Michael H Scott

List of Publications by Citations

34 papers	1,183 citations	15 h-index	34 g-index
36 ext. papers	1,429 ext. citations	3 avg, IF	4.79 L-index

#	Paper	IF	Citations
34	Nonlinear Finite-Element Analysis Software Architecture Using Object Composition. *Journal of Computing in Civil Engineering*, **2010**, 24, 95-107	5	340
33	Plastic Hinge Integration Methods for Force-Based Beam–Column Elements. *Journal of Structural Engineering*, **2006**, 132, 244-252	3	313
32	Krylov Subspace Accelerated Newton Algorithm: Application to Dynamic Progressive Collapse Simulation of Frames. *Journal of Structural Engineering*, **2010**, 136, 473-480	3	68
31	OpenSeesPy: Python library for the OpenSees finite element framework. *SoftwareX*, **2018**, 7, 6-11	2.7	61
30	Response Sensitivity for Nonlinear Beam–Column Elements. *Journal of Structural Engineering*, **2004**, 130, 1281-1288	3	50
29	Software Patterns for Nonlinear Beam-Column Models. *Journal of Structural Engineering*, **2008**, 134, 562-571	3	41
28	Modeling fluid–structure interaction by the particle finite element method in OpenSees. *Computers and Structures*, **2014**, 132, 12-21	4.5	36
27	Development of Physics-Based Tsunami Fragility Functions Considering Structural Member Failures. *Journal of Structural Engineering*, **2018**, 144, 04017221	3	31
26	Shape sensitivities in the reliability analysis of nonlinear frame structures. *Computers and Structures* , **2006**, 84, 964-977	4.5	31
25	Moment-Rotation Behavior of Force-Based Plastic Hinge Elements. *Earthquake Spectra*, **2013**, 29, 597-607	3.4	26
24	Response Gradients for Nonlinear Beam-Column Elements under Large Displacements. *Journal of Structural Engineering*, **2007**, 133, 155-165	3	22
23	Software Framework for Parameter Updating and Finite-Element Response Sensitivity Analysis. *Journal of Computing in Civil Engineering*, **2008**, 22, 281-291	5	19
22	Deterioration Modeling of Steel Moment Resisting Frames Using Finite-Length Plastic Hinge Force-Based Beam-Column Elements. *Journal of Structural Engineering*, **2015**, 141, 04014112	3	16
21	Multihazard Earthquake and Tsunami Effects on Soil–Foundation–Bridge Systems. *Journal of Bridge Engineering*, **2019**, 24, 04019004	2.7	16
20	Improved fractional step method for simulating fluid-structure interaction using the PFEM. *International Journal for Numerical Methods in Engineering*, **2014**, 99, 925-944	2.4	15
19	Validation of OpenSees for Tsunami Loading on Bridge Superstructures. *Journal of Bridge Engineering*, **2018**, 23, 04018015	2.7	14
18	Analysis of moving loads using force-based finite elements. *Finite Elements in Analysis and Design*, **2008**, 44, 214-224	2.2	14

17	Constant-ductility response spectra for sequential earthquake and tsunami loading. *Earthquake Engineering and Structural Dynamics*, **2017**, 46, 1549-1554	4	10
16	Unified fractional step method for Lagrangian analysis of quasi-incompressible fluid and nonlinear structure interaction using the PFEM. *International Journal for Numerical Methods in Engineering*, **2017**, 109, 1219-1236	2.4	8
15	Response sensitivity of material and geometric nonlinear force-based Timoshenko frame elements. *International Journal for Numerical Methods in Engineering*, **2017**, 111, 474-492	2.4	8
14	Evaluation of Force-Based Frame Element Response Sensitivity Formulations. *Journal of Structural Engineering*, **2012**, 138, 72-80	3	7
13	Development of Bridge Rating Applications Using OpenSees and Tcl. *Journal of Computing in Civil Engineering*, **2008**, 22, 264-271	5	7
12	Direct Differentiation of the Particle Finite-Element Method for Fluid–Structure Interaction. *Journal of Structural Engineering*, **2016**, 142, 04015159	3	6
11	Implementation of Nonlinear Elements for Seismic Response Analysis of Bridges. *Practice Periodical on Structural Design and Construction*, **2019**, 24, 04019011	1.2	4
10	Response Sensitivity of Geometrically Nonlinear Force-Based Frame Elements. *Journal of Structural Engineering*, **2013**, 139, 1963-1972	3	4
9	Direct differentiation of the quasi-incompressible fluid formulation of fluid–structure interaction using the PFEM. *Computational Particle Mechanics*, **2017**, 4, 307-319	3	4
8	Sensitivity Analysis for Displacement-Controlled Finite-Element Analyses. *Journal of Structural Engineering*, **2018**, 144, 04017222	3	3
7	Response sensitivity for geometrically nonlinear displacement-based beam-column elements. *Computers and Structures*, **2019**, 220, 43-54	4.5	2
6	Analytical Sensitivity of Plastic Rotations in Beam-Column Elements. *Journal of Structural Engineering*, **2007**, 133, 1341-1345	3	2
5	Response spectrum devices for active learning in earthquake engineering education. *HardwareX*, **2018**, 4, e00032	2.7	2
4	Strength and Reliability of Structural Steel Roofs Subjected to Ponding Loads. *Journal of Structural Engineering*, **2021**, 147, 04020318	3	1
3	Discussion of "Complex Perturbation Method for Sensitivity Analysis of Nonlinear Trusses" by Ravi Kiran, Lei Li, and Kapil Khandelwal. *Journal of Structural Engineering*, **2017**, 143, 07017005	3	
2	Erratum for "Krylov Subspace Accelerated Newton Algorithm: Application to Dynamic Progressive Collapse Simulation of Frames" by Michael H. Scott and Gregory L. Fenves. *Journal of Structural Engineering*, **2020**, 146, 08220003	3	
1	Discussion of "Nonlinear Truss Analysis by One Matrix Inversion" by A. Fafitis. *Journal of Structural Engineering*, **2006**, 132, 1852-1853	3	