

Ertugrul Taciroglu

List of Publications by Year in descending order

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122
papers

2,462
citations

218677

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265206

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127
times ranked

1458
citing authors

#	ARTICLE	IF	CITATIONS
1	Interpretable XGBoost-SHAP Machine-Learning Model for Shear Strength Prediction of Squat RC Walls. <i>Journal of Structural Engineering</i> , 2021, 147, .	3.4	151
2	Much ado about shear correction factors in Timoshenko beam theory. <i>International Journal of Solids and Structures</i> , 2010, 47, 1651-1665.	2.7	121
3	Seismic behavior of reinforced concrete bridges with skew-angled seat-type abutments. <i>Engineering Structures</i> , 2012, 45, 137-150.	5.3	107
4	Validated Simulation Models for Lateral Response of Bridge Abutments with Typical Backfills. <i>Journal of Bridge Engineering</i> , 2010, 15, 302-311.	2.9	101
5	Real-time regional seismic damage assessment framework based on long short-term memory neural network. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2021, 36, 504-521.	9.8	77
6	Response-only modal identification of structures using limited sensors. <i>Structural Control and Health Monitoring</i> , 2013, 20, 987-1006.	4.0	73
7	A deep learning approach to rapid regional post-event seismic damage assessment using time-frequency distributions of ground motions. <i>Earthquake Engineering and Structural Dynamics</i> , 2021, 50, 1612-1627.	4.4	68
8	Response-only modal identification of structures using strong motion data. <i>Earthquake Engineering and Structural Dynamics</i> , 2013, 42, 1221-1242.	4.4	66
9	Data-Driven Approach to Predict the Plastic Hinge Length of Reinforced Concrete Columns and Its Application. <i>Journal of Structural Engineering</i> , 2021, 147, .	3.4	65
10	Identification of a scatterer embedded in elastic heterogeneous media using dynamic XFEM. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2013, 259, 50-63.	6.6	51
11	A generalized log-spiral-Rankine limit equilibrium model for seismic earth pressure analysis. <i>Soil Dynamics and Earthquake Engineering</i> , 2013, 49, 197-209.	3.8	48
12	Modeling and identification of an arbitrarily shaped scatterer using dynamic XFEM with cubic splines. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014, 278, 101-118.	6.6	42
13	Ambient and Forced Vibration Testing of a Reinforced Concrete Building before and after Its Seismic Retrofitting. <i>Journal of Structural Engineering</i> , 2013, 139, 1741-1752.	3.4	41
14	An ABAQUS toolbox for soil-structure interaction analysis. <i>Computers and Geotechnics</i> , 2019, 114, 103143.	4.7	39
15	Evaluation of active and passive seismic earth pressures considering internal friction and cohesion. <i>Soil Dynamics and Earthquake Engineering</i> , 2015, 70, 30-47.	3.8	38
16	Probabilistic models of abutment backfills for regional seismic assessment of highway bridges in California. <i>Engineering Structures</i> , 2019, 180, 452-467.	5.3	37
17	A Robust Macroelement Model for Soil-Pile Interaction under Cyclic Loads. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2006, 132, 1304-1314.	3.0	35
18	Efficient model updating of a multi-story frame and its foundation stiffness from earthquake records using a timoshenko beam model. <i>Soil Dynamics and Earthquake Engineering</i> , 2017, 92, 25-35.	3.8	35

