Arturo Montoya

List of Publications by Year in descending order

37 papers	489 citations	933447 10 h-index	677142 22 g-index
38 all docs	38 docs citations	38 times ranked	395 citing authors

#	Article	IF	Citations
1	Energy harvesting from asphalt pavement roadways vehicle-induced stresses: A feasibility study. Applied Energy, 2016, 182, 210-218.	10.1	153
2	Theoretical and Experimental Evaluation of Two Roadway Piezoelectric-Based Energy Harvesting Prototypes. Journal of Materials in Civil Engineering, 2018, 30, .	2.9	60
3	Harvesting kinetic energy from roadway pavement through an electromagnetic speed bump. Applied Energy, 2019, 250, 503-511.	10.1	55
4	Finite-Element Sensitivity for Plasticity Using Complex Variable Methods. Journal of Engineering Mechanics - ASCE, 2015, 141, .	2.9	28
5	Residual stress sensitivity analysis using a complex variable finite element method. International Journal of Mechanical Sciences, 2017, 133, 112-120.	6.7	23
6	Sensitivity analysis in thermoelastic problems using the complex finite element method. Journal of Thermal Stresses, 2017, 40, 302-321.	2.0	19
7	Complex finite element sensitivity method for creep analysis. International Journal of Pressure Vessels and Piping, 2015, 132-133, 27-42.	2.6	18
8	A complex-variable virtual crack extension finite element method for elastic-plastic fracture mechanics. Engineering Fracture Mechanics, 2018, 202, 242-258.	4.3	12
9	A stiffness derivative local hypercomplex-variable finite element method for computing the energy release rate. Engineering Fracture Mechanics, 2019, 218, 106581.	4.3	11
10	Experimental and finite element assessment of three energy harvesting prototypes for roadways. Innovative Infrastructure Solutions, 2017, 2, 1.	2.2	10
11	A virtual crack extension method for thermoelastic fracture using a complex-variable finite element method. Engineering Fracture Mechanics, 2018, 192, 328-342.	4.3	10
12	A finite element-based adaptive energy response function method for 2D curvilinear progressive fracture. International Journal of Fatigue, 2019, 127, 229-245.	5.7	10
13	Harvesting Solar Energy from Asphalt Pavement. Sustainability, 2021, 13, 12807.	3.2	10
14	Efficient estimate of residual stress variance using complex variable finite element methods. International Journal of Pressure Vessels and Piping, 2019, 173, 101-113.	2.6	8
15	A complex-variable cohesive finite element subroutine to enable efficient determination of interfacial cohesive material parameters. Engineering Fracture Mechanics, 2021, 247, 107638.	4.3	8
16	A block forward substitution method for solving the hypercomplex finite element system of equations. Computer Methods in Applied Mechanics and Engineering, 2021, 387, 114195.	6.6	8
17	Simulating the hot dip galvanizing process of high mast illumination poles. Part I: Finite element model development. Journal of Constructional Steel Research, 2019, 162, 105705.	3.9	7
18	Simulating the hot dip galvanizing process of high mast illumination poles. Part II: Effects of geometrical properties and galvanizing practices. Journal of Constructional Steel Research, 2019, 159, 584-597.	3.9	6

#	Article	IF	Citations
19	Quaternion and octonion-based finite element analysis methods for computing multiple first order derivatives. Journal of Computational Physics, 2019, 397, 108831.	3.8	5
20	Mixed-mode stress intensity factors computation in functionally graded materials using a hypercomplex-variable finite element formulation. International Journal of Fracture, 2020, 226, 219-232.	2.2	5
21	Complex-Variable Finite-Element Method for Mixed Mode Fracture and Interface Cracks. AIAA Journal, 2018, 56, 4632-4637.	2.6	4
22	Numerical Study on Design and Installation of Energy-Harvesting Modules Embedded within a Flexible Pavement Structure. Journal of Transportation Engineering Part B: Pavements, 2020, 146, .	1.5	3
23	Evaluation of a roadway thermoelectric energy harvester through FE analysis and laboratory tests. International Journal of Sustainable Engineering, 2021, 14, 1016-1032.	3.5	3
24	Sensitivity Analysis for Transient Thermal Problems Using the Complex-Variable Finite Element Method. Applied Sciences (Switzerland), 2022, 12, 2738.	2.5	3
25	A Reflective Framework for Performance Management (REFORM) of Real-Time Hybrid Simulation. Frontiers in Built Environment, 2020, 6, 159-171.	2.3	2
26	Generation of Periodic Wave Using Lagrange-Plus Remap Finite Element Method for Evaluating the Vulnerability of Coastal Bridges to Extreme Weather Events. , 2021, , .		2
27	A complex-variable finite element method-based inverse methodology to extract constitutive parameters using experimental data. International Journal of Solids and Structures, 2022, 243, 111545.	2.7	2
28	Galvanizing-Induced Distortion in Steel Plate Girders. I: Effects of Girder Geometry. Journal of Bridge Engineering, 2019, 24, 04019110.	2.9	1
29	Development of a Computational Framework for the Design of Resilient Space Structures. , 2021, , .		1
30	A New Complex-valued Thermal Fracture Approach for Evaluating the Structural Integrity of Aircraft Structures. , 2018, , .		0
31	Galvanizing-Induced Distortion in Steel Plate Girders. II: Effects of Welding and Galvanizing Practices. Journal of Bridge Engineering, 2019, 24, .	2.9	0
32	Geometric Configuration Effects on the Formation of Weld Toe Cracks during the Galvanizing of High Mast Illumination Poles. , 2021, , .		0
33	Structural Vulnerability of Coastal Bridges under a Variety of Hydrodynamic Conditions. , 2021, , .		0
34	Uncertainty Quantification Modeling of Structures and Materials Using the Hypercomplex Differentiation Method. , 2021, , .		0
35	Explicit Finite Element Analysis of Coastal Bridges under Extreme Hurricane Waves. , 2021, , .		0
36	Tearing energy calculation in hyperelastic fracture mechanics using the local and global complex-variable finite element method. International Journal of Solids and Structures, 2022, 239-240, 111425.	2.7	0

#	ARTICLE	IF	CITATIONS
37	Transient thermomechanical sensitivity analysis using a complex-variable finite element method. Journal of Thermal Stresses, 0, , 1-34.	2.0	0