

Tom Lahmer

List of Publications by Year in descending order

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Version: 2024-02-01

76
papers

2,645
citations

236925

25
h-index

189892

50
g-index

80
all docs

80
docs citations

80
times ranked

2079
citing authors

#	ARTICLE	IF	CITATIONS
1	ML-EHSAPP: a prototype for machine learning-based earthquake hazard safety assessment of structures by using a smartphone app. <i>European Journal of Environmental and Civil Engineering</i> , 2022, 26, 5279-5299.	2.1	30
2	Evaluation of Machine Learning and Web-Based Process for Damage Score Estimation of Existing Buildings. <i>Buildings</i> , 2022, 12, 578.	3.1	18
3	Combined approach for optimal sensor placement and experimental verification in the context of tower-like structures. <i>Journal of Civil Structural Health Monitoring</i> , 2021, 11, 223-234.	3.9	8
4	Decision making and design in structural engineering problems under polymorphic uncertainty. <i>Engineering Structures</i> , 2021, 231, 111649.	5.3	6
5	Eigenfrequency-Based Bayesian Approach for Damage Identification in Catenary Poles. <i>Infrastructures</i> , 2021, 6, 57.	2.8	3
6	A Synthesized Study Based on Machine Learning Approaches for Rapid Classifying Earthquake Damage Grades to RC Buildings. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 7540.	2.5	29
7	A review on application of soft computing techniques for the rapid visual safety evaluation and damage classification of existing buildings. <i>Journal of Building Engineering</i> , 2021, 43, 102536.	3.4	55
8	Efficient domain decomposition based reliability analysis for polymorphic uncertain material parameters. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021, 21, .	0.2	0
9	A Comparative Study of MCDM Methods Integrated with Rapid Visual Seismic Vulnerability Assessment of Existing RC Structures. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 6411.	2.5	20
10	Developing a hierarchical type-2 fuzzy logic model to improve rapid evaluation of earthquake hazard safety of existing buildings. <i>Structures</i> , 2020, 28, 1384-1399.	3.6	35
11	A Machine Learning Framework for Assessing Seismic Hazard Safety of Reinforced Concrete Buildings. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 7153.	2.5	35
12	Improved Rapid Assessment of Earthquake Hazard Safety of Structures via Artificial Neural Networks. <i>IOP Conference Series: Materials Science and Engineering</i> , 2020, 897, 012014.	0.6	18
13	Application of Support Vector Machine Modeling for the Rapid Seismic Hazard Safety Evaluation of Existing Buildings. <i>Energies</i> , 2020, 13, 3340.	3.1	25
14	Prediction of aeroelastic response of bridge decks using artificial neural networks. <i>Computers and Structures</i> , 2020, 231, 106198.	4.4	33
15	Single and multi-objective shape optimization of streamlined bridge decks. <i>Structural and Multidisciplinary Optimization</i> , 2020, 61, 1495-1514.	3.5	14
16	Improved Rapid Visual Earthquake Hazard Safety Evaluation of Existing Buildings Using a Type-2 Fuzzy Logic Model. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 2375.	2.5	29
17	Earthquake Hazard Safety Assessment of Existing Buildings Using Optimized Multi-Layer Perceptron Neural Network. <i>Energies</i> , 2020, 13, 2060.	3.1	31
18	Earthquake Safety Assessment of Buildings through Rapid Visual Screening. <i>Buildings</i> , 2020, 10, 51.	3.1	25