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19	Blind identification of soil-structure systems. <i>Soil Dynamics and Earthquake Engineering</i> , 2013, 45, 56-69.	3.8	33
20	On numerical computation of impedance functions for rigid soil-structure interfaces embedded in heterogeneous half-spaces. <i>Computers and Geotechnics</i> , 2016, 72, 15-27.	4.7	33
21	Rapid visual screening of soft-story buildings from street view images using deep learning classification. <i>Earthquake Engineering and Engineering Vibration</i> , 2020, 19, 827-838.	2.3	32
22	Blind identification of the Millikan Library from earthquake data considering soil-structure interaction. <i>Structural Control and Health Monitoring</i> , 2016, 23, 684-706.	4.0	31
23	Bridge mode shape identification using moving vehicles at traffic speeds through non-parametric sparse matrix completion. <i>Structural Control and Health Monitoring</i> , 2021, 28, e2747.	4.0	31
24	Extended Blind Modal Identification Technique for Nonstationary Excitations and Its Verification and Validation. <i>Journal of Engineering Mechanics - ASCE</i> , 2016, 142, .	2.9	30
25	Analysis and Implementation of Resilient Modulus Models for Granular Solids. <i>Journal of Engineering Mechanics - ASCE</i> , 2000, 126, 821-830.	2.9	29
26	Parameter identification of framed structures using an improved finite element model-updating methodâ€”Part I: formulation and verification. <i>Earthquake Engineering and Structural Dynamics</i> , 2007, 36, 619-639.	4.4	28
27	Responses of Two Tall Buildings in Tokyo, Japan, before, during, and after the M9.0 Tohoku Earthquake of 11 March 2011. <i>Earthquake Spectra</i> , 2016, 32, 463-495.	3.1	28
28	Variability in the predicted seismic performance of a typical seat-type California bridge due to epistemic uncertainties in its abutment backfill and shear-key models. <i>Engineering Structures</i> , 2017, 148, 718-738.	5.3	28
29	Nonlinear Efficiency of Bored Pile Group under Lateral Loading. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2010, 136, 1673-1685.	3.0	27
30	Mixed variational methods for finite element analysis of geometrically non-linear, inelastic Bernoulli-Euler beams. <i>Communications in Numerical Methods in Engineering</i> , 2003, 19, 809-832.	1.3	26
31	Parameter identification of framed structures using an improved finite element model-updating methodâ€”Part II: application to experimental data. <i>Earthquake Engineering and Structural Dynamics</i> , 2007, 36, 641-660.	4.4	26
32	Validation of a three-dimensional constitutive model for nonlinear site response and soil-structure interaction analyses using centrifuge test data. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2017, 41, 1828-1847.	3.3	25
33	Story-by-story estimation of the stiffness parameters of laterally-torsionally coupled buildings using forced or ambient vibration data: I. Formulation and verification. <i>Earthquake Engineering and Structural Dynamics</i> , 2012, 41, 1609-1634.	4.4	24
34	A computational workflow for rupture-structure response simulation and its application to Istanbul. <i>Earthquake Engineering and Structural Dynamics</i> , 2021, 50, 177-196.	4.4	24
35	Blind Modal Identification of Non-Classically Damped Systems from Free or Ambient Vibration Records. <i>Earthquake Spectra</i> , 2013, 29, 1137-1157.	3.1	23
36	An Investigation of Soil-Structure Interaction Effects Observed at the MIT Green Building. <i>Earthquake Spectra</i> , 2016, 32, 2425-2448.	3.1	23

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37	Estimation of static earth pressures for a sloping cohesive backfill using extended Rankine theory with a composite log-spiral failure surface. <i>Acta Geotechnica</i> , 2019, 14, 579-594.	5.7	23
38	Soil-pile-superstructure interaction effects in seismically isolated bridges under combined vertical and horizontal strong ground motions. <i>Soil Dynamics and Earthquake Engineering</i> , 2019, 126, 105753.	3.8	23
39	Conditioned Simulation of Ground-Motion Time Series at Uninstrumented Sites Using Gaussian Process Regression. <i>Bulletin of the Seismological Society of America</i> , 2022, 112, 331-347.	2.3	22
40	Variational Basis of Nonlinear Flexibility Methods for Structural Analysis of Frames. <i>Journal of Engineering Mechanics - ASCE</i> , 2005, 131, 1157-1169.	2.9	20
41	Responses of a Tall Building with U.S. Code-Type Instrumentation in Tokyo, Japan, to Events before, during, and after the Tohoku Earthquake of 11 March 2011. <i>Earthquake Spectra</i> , 2016, 32, 497-522.	3.1	18
42	Blind modal identification of non-classically damped structures under non-stationary excitations. <i>Structural Control and Health Monitoring</i> , 2017, 24, e1925.	4.0	18
43	Bayesian identification of soil-foundation stiffness of building structures. <i>Structural Control and Health Monitoring</i> , 2018, 25, e2090.	4.0	18
44	Probabilistic Model Based on Bayesian Model Averaging for Predicting the Plastic Hinge Lengths of Reinforced Concrete Columns. <i>Journal of Engineering Mechanics - ASCE</i> , 2021, 147, .	2.9	18
45	Probabilistic Machine-Learning Methods for Performance Prediction of Structure and Infrastructures through Natural Gradient Boosting. <i>Journal of Structural Engineering</i> , 2022, 148, .	3.4	18
46	Analysis of the stress distribution across a retaining wall backfill. <i>Computers and Geotechnics</i> , 2018, 103, 13-25.	4.7	17
47	Nonlinear seismic fragility assessment of tall buildings equipped with tuned mass damper (TMD) and considering soil-structure interaction effects. <i>Bulletin of Earthquake Engineering</i> , 2022, 20, 3469-3483.	4.1	17
48	Nonlinear Load-Deflection Behavior of Reinforced Concrete Drilled Piles in Stiff Clay. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2014, 140, .	3.0	16
49	Moving source localization using seismic signal processing. <i>Journal of Sound and Vibration</i> , 2015, 335, 384-396.	3.9	16
50	Data-Driven Models for Predicting the Shear Strength of Rectangular and Circular Reinforced Concrete Columns. <i>Journal of Structural Engineering</i> , 2021, 147, .	3.4	16
51	Computationally efficient multi-time-step method for partitioned time integration of highly nonlinear structural dynamics. <i>Computers and Structures</i> , 2014, 133, 51-63.	4.4	15
52	An extended probabilistic demand model with optimal intensity measures for seismic performance characterization of isolated bridges under coupled horizontal and vertical motions. <i>Bulletin of Earthquake Engineering</i> , 2021, 19, 2291-2323.	4.1	15
53	Coupled Macroelement Model of Soil-Structure Interaction in Deep Foundations. <i>Journal of Engineering Mechanics - ASCE</i> , 2007, 133, 1326-1340.	2.9	14
54	Effectiveness of particle tuned mass damper devices for pile-supported multi-story frames under seismic excitations. <i>Structural Control and Health Monitoring</i> , 2020, 27, e2627.	4.0	14

