Ertugrul Taciroglu

List of Publications by Year
in descending order

122 papers	2,462 citations	218677 26 h-index	265206 42 g-index
127 all docs	127 docs citations	127 times ranked	1458 citing authors

#	Article	IF	Citations
1	Velocity pulse effects of near-fault earthquakes on a high-speed railway vehicle-ballastless track-benchmark bridge system. Vehicle System Dynamics, 2022, 60, 2963-2987.	3.7	12
2	Conditioned Simulation of Ground-Motion Time Series at Uninstrumented Sites Using Gaussian Process Regression. Bulletin of the Seismological Society of America, 2022, 112, 331-347.	2.3	22
3	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
4	Dynamic analysis of soil-structure interaction shear model for beams on transversely isotropic viscoelastic soil. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 2022, 236, 999-1019.	1.1	5
5	Bridge Digital Twinning Using an Output-Only Bayesian Model Updating Method and Recorded Seismic Measurements. Sensors, 2022, 22, 1278.	3.8	12
6	Nonlinear seismic fragility assessment of tall buildings equipped with tuned mass damper (TMD) and considering soil-structure interaction effects. Bulletin of Earthquake Engineering, 2022, 20, 3469-3483.	4.1	17
7	Influence of Sensor Density on Seismic Damage Assessment: A Case Study for Istanbul. Bulletin of the Seismological Society of America, 2022, 112, 2156-2169.	2.3	6
8	Probabilistic Machine-Learning Methods for Performance Prediction of Structure and Infrastructures through Natural Gradient Boosting. Journal of Structural Engineering, 2022, 148, .	3.4	18
9	Influence of accelerometer type on uncertainties in recorded ground motions and seismic damage assessment. Bulletin of Earthquake Engineering, 2022, 20, 4419-4439.	4.1	7
10	Coupled Horizontal and Vertical Component Analysis of Strong Ground Motions for Soilâ€“Pileâ€“Superstructure Systems: Application to a Bridge Pier with Soilâ€“Structure Interaction. Journal of Earthquake Engineering, 2021, 25, 2202-2230.	2.5	6
11	Realâ€time regional seismic damage assessment framework based on long shortâ€term memory neural network. Computer-Aided Civil and Infrastructure Engineering, 2021, 36, 504-521.	9.8	77
12	Data-Driven Approach to Predict the Plastic Hinge Length of Reinforced Concrete Columns and Its Application. Journal of Structural Engineering, 2021, 147, .	3.4	65
13	Effects of conditioning criteria for ground motion selection on the probabilistic seismic responses of reinforced concrete buildings. Earthquake Engineering and Structural Dynamics, 2021, 50, 1414-1428.	4.4	5
14	Ground motion selection based on a multiâ€intensityâ€measure conditioning approach with emphasis on diverse earthquake contents. Earthquake Engineering and Structural Dynamics, 2021, 50, 1378-1394.	4.4	10
15	Data-Driven Models for Predicting the Shear Strength of Rectangular and Circular Reinforced Concrete Columns. Journal of Structural Engineering, 2021, 147, .	3.4	16
16	A computational workflow for ruptureâ€toâ€structuralâ€response simulation and its application to Istanbul. Earthquake Engineering and Structural Dynamics, 2021, 50, 177-196.	4.4	24
17	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
18	A deep learning approach to rapid regional postâ€event seismic damage assessment using timeâ€frequency distributions of ground motions. Earthquake Engineering and Structural Dynamics, 2021, 50, 1612-1627.	4.4	68

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19	On the implementation and validation of a threeâ€dimensional pressureâ€dependent bounding surface plasticity model for soil nonlinear wave propagation and soilâ€structure interaction analyses. International Journal for Numerical and Analytical Methods in Geomechanics, 2021, 45, 1091-1119.	3.3	8
20	An extended probabilistic demand model with optimal intensity measures for seismic performance characterization of isolated bridges under coupled horizontal and vertical motions. Bulletin of Earthquake Engineering, 2021, 19, 2291-2323.	4.1	15
21	3D timeâ€domain nonlinear analysis of soilâ€structure systems subjected to obliquely incident SV waves in layered soil media. Earthquake Engineering and Structural Dynamics, 2021, 50, 2156-2173.	4.4	12
22	Bridge mode shape identification using moving vehicles at traffic speeds through nonâ€parametric sparse matrix completion. Structural Control and Health Monitoring, 2021, 28, e2747.	4.0	31
23	Classification of Soft-Story Buildings Using Deep Learning with Density Features Extracted from 3D Point Clouds. Journal of Computing in Civil Engineering, 2021, 35, .	4.7	7
24	A validated lateral response model for mass timber frames with knee-braces. Engineering Structures, 2021, 239, 112278.	5.3	8
25	A novel Rayleigh-type viscoelastic Perfectly-Matched-Layer for wave propagation analysis: Formulation, implementation and application. Computer Methods in Applied Mechanics and Engineering, 2021, 383, 113913.	6.6	12
26	Bayesian Joint State-Parameter-Input Estimation of Flexible-Base Buildings from Sparse Measurements Using Timoshenko Beam Models. Journal of Structural Engineering, 2021, 147, .	3.4	6
27	Probabilistic Model Based on Bayesian Model Averaging for Predicting the Plastic Hinge Lengths of Reinforced Concrete Columns. Journal of Engineering Mechanics - ASCE, 2021, 147, .	2.9	18
28	Interpretable XGBoost-SHAP Machine-Learning Model for Shear Strength Prediction of Squat RC Walls. Journal of Structural Engineering, 2021, 147, .	3.4	151
29	Recent Advances in Computational Methods in Engineering Mechanics. Journal of Engineering Mechanics - ASCE, 2021, 147, 02021001.	2.9	0
30	Lateral Capacity Model for Backfills Reacting against Skew-Angled Abutments under Seismic Loading. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2020, 146, .	3.0	5
31	Rapid visual screening of soft-story buildings from street view images using deep learning classification. Earthquake Engineering and Engineering Vibration, 2020, 19, 827-838.	2.3	32
32	A forensic investigation of the Xiaoshan ramp bridge collapse. Engineering Structures, 2020, 224, 111203.	5.3	10
33	Effectiveness of particle tuned mass damper devices for pileâ€supported multiâ€story frames under seismic excitations. Structural Control and Health Monitoring, 2020, 27, e2627.	4.0	14
34	Response study of the tallest California building inferred from the Mw7.1 Ridgecrest, California earthquake of 5 July 2019 and ambient motions. Earthquake Spectra, 2020, 36, 1096-1118.	3.1	14
35	Outputâ€only model updating of adjacent buildings from sparse seismic response records and identification of their common excitation. Structural Control and Health Monitoring, 2020, 27, e2597.	4.0	9
36	Airborne pathogen projection during ophthalmic examination. Graefe's Archive for Clinical and Experimental Ophthalmology, 2020, 258, 2275-2282.	1.9	9

