

Rodrigo Astroza

List of Publications by Year in descending order

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Version: 2024-02-01

65
papers

1,264
citations

430874

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377865

34
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69
all docs

69
docs citations

69
times ranked

736
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Test Data-Informed Nonlinear Finite Element Model Updating and Damage Inference of a Shake-table Tested Bridge Column considering Bond-slip under Multiple Earthquakes. <i>Journal of Earthquake Engineering</i> , 2023, 27, 1875-1899. | 2.5 | 2 |
| 2 | Modeling the Loss of Vibration Energy in Buildings to Elastic-waves Using High-fidelity FE Modeling and Absorbent Exterior Boundaries. <i>Journal of Earthquake Engineering</i> , 2022, 26, 6567-6584. | 2.5 | 2 |
| 3 | Bayesian updating and identifiability assessment of nonlinear finite element models. <i>Mechanical Systems and Signal Processing</i> , 2022, 167, 108517. | 8.0 | 23 |
| 4 | Statistical analysis of the modal properties of a seismically-damaged five-story RC building identified using ambient vibration data. <i>Journal of Building Engineering</i> , 2022, 52, 104411. | 3.4 | 5 |
| 5 | A Bayesian approach for fatigue damage diagnosis and prognosis of wind turbine blades. <i>Mechanical Systems and Signal Processing</i> , 2022, 174, 109067. | 8.0 | 18 |
| 6 | Probabilistic characterization of a high-cycle accumulation model for sands. <i>Computers and Geotechnics</i> , 2022, 147, 104798. | 4.7 | 0 |
| 7 | Soil-basement interaction effects on the seismic response of tall buildings with basement levels. <i>Engineering Structures</i> , 2022, 263, 114406. | 5.3 | 3 |
| 8 | Adobe mixtures reinforced with fibrillated polypropylene fibers: Physical/mechanical/fracture/durability performance and its limits due to fiber clustering. <i>Construction and Building Materials</i> , 2022, 343, 128102. | 7.2 | 3 |
| 9 | Real-time thermal dynamic analysis of a house using RC models and joint state-parameter estimation. <i>Building and Environment</i> , 2021, 188, 107184. | 6.9 | 14 |
| 10 | Parameter estimation of resistor-capacitor models for building thermal dynamics using the unscented Kalman filter. <i>Journal of Building Engineering</i> , 2021, 34, 101639. | 3.4 | 8 |
| 11 | Bayesian parameter and joint probability distribution estimation for a hysteretic constitutive model of reinforcing steel. <i>Structural Safety</i> , 2021, 90, 102062. | 5.3 | 13 |
| 12 | Seismic response analysis and modal identification of a full-scale five-story base-isolated building tested on the NEES@UCSD shake table. <i>Engineering Structures</i> , 2021, 238, 112087. | 5.3 | 11 |
| 13 | Bayesian inference for calibration and validation of uniaxial reinforcing steel models. <i>Engineering Structures</i> , 2021, 243, 112386. | 5.3 | 4 |
| 14 | Time variant system identification of superstructures of base-isolated buildings. <i>Engineering Structures</i> , 2021, 246, 112697. | 5.3 | 4 |
| 15 | Seismic fragility assessment of Chilean skewed highway bridges. <i>Engineering Structures</i> , 2021, 249, 113300. | 5.3 | 9 |
| 16 | Calibration of a Large Nonlinear Finite Element Model of a Highway Bridge with Many Uncertain Parameters. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 177-187. | 0.5 | 0 |
| 17 | Finite Element Model Updating Accounting for Modeling Uncertainty. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 211-221. | 0.5 | 0 |
| 18 | Non-unique Estimates in Material Parameter Identification of Nonlinear FE Models Governed by Multiaxial Material Models Using Unscented Kalman Filtering. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 257-265. | 0.5 | 3 |