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55	Response study of the tallest California building inferred from the Mw7.1 Ridgecrest, California earthquake of 5 July 2019 and ambient motions. <i>Earthquake Spectra</i> , 2020, 36, 1096-1118.	3.1	14
56	A divide-alternate-and-conquer approach for localization and shape identification of multiple scatterers in heterogeneous media using dynamic XFEM. <i>Inverse Problems and Imaging</i> , 2016, 10, 165-193.	1.1	14
57	Localization of short-range acoustic and seismic wideband sources: Algorithms and experiments. <i>Journal of Sound and Vibration</i> , 2008, 312, 74-93.	3.9	13
58	Blind modal identification of structures from spatially sparse seismic response signals. <i>Structural Control and Health Monitoring</i> , 2013, 21, n/a-n/a.	4.0	13
59	Validated finite element techniques for quasi-static cyclic response analyses of braced frames at sub-member scales. <i>Engineering Structures</i> , 2016, 106, 222-242.	5.3	13
60	Modeling Techniques for Strain-Range-Dependent Hardening Behavior of Low-Yield-Point Steel Shear Panel Dampers. <i>Journal of Structural Engineering</i> , 2017, 143, 04017172.	3.4	12
61	Seismic response of buried reservoir structures: a comparison of numerical simulations with centrifuge experiments. <i>Soil Dynamics and Earthquake Engineering</i> , 2018, 109, 89-101.	3.8	12
62	3D time-domain nonlinear analysis of soil-structure systems subjected to obliquely incident SV waves in layered soil media. <i>Earthquake Engineering and Structural Dynamics</i> , 2021, 50, 2156-2173.	4.4	12
63	Velocity pulse effects of near-fault earthquakes on a high-speed railway vehicle-ballastless track-benchmark bridge system. <i>Vehicle System Dynamics</i> , 2022, 60, 2963-2987.	3.7	12
64	A novel Rayleigh-type viscoelastic Perfectly-Matched-Layer for wave propagation analysis: Formulation, implementation and application. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021, 383, 113913.	6.6	12
65	Bridge Digital Twinning Using an Output-Only Bayesian Model Updating Method and Recorded Seismic Measurements. <i>Sensors</i> , 2022, 22, 1278.	3.8	12
66	A semi-analytic meshfree method for Almansî-Michell problems of piezoelectric cylinders. <i>International Journal of Solids and Structures</i> , 2008, 45, 2379-2398.	2.7	11
67	Backbone curves with physical parameters for passive lateral response of homogeneous abutment backfills. <i>Bulletin of Earthquake Engineering</i> , 2016, 14, 3003-3023.	4.1	11
68	Enriched reproducing kernel particle method for piezoelectric structures with arbitrary interfaces. <i>International Journal for Numerical Methods in Engineering</i> , 2006, 67, 1565-1586.	2.8	10
69	Story-by-story estimation of the stiffness parameters of laterally-torsionally coupled buildings using forced or ambient vibration data: II. Application to experimental data. <i>Earthquake Engineering and Structural Dynamics</i> , 2012, 41, 1635-1649.	4.4	10
70	Before and after Retrofit Behavior and Performance of a 55-Story Tall Building Inferred from Distant Earthquake and Ambient Vibration Data. <i>Earthquake Spectra</i> , 2017, 33, 1599-1626.	3.1	10
71	Blind identification of site effects and bedrock motion from surface response signals. <i>Soil Dynamics and Earthquake Engineering</i> , 2018, 107, 322-331.	3.8	10
72	A forensic investigation of the Taihe arch bridge collapse. <i>Engineering Structures</i> , 2018, 176, 881-891.	5.3	10

