Alejandro M. AragÃ³n

List of Publications by Year
in descending order

35	946	471061 17	454577 30
papers	citations	h-index	g-index

36	36	36	846
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An interfaceâ€enriched generalized FEM for problems with discontinuous gradient fields. International Journal for Numerical Methods in Engineering, 2012, 89, 991-1008.	1.5	112
2	Direct-write assembly of biomimetic microvascular networks for efficient fluid transport. Soft Matter, 2010, 6, 739-742.	1.2	110
3	A calibration framework for discrete element model parameters using genetic algorithms. Advanced Powder Technology, 2018, 29, 1393-1403.	2.0	72
4	Polymer Microvascular Network Composites. Journal of Composite Materials, 2010, 44, 2587-2603.	1.2	69
5	Generalized finite element enrichment functions for discontinuous gradient fields. International Journal for Numerical Methods in Engineering, 2010, 82, 242-268.	1.5	59
6	Design of microvascular flow networks using multi-objective genetic algorithms. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 4399-4410.	3.4	58
7	The Discontinuityâ€Enriched Finite Element Method. International Journal for Numerical Methods in Engineering, 2017, 112, 1589-1613.	1.5	48
8	An engineering perspective to the virtual element method and its interplay with the standard finite element method. Computer Methods in Applied Mechanics and Engineering, 2019, 350, 995-1023.	3.4	41
9	An improved stress recovery technique for lowâ€order 3D finite elements. International Journal for Numerical Methods in Engineering, 2018, 114, 88-103.	1.5	38
10	A measure for the impact of research. Scientific Reports, 2013, 3, 1649.	1.6	32
11	Effect of in-plane deformation on the cohesive failure of heterogeneous adhesives. Journal of the Mechanics and Physics of Solids, 2013, 61, 1600-1611.	2.3	31
12	Multi-physics optimization of three-dimensional microvascular polymeric components. Journal of Computational Physics, 2013, 233, 132-147.	1.9	29
13	A stable discontinuity-enriched finite element method for 3-D problems containing weak and strong discontinuities. Computer Methods in Applied Mechanics and Engineering, 2019, 355, 1097-1123.	3.4	26
14	A new formulation for imposing Dirichlet boundary conditions on nonâ€matching meshes. International Journal for Numerical Methods in Engineering, 2015, 103, 430-444.	1.5	25
15	On the stability and interpolating properties of the Hierarchical Interface-enriched Finite Element Method. Computer Methods in Applied Mechanics and Engineering, 2020, 362, 112671.	3.4	25
16	A stable interfaceâ€enriched formulation for immersed domains with strong enforcement of essential boundary conditions. International Journal for Numerical Methods in Engineering, 2019, 120, 1163-1183.	1.5	23
17	Multi-physics design of microvascular materials for active cooling applications. Journal of Computational Physics, 2011, 230, 5178-5198.	1.9	19
18	Automated discrete element method calibration using genetic and optimization algorithms. EPJ Web of Conferences, 2017, 140, 15011.	0.1	15

#	Article	IF	Citations
19	An interface-enriched generalized finite element method for level set-based topology optimization. Structural and Multidisciplinary Optimization, 2021, 63, 1-20.	1.7	15
20	Computational design and optimization of a biomimetic self-healing/cooling composite material. , 2007, 6526, 323.		13
21	On tailoring fracture resistance of brittle structures: A level set interface-enriched topology optimization approach. Computer Methods in Applied Mechanics and Engineering, 2022, 388, 114189.	3.4	13
22	Design of actively-cooled microvascular materials: a genetic algorithm inspired network optimization. Structural and Multidisciplinary Optimization, 2014, 49, 643-655.	1.7	11
23	Fully decoupling geometry from discretization in the Blochâ€“Floquet finite element analysis of phononic crystals. Computer Methods in Applied Mechanics and Engineering, 2021, 382, 113848.	3.4	11
24	Edible mechanical metamaterials with designed fracture for mouthfeel control. Soft Matter, 2022, 18, 2910-2919.	1.2	11
25	Bounds for decoupled design and analysis discretizations in topology optimization. International Journal for Numerical Methods in Engineering, 2017, 111, 88-100.	1.5	7
26	An improved stress recovery technique for the unfitted finite element analysis of discontinuous gradient fields. International Journal for Numerical Methods in Engineering, 2022, 123, 639-663.	1.5	7
27	A hierarchical detection framework for computational contact mechanics. Computer Methods in Applied Mechanics and Engineering, 2014, 268, 574-588.	3.4	5
28	A C++11 implementation of arbitrary-rank tensors for high-performance computing. Computer Physics Communications, 2014, 185, 1681-1696.	3.0	5
29	A multisymplectic integrator for elastodynamic frictionless impact problems. Computer Methods in Applied Mechanics and Engineering, 2017, 315, 1025-1052.	3.4	5
30	A constrainedâ€optimization methodology for the detection phase in contact mechanics simulations. International Journal for Numerical Methods in Engineering, 2013, 96, 323-338.	1.5	4
31	A critical view on the use of Nonâ€Uniform Rational Bâ€Splines to improve geometry representation in enriched finite element methods. International Journal for Numerical Methods in Engineering, 2021, 122, 1195.	1.5	2
32	A C++11 implementation of arbitrary-rank tensors for high-performance computing. Computer Physics Communications, 2014, 185, 3065-3066.	3.0	1
33	Mesh-Independent Design of Phononic Crystals Using an Advanced Finite Element Formulation. , 2016, , .		1
34	Discussion on â€œA linear complete extended finite element method for dynamic fracture simulation with non-nodal enrichmentsâ€•[Finite Elem. Anal. Des. 152 (2018)] by I. Asareh, T.-Y. Kim, and J.-H. Song. Finite Elements in Analysis and Design, 2020, 168, 103340.	1.7	0
35	An objectâ€oriented geometric engine design for discontinuities in unfitted/immersed/enriched finite element methods. International Journal for Numerical Methods in Engineering, 0, , .	1.5	0