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|----|---|-----|-----------|
| 19 | Biopolymer-Waste Fiber Reinforcement for Earthen Materials: Capillary, Mechanical, Impact, and Abrasion Performance. <i>Polymers</i> , 2020, 12, 1819. | 4.5 | 5 |
| 20 | Auto-regressive model based input and parameter estimation for nonlinear finite element models. <i>Mechanical Systems and Signal Processing</i> , 2020, 143, 106779. | 8.0 | 28 |
| 21 | Adaptive Kalman filters for nonlinear finite element model updating. <i>Mechanical Systems and Signal Processing</i> , 2020, 143, 106837. | 8.0 | 68 |
| 22 | System Identification of a Five-Story Building Using Seismic Strong-Motion Data. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 181-189. | 0.5 | 1 |
| 23 | Nonlinear Model Updating Using Recursive and Batch Bayesian Methods. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 279-286. | 0.5 | 0 |
| 24 | Bayesian Nonlinear Finite Element Model Updating of a Full-Scale Bridge-Column Using Sequential Monte Carlo. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 389-397. | 0.5 | 5 |
| 25 | Output-Only Nonlinear Finite Element Model Updating Using Autoregressive Process. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2020, , 83-86. | 0.5 | 0 |
| 26 | A dual adaptive filtering approach for nonlinear finite element model updating accounting for modeling uncertainty. <i>Mechanical Systems and Signal Processing</i> , 2019, 115, 782-800. | 8.0 | 68 |
| 27 | Shear bond behaviour of elemental composite beams with different configurations. <i>Engineering Structures</i> , 2019, 201, 109742. | 5.3 | 4 |
| 28 | Uncertainty quantification and propagation in the modeling of liquefiable sands. <i>Soil Dynamics and Earthquake Engineering</i> , 2019, 123, 217-229. | 3.8 | 6 |
| 29 | Information-Theoretic Approach for Identifiability Assessment of Nonlinear Structural Finite-Element Models. <i>Journal of Engineering Mechanics - ASCE</i> , 2019, 145, 04019039. | 2.9 | 17 |
| 30 | Bayesian updating of complex nonlinear FE models with high-dimensional parameter space using heterogeneous measurements and a batch-recursive approach. <i>Engineering Structures</i> , 2019, 201, 109724. | 5.3 | 15 |
| 31 | Performance comparison of Kalman~based filters for nonlinear structural finite element model updating. <i>Journal of Sound and Vibration</i> , 2019, 438, 520-542. | 3.9 | 44 |
| 32 | Effects of model uncertainty in nonlinear structural finite element model updating by numerical simulation of building structures. <i>Structural Control and Health Monitoring</i> , 2019, 26, e2297. | 4.0 | 43 |
| 33 | Bayesian optimal estimation for output-only nonlinear system and damage identification of civil structures. <i>Structural Control and Health Monitoring</i> , 2018, 25, e2128. | 4.0 | 64 |
| 34 | Pretest Nonlinear Finite-Element Modeling and Response Simulation of a Full-Scale 5-Story Reinforced Concrete Building Tested on the NEES-UCSD Shake Table. <i>Journal of Structural Engineering</i> , 2018, 144, . | 3.4 | 7 |
| 35 | Time-Variant Modal Parameters and Response Behavior of a Base-Isolated Building Tested on a Shake Table. <i>Earthquake Spectra</i> , 2018, 34, 121-143. | 3.1 | 14 |
| 36 | Nonlinear finite element model updating for damage identification of civil structures using batch Bayesian estimation. <i>Mechanical Systems and Signal Processing</i> , 2017, 84, 194-222. | 8.0 | 90 |