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73	A forensic investigation of the Xiaoshan ramp bridge collapse. <i>Engineering Structures</i> , 2020, 224, 111203.	5.3	10
74	A methodology for fragility analysis of buried water pipes considering coupled horizontal and vertical ground motions. <i>Computers and Geotechnics</i> , 2020, 126, 103709.	4.7	10
75	Ground motion selection based on a multi-intensity measure conditioning approach with emphasis on diverse earthquake contents. <i>Earthquake Engineering and Structural Dynamics</i> , 2021, 50, 1378-1394.	4.4	10
76	Output-only model updating of adjacent buildings from sparse seismic response records and identification of their common excitation. <i>Structural Control and Health Monitoring</i> , 2020, 27, e2597.	4.0	9
77	Airborne pathogen projection during ophthalmic examination. <i>Graefe's Archive for Clinical and Experimental Ophthalmology</i> , 2020, 258, 2275-2282.	1.9	9
78	Probabilistic blind identification of site effects from ground surface signals. <i>Bulletin of Earthquake Engineering</i> , 2018, 16, 1079-1104.	4.1	8
79	On the implementation and validation of a three-dimensional pressure-dependent bounding surface plasticity model for soil nonlinear wave propagation and soil-structure interaction analyses. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2021, 45, 1091-1119.	3.3	8
80	A validated lateral response model for mass timber frames with knee-braces. <i>Engineering Structures</i> , 2021, 239, 112278.	5.3	8
81	Numerical analysis of end effects in laminated piezoelectric circular cylinders. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2007, 196, 2173-2186.	6.6	7
82	Multiphase Performance Assessment of Structural Response to Seismic Excitations. <i>Journal of Structural Engineering</i> , 2015, 141, .	3.4	7
83	Classification of Soft-Story Buildings Using Deep Learning with Density Features Extracted from 3D Point Clouds. <i>Journal of Computing in Civil Engineering</i> , 2021, 35, .	4.7	7
84	Influence of accelerometer type on uncertainties in recorded ground motions and seismic damage assessment. <i>Bulletin of Earthquake Engineering</i> , 2022, 20, 4419-4439.	4.1	7
85	Partitioning of elastic energy in open-cell foams under finite deformations. <i>Acta Materialia</i> , 2013, 61, 1454-1468.	7.9	6
86	Implementation and stability analysis of discrete-time filters for approximating frequency-dependent impedance functions in the time domain. <i>Soil Dynamics and Earthquake Engineering</i> , 2017, 94, 223-233.	3.8	6
87	Coupled Horizontal and Vertical Component Analysis of Strong Ground Motions for Soil-Pile-Superstructure Systems: Application to a Bridge Pier with Soil-Structure Interaction. <i>Journal of Earthquake Engineering</i> , 2021, 25, 2202-2230.	2.5	6
88	Bayesian Joint State-Parameter-Input Estimation of Flexible-Base Buildings from Sparse Measurements Using Timoshenko Beam Models. <i>Journal of Structural Engineering</i> , 2021, 147, .	3.4	6
89	Variationally consistent coupling of non-matching discretizations for large deformation problems. <i>Computational Mechanics</i> , 2017, 60, 465-478.	4.0	6
90	An enhanced damage plasticity model for predicting the cyclic behavior of plain concrete under multiaxial loading conditions. <i>Frontiers of Structural and Civil Engineering</i> , 2020, 14, 1531-1544.	2.9	6