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19	Earthquake Hazard Safety Assessment of Buildings via Smartphone App: A Comparative Study. IOP Conference Series: Materials Science and Engineering, 2019, 652, 012069.	0.6	12
20	Development of fuzzy probability based random fields for the numerical structural design. GAMM Mitteilungen, 2019, 42, e201900004.	5.5	11
21	Shape design of arch dams under load uncertainties with robust optimization. Frontiers of Structural and Civil Engineering, 2019, 13, 852-862.	2.9	4
22	Numerical studies of earth structure assessment via the theory of porous media using fuzzy probability based random field material descriptions. GAMM Mitteilungen, 2019, 42, e201900007.	5.5	11
23	Identification of multiple flaws in dams using inverse analysis based on hydro-mechanical XFEM and level sets. Computers and Geotechnics, 2019, 110, 211-221.	4.7	9
24	Sensor positioning in the context of wave-based damage identification in dams. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900082.	0.2	0
25	Uncertainty quantification of stability and damage detection parameters of coupled hydrodynamic-ground motion in concrete gravity dams. Frontiers of Structural and Civil Engineering, 2019, 13, 303-323.	2.9	11
26	Quantifying the Uncertainty of Identified Parameters of Prestressed Concrete Poles Using the Experimental Measurements and Different Optimization Methods. Engineering and Applied Sciences, 2019, 4, 84.	0.1	2
27	Calibration of cyclic constitutive models by oscillating functions. Geomechanics and Geoengineering, 2018, 13, 146-157.	1.8	0
28	Shape optimization based design of arch-type dams under uncertainties. Engineering Optimization, 2018, 50, 1470-1482.	2.6	11
29	Damage identification in gravity dams using dynamic coupled hydro-mechanical XFEM. International Journal of Mechanics and Materials in Design, 2018, 14, 157-175.	3.0	12
30	Damage identification using inverse analysis in coupled thermo-hydro-mechanical problems applied to masonry dams. International Journal for Numerical and Analytical Methods in Geomechanics, 2018, 42, 256-273.	3.3	4
31	Damage identification using inverse analysis for 3D coupled thermo-hydro-mechanical problems. Computers and Structures, 2018, 196, 146-156.	4.4	3
32	Uncertainty assessment in the results of inverse problems: applied to damage detection in masonry dams. International Journal of Reliability and Safety, 2018, 12, 2.	0.2	3
33	Uncertainty assessment in the results of inverse problems: applied to damage detection in masonry dams. International Journal of Reliability and Safety, 2018, 12, 2.	0.2	1
34	Uncertainty analysis in multiscale modeling of concrete based on continuum micromechanics. European Journal of Mechanics, A/Solids, 2017, 65, 14-29.	3.7	14
35	Multiple cracks identification for piezoelectric structures. International Journal of Fracture, 2017, 206, 151-169.	2.2	19
36	On the optimality of harmonic excitation as input signals for the characterization of parameters in coupled piezoelectric and poroelastic problems. Mechanical Systems and Signal Processing, 2017, 90, 399-418.	8.0	3

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37	Numerical modeling and validation for 3D coupled-nonlinear thermo-hydro-mechanical problems in masonry dams. Computers and Structures, 2017, 178, 143-154.	4.4	8
38	Identification of the thermal properties of concrete for the temperature calculation of concrete slabs and columns subjected to a standard fire—Methodology and proposal for simplified formulations. Fire Safety Journal, 2017, 87, 80-86.	3.1	37
39	Non-destructive identification of residual stresses in steel under thermal loadings. Inverse Problems in Science and Engineering, 2017, 25, 1519-1535.	1.2	0
40	Hybrid nonlinear surrogate models for fracture behavior of polymeric nanocomposites. Probabilistic Engineering Mechanics, 2017, 50, 64-75.	2.7	35
41	A stochastic computational method based on goal-oriented error estimation for heterogeneous geological materials. Engineering Geology, 2017, 225, 103-113.	6.3	2
42	Global and local sensitivity analyses for coupled thermo-hydro-mechanical problems. International Journal for Numerical and Analytical Methods in Geomechanics, 2017, 41, 707-720.	3.3	7
43	Polymorphic Uncertainty Modeling of Heterogeneous Thermo-Hydro-Mechanical Coupled Systems under Vague Assumptions on Parameter Correlations. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 69-70.	0.2	1
44	Project scheduling under uncertainty and resource constraints. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 839-840.	0.2	1
45	Seismic Performance of Steel Frames with Semirigid Connections. Journal of Engineering (United) Tj ETQq1 1 0.784314 rgBT /Overloc 1.0 11	1.0	11
46	Classification System for Semi-Rigid Beam-to-Column Connections. Latin American Journal of Solids and Structures, 2016, 13, 2152-2175.	1.0	11
47	Inverse analysis of cyclic constitutive models for unsaturated soil under consideration of oscillating functions. E3S Web of Conferences, 2016, 9, 08012.	0.5	2
48	A novel parameter identification approach for buffer elements involving complex coupled thermo-hydro-mechanical analyses. Computers and Geotechnics, 2016, 76, 23-32.	4.7	21
49	Conceptual implementation of the variance-based sensitivity analysis for the calculation of the first-order effects. Journal of Statistical Theory and Practice, 2016, 10, 589-611.	0.5	11
50	A software framework for probabilistic sensitivity analysis for computationally expensive models. Advances in Engineering Software, 2016, 100, 19-31.	3.8	514
51	Topology optimization of piezoelectric nanostructures. Journal of the Mechanics and Physics of Solids, 2016, 94, 316-335.	4.8	73
52	A dynamic XFEM formulation for crack identification. International Journal of Mechanics and Materials in Design, 2016, 12, 427-448.	3.0	25
53	Detection of material interfaces using a regularized level set method in piezoelectric structures. Inverse Problems in Science and Engineering, 2016, 24, 153-176.	1.2	196
54	Predicting the fracture toughness of PNCs: A stochastic approach based on ANN and ANFIS. Computational Materials Science, 2015, 102, 304-313.	3.0	88