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|----|--|-----|-----------|
| 37 | Bayesian nonlinear structural FE model and seismic input identification for damage assessment of civil structures. <i>Mechanical Systems and Signal Processing</i> , 2017, 93, 661-687. | 8.0 | 74 |
| 38 | Site response analysis using one-dimensional equivalent-linear method and Bayesian filtering. <i>Computers and Geotechnics</i> , 2017, 89, 43-54. | 4.7 | 17 |
| 39 | Predominant period and equivalent viscous damping ratio identification for a full-scale building shake table test. <i>Earthquake Engineering and Structural Dynamics</i> , 2017, 46, 2459-2477. | 4.4 | 13 |
| 40 | Nonlinear FE model updating of seismic isolated bridge instrumented during the 2010 Mw 8.8 Maule-Chile Earthquake. <i>Procedia Engineering</i> , 2017, 199, 3003-3008. | 1.2 | 3 |
| 41 | Nonlinear FE model updating and reconstruction of the response of an instrumented seismic isolated bridge to the 2010 Maule Chile earthquake. <i>Earthquake Engineering and Structural Dynamics</i> , 2017, 46, 2699-2716. | 4.4 | 19 |
| 42 | A Nonlinear Model Inversion Method for Joint System Parameter, Noise, and Input Identification of Civil Structures. <i>Procedia Engineering</i> , 2017, 199, 924-929. | 1.2 | 3 |
| 43 | Shake table testing of an elevator system in a full-scale five-story building. <i>Earthquake Engineering and Structural Dynamics</i> , 2017, 46, 391-407. | 4.4 | 13 |
| 44 | Batch and Recursive Bayesian Estimation Methods for Nonlinear Structural System Identification. <i>Springer Series in Reliability Engineering</i> , 2017, , 341-364. | 0.5 | 3 |
| 45 | System identification of a full-scale five-story reinforced concrete building tested on the NEES@UCSD shake table. <i>Structural Control and Health Monitoring</i> , 2016, 23, 535-559. | 4.0 | 36 |
| 46 | Finite element model updating using simulated annealing hybridized with unscented Kalman filter. <i>Computers and Structures</i> , 2016, 177, 176-191. | 4.4 | 40 |
| 47 | Influence of the construction process and nonstructural components on the modal properties of a five-story building. <i>Earthquake Engineering and Structural Dynamics</i> , 2016, 45, 1063-1084. | 4.4 | 25 |
| 48 | Full-Scale Structural and Nonstructural Building System Performance during Earthquakes: Part I "Specimen Description, Test Protocol, and Structural Response. <i>Earthquake Spectra</i> , 2016, 32, 737-770. | 3.1 | 72 |
| 49 | Full-Scale Structural and Nonstructural Building System Performance during Earthquakes: Part II "NCS Damage States. <i>Earthquake Spectra</i> , 2016, 32, 771-794. | 3.1 | 51 |
| 50 | Bayesian Methods for Nonlinear System Identification of Civil Structures. <i>MATEC Web of Conferences</i> , 2015, 24, 03002. | 0.2 | 8 |
| 51 | Dynamic characteristics and seismic behavior of prefabricated steel stairs in a full-scale five-story building shake table test program. <i>Earthquake Engineering and Structural Dynamics</i> , 2015, 44, 2507-2527. | 4.4 | 10 |
| 52 | Stochastic filtering for damage identification through nonlinear structural finite element model updating. <i>Proceedings of SPIE</i> , 2015, , . | 0.8 | 0 |
| 53 | Extended Kalman filter for material parameter estimation in nonlinear structural finite element models using direct differentiation method. <i>Earthquake Engineering and Structural Dynamics</i> , 2015, 44, 1495-1522. | 4.4 | 94 |
| 54 | Output-only identification of civil structures using nonlinear finite element model updating. , 2015, , . | | 1 |

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|----|--|-----|-----------|
| 55 | Material Parameter Identification in Distributed Plasticity FE Models of Frame-Type Structures Using Nonlinear Stochastic Filtering. Journal of Engineering Mechanics - ASCE, 2015, 141, . | 2.9 | 86 |
| 56 | Nonlinear Structural Finite Element Model Updating Using Stochastic Filtering. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 67-74. | 0.5 | 1 |
| 57 | Nonlinear structural finite element model updating and uncertainty quantification. Proceedings of SPIE, 2015, , . | 0.8 | 0 |
| 58 | Experimental Evaluation of the Seismic Response of a Rooftop-Mounted Cooling Tower. Earthquake Spectra, 2015, 31, 1567-1589. | 3.1 | 15 |
| 59 | Nonlinear Structural Finite Element Model Updating Using Batch Bayesian Estimation. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 35-43. | 0.5 | 2 |
| 60 | Statistical analysis of the identified modal properties of a 5-story RC seismically damaged building specimen. , 2014, , 4593-4600. | | 2 |
| 61 | Shake Table Testing of a Full-Scale Five-Story Building: System Identification of the Five-Story Test Structure. , 2013, , . | | 7 |
| 62 | Shake Table Testing of a Full-Scale Five-Story Building: Pre-test Simulation of the Test Building and Development of an NCS Design Criteria. , 2013, , . | | 5 |
| 63 | Evolution of Dynamic Properties of a 5-Story RC Building During Construction. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 163-173. | 0.5 | 4 |
| 64 | Pre-Test Nonlinear FE Modeling and Simulation of a Full-Scale Five-Story Reinforced Concrete Building. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 503-511. | 0.5 | 1 |
| 65 | Wave Dynamic Analysis of the Seismic Response of a Reinforced Concrete Building. AIP Conference Proceedings, 2008, , . | 0.4 | 0 |