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91	Novel post-tensioned rocking piles for enhancing the seismic resilience of bridges. <i>Earthquake Engineering and Structural Dynamics</i> , 0, , .	4.4	6
92	Influence of Sensor Density on Seismic Damage Assessment: A Case Study for Istanbul. <i>Bulletin of the Seismological Society of America</i> , 2022, 112, 2156-2169.	2.3	6
93	Criteria for balanced design of diagonally braced moment resisting frames based on hierarchical yielding and failure sequences and their application. <i>Engineering Structures</i> , 2015, 87, 198-219.	5.3	5
94	A forensic analysis of the Florida International University pedestrian bridge collapse using incident video footages. <i>Engineering Structures</i> , 2019, 200, 109732.	5.3	5
95	Lateral Capacity Model for Backfills Reacting against Skew-Angled Abutments under Seismic Loading. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2020, 146, .	3.0	5
96	Effects of conditioning criteria for ground motion selection on the probabilistic seismic responses of reinforced concrete buildings. <i>Earthquake Engineering and Structural Dynamics</i> , 2021, 50, 1414-1428.	4.4	5
97	Dynamic analysis of soil-structure interaction shear model for beams on transversely isotropic viscoelastic soil. <i>Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications</i> , 2022, 236, 999-1019.	1.1	5
98	Shape optimization of piezoelectric devices using an enriched meshfree method. <i>International Journal for Numerical Methods in Engineering</i> , 2009, 78, 151-171.	2.8	4
99	Interaction of a pile with layered-soil under vertical excitations: field experiments versus numerical simulations. <i>Bulletin of Earthquake Engineering</i> , 2017, 15, 3529-3553.	4.1	4
100	Modal and nodal impedance functions for truncated semi-infinite soil domains. <i>Soil Dynamics and Earthquake Engineering</i> , 2017, 92, 192-202.	3.8	4
101	A Nonlinear Model Inversion to Estimate Dynamic Soil Stiffness of Building Structures. , 2018, , .		4
102	Bridge Instrumentation: Needs, Options, and Consequences. <i>Springer Tracts on Transportation and Traffic</i> , 2016, , 199-210.	0.2	4
103	System Identification of Constructed Facilities: Challenges and Opportunities across Hazards. , 2008, , .		3
104	A Time-Domain Substructuring Method for Dynamic Soil Structure Interaction Analysis of Arbitrarily Shaped Foundation Systems on Heterogeneous Media. , 2013, , .		3
105	Nonlinear Performance Evaluation of Diagonally and X-Braced Moment Resisting Frame Systems: Buckling and Post-Buckling Responses. <i>Procedia Engineering</i> , 2016, 145, 1193-1200.	1.2	3
106	Bayesian Estimation of Nonlinear Soil Model Parameters Using Centrifuge Experimental Data. , 2018, , .		3
107	Responses of the odd couple Carquinez, CA, suspension bridge during the Mw6.0 south Napa earthquake of August 24, 2014. <i>Journal of Civil Structural Health Monitoring</i> , 2019, 9, 719-739.	3.9	3
108	A quantitative assessment of the NCHRP 611 method for soil-structure interaction analysis of buried circular structures & a proposed improvement. <i>Computers and Geotechnics</i> , 2019, 113, 103103.	4.7	3

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109	Identification of Soil-Structure Systems. Springer Tracts in Civil Engineering, 2019, , 139-167.	0.5	3
110	Structural seismic damage and loss assessments using a multi-conditioning ground motion selection approach based on an efficient sampling technique. Bulletin of Earthquake Engineering, 2021, 19, 1271-1287.	4.1	3
111	Considering Wave Passage Effects in Blind Identification of Long-Span Bridges. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 53-66.	0.5	3
112	Earthquake Early Warning for Estimating Floor Shaking Levels of Tall Buildings. Bulletin of the Seismological Society of America, 2022, 112, 820-849.	2.3	3
113	Performance of equilibrium-based system identification algorithms with incomplete state data. Engineering Structures, 2010, 32, 483-497.	5.3	2
114	Effects of Morphology and Topology on the Effective Stiffness of Chiral Cellular Materials in the Transverse Plane. Advances in Materials Science and Engineering, 2016, 2016, 1-7.	1.8	2
115	Inelastic Buckling Simulation of Steel Braces through Explicit Dynamic Analyses. , 2011, , .		1
116	Experimental Assessment of the Passive Resistance of a Bridge Abutment System with Various Backfill Heights. , 2012, , .		1
117	Validated Lateral Seismic Force-Displacement Backbone Curves for High-Speed Rail Bridge Abutments. Journal of Bridge Engineering, 2020, 25, .	2.9	1
118	High-fidelity inelastic post-buckling response for balanced design and performance improvement of X-braced moment resisting frames. , 2015, , .		1
119	15.12: On imperfection-sensitivity evaluation of BMRF systems: Buckling and post-buckling responses. Ce/Papers, 2017, 1, 3980-3989.	0.3	0
120	Fragility Based Seismic Performance Assessment of Buried Structures. , 2018, , .		0
121	Recent Advances in Computational Methods in Engineering Mechanics. Journal of Engineering Mechanics - ASCE, 2021, 147, 02021001.	2.9	0
122	Simplified indentation mechanics to connect nanoindentation and low-energy impact of structural composites and polymers. Journal of Reinforced Plastics and Composites, 0, , 073168442110722.	3.1	0