9
29	A hybridizable discontinuous Galerkin method for both thin and 3D nonlinear elastic structures. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019 , 352, 561-585	5.7	8
28	The efficient computation of bounds for functionals of finite element solutions in large strain elasticity. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2002 , 191, 4807-4826	5.7	8
27	Incremental flow procedures for the finite-element analysis of thin sheet superplastic forming processes. <i>Journal of Materials Processing Technology</i> , 1994 , 42, 147-165	5.3	8
26	A new computational framework for electro-activation in cardiac mechanics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019 , 348, 796-845	5.7	8
25	Discontinuous Galerkin Solution of the Navier-Stokes Equations on Deformable Domains 2007 ,		7
24	Adaptive mesh refinement for faceted shells. <i>Communications in Applied Numerical Methods</i> , 1992 , 8, 319-329		7
23	A first order hyperbolic framework for large strain computational solid dynamics. Part III: Thermo-elasticity. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021 , 373, 113505	5.7	7
22	Towards an efficient computational strategy for electro-activation in cardiac mechanics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019 , 356, 220-260	5.7	6
21	UPDATED LAGRANGIAN FORMULATION FOR CORRECTED SMOOTH PARTICLE HYDRODYNAMICS. <i>International Journal of Computational Methods</i> , 2006 , 03, 383-399	1.1	6
20	The incremental flow formulation for the finite element analysis of 3-dimensional superplastic forming processes. <i>Journal of Materials Processing Technology</i> , 1994 , 45, 243-248	5.3	6
19	Finite element superplastic forming (FE-SPF) of patient-specific maxillofacial prostheses. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2010 , 26, 139-155	2.6	5
18	Alternative Total Lagrangian Formulations for Corrected Smooth Particle Hydrodynamics (CSPH) Methods in Large Strain Dynamic Problems. <i>Revue Europeenne Des Elements</i> , 2002 , 11, 893-912		5
17	Recent developments in the incremental flow formulation for the numerical simulation of metal forming processes. <i>Engineering Computations</i> , 1998 , 15, 345-356	1.4	5
16	A new energy-momentum time integration scheme for non-linear thermo-mechanics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020 , 372, 113395	5.7	5
15	Smoothing stress resultants in adaptive finite element shell analysis. <i>Computers and Structures</i> , 1995 , 54, 835-849	4.5	4
14	An entropy-stable Smooth Particle Hydrodynamics algorithm for large strain thermo-elasticity. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021 , 379, 113736	5.7	4
13	An upwind vertex centred finite volume algorithm for nearly and truly incompressible explicit fast solid dynamic applications: Total and Updated Lagrangian formulations. <i>Journal of Computational Physics: X</i> , 2019 , 3, 100025	1	3

12	Finite increment gradient stabilization of point integrated meshless methods for elliptic equations. <i>Communications in Numerical Methods in Engineering</i> , 2000 , 16, 475-483		2
11	A parameter-free total Lagrangian smooth particle hydrodynamics algorithm applied to problems with free surfaces. <i>Computational Particle Mechanics</i> , 2021 , 8, 859-892	3	2
10	Mathematical models of supersonic and intersonic crack propagation in linear elastodynamics. <i>International Journal of Fracture</i> , 2021 , 229, 55-75	2.3	1
9	10th anniversary conference of ACME-UK. <i>Communications in Numerical Methods in Engineering</i> , 2003 , 19, 657-657		0
8	A New Updated Reference Lagrangian Smooth Particle Hydrodynamics algorithm for isothermal elasticity and elasto-plasticity. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2022 , 392, 114680	5.7	0
7	LARGE ELASTO-PLASTIC DEFORMATIONS188-215		
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