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55	A unified framework for stochastic predictions of mechanical properties of polymeric nanocomposites. <i>Computational Materials Science</i> , 2015, 96, 520-535.	3.0	142
56	Uncertainty quantification for multiscale modeling of polymer nanocomposites with correlated parameters. <i>Composites Part B: Engineering</i> , 2015, 68, 446-464.	12.0	187
57	Comparison of Different Approaches for the Model-Based Design of Experiments. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2015, , 135-141.	0.5	2
58	Stochastic predictions of interfacial characteristic of polymeric nanocomposites (PNCs). <i>Composites Part B: Engineering</i> , 2014, 59, 80-95.	12.0	132
59	Detection of multiple flaws in piezoelectric structures using XFEM and level sets. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014, 275, 98-112.	6.6	74
60	Stochastic predictions of bulk properties of amorphous polyethylene based on molecular dynamics simulations. <i>Mechanics of Materials</i> , 2014, 68, 70-84.	3.2	118
61	Uncertainty quantification of dry woven fabrics: A sensitivity analysis on material properties. <i>Composite Structures</i> , 2014, 116, 1-17.	5.8	36
62	Model based design of experiments and monitoring systems for parameter identification of structures. <i>IABSE Symposium Report</i> , 2014, , .	0.0	0
63	Identification of constitutive parameters of soil using an optimization strategy and statistical analysis. <i>Computers and Geotechnics</i> , 2013, 49, 143-157.	4.7	38
64	Detection of flaws in piezoelectric structures using extended FEM. <i>International Journal for Numerical Methods in Engineering</i> , 2013, 96, 373-389.	2.8	90
65	Extended finite element method for dynamic fracture of piezo-electric materials. <i>Engineering Fracture Mechanics</i> , 2012, 92, 19-31.	4.3	59
66	Optimal experimental design for nonlinear ill-posed problems applied to gravity dams. <i>Inverse Problems</i> , 2011, 27, 125005.	2.0	22
67	Evaluation of coupled partial models in structural engineering using graph theory and sensitivity analysis. <i>Engineering Structures</i> , 2011, 33, 3726-3736.	5.3	25
68	Crack identification in hydro-mechanical systems with applications to gravity water dams. <i>Inverse Problems in Science and Engineering</i> , 2010, 18, 1083-1101.	1.2	10
69	Modified Landweber iterations in a multilevel algorithm applied to inverse problems in piezoelectricity. <i>Journal of Inverse and Ill-Posed Problems</i> , 2009, 17, .	1.0	2
70	Enhanced homogenization technique for magnetomechanical systems using the generalized finite element method. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , 2009, 28, 935-947.	0.9	3
71	Optimal measurement selection for piezoelectric material tensor identification. <i>Inverse Problems in Science and Engineering</i> , 2008, 16, 369-387.	1.2	12
72	FEM-Based determination of real and complex elastic, dielectric, and piezoelectric moduli in piezoceramic materials. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2008, 55, 465-475.	3.0	55

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73	Finite element modeling of ultrasonic transducer by utilizing an inverse scheme for the determination of its material parameters. , 2008, , .		4
74	PDE based determination of piezoelectric material tensors. European Journal of Applied Mathematics, 2006, 17, 383-416.	2.9	40
75	5H-3 Material Parameter Identification of Piezoelectric Transducers Including the Whole Assembly. , 2006, , .		2
76	Existence, uniqueness and regularity of piezoelectric partial differential equations. Applicable Analysis, 0, , 1-22.	1.3	0