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37	A methodology for fragility analysis of buried water pipes considering coupled horizontal and vertical ground motions. Computers and Geotechnics, 2020, 126, 103709.	4.7	10
38	Validated Lateral Seismic Force-Displacement Backbone Curves for High-Speed Rail Bridge Abutments. Journal of Bridge Engineering, 2020, 25, .	2.9	1
39	An enhanced damage plasticity model for predicting the cyclic behavior of plain concrete under multiaxial loading conditions. Frontiers of Structural and Civil Engineering, 2020, 14, 1531-1544.	2.9	6
40	Estimation of static earth pressures for a sloping cohesive backfill using extended Rankine theory with a composite log-spiral failure surface. Acta Geotechnica, 2019, 14, 579-594.	5.7	23
41	Soil-pile-superstructure interaction effects in seismically isolated bridges under combined vertical and horizontal strong ground motions. Soil Dynamics and Earthquake Engineering, 2019, 126, 105753.	3.8	23
42	A forensic analysis of the Florida International University pedestrian bridge collapse using incident video footages. Engineering Structures, 2019, 200, 109732.	5.3	5
43	Responses of the odd couple Carquinez, CA, suspension bridge during the Mw6.0 south Napa earthquake of August 24, 2014. Journal of Civil Structural Health Monitoring, 2019, 9, 719-739.	3.9	3
44	An ABAQUS toolbox for soil-structure interaction analysis. Computers and Geotechnics, 2019, 114, 103143.	4.7	39
45	A quantitative assessment of the NCHRP 611 method for soil-structure interaction analysis of buried circular structures & a proposed improvement. Computers and Geotechnics, 2019, 113, 103103.	4.7	3
46	Identification of Soil-Structure Systems. Springer Tracts in Civil Engineering, 2019, , 139-167.	0.5	3
47	Probabilistic models of abutment backfills for regional seismic assessment of highway bridges in California. Engineering Structures, 2019, 180, 452-467.	5.3	37
48	Blind identification of site effects and bedrock motion from surface response signals. Soil Dynamics and Earthquake Engineering, 2018, 107, 322-331.	3.8	10
49	Seismic response of buried reservoir structures: a comparison of numerical simulations with centrifuge experiments. Soil Dynamics and Earthquake Engineering, 2018, 109, 89-101.	3.8	12
50	Probabilistic blind identification of site effects from ground surface signals. Bulletin of Earthquake Engineering, 2018, 16, 1079-1104.	4.1	8
51	Bayesian identification of soil-foundation stiffness of building structures. Structural Control and Health Monitoring, 2018, 25, e2090.	4.0	18
52	A forensic investigation of the Taihe arch bridge collapse. Engineering Structures, 2018, 176, 881-891.	5.3	10
53	Analysis of the stress distribution across a retaining wall backfill. Computers and Geotechnics, 2018, 103, 13-25.	4.7	17
54	A Nonlinear Model Inversion to Estimate Dynamic Soil Stiffness of Building Structures. , 2018, , .		4

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55	Bayesian Estimation of Nonlinear Soil Model Parameters Using Centrifuge Experimental Data. , 2018, , .		3
56	Fragility Based Seismic Performance Assessment of Buried Structures. , 2018, , .		0
57	Implementation and stability analysis of discrete-time filters for approximating frequency-dependent impedance functions in the time domain. Soil Dynamics and Earthquake Engineering, 2017, 94, 223-233.	3.8	6
58	Interaction of a pile with layered-soil under vertical excitations: field experiments versus numerical simulations. Bulletin of Earthquake Engineering, 2017, 15, 3529-3553.	4.1	4
59	Validation of a threeâ€dimensional constitutive model for nonlinear site response and soilâ€structure interaction analyses using centrifuge test data. International Journal for Numerical and Analytical Methods in Geomechanics, 2017, 41, 1828-1847.	3.3	25
60	Modal and nodal impedance functions for truncated semi-infinite soil domains. Soil Dynamics and Earthquake Engineering, 2017, 92, 192-202.	3.8	4
61	Modeling Techniques for Strain-Range-Dependent Hardening Behavior of Low-Yield-Point Steel Shear Panel Dampers. Journal of Structural Engineering, 2017, 143, 04017172.	3.4	12
62	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. Engineering Structures, 2017, 148, 718-738.	5.3	28
63	15.12: On imperfection-sensitivity evaluation of BMRF systems: Buckling and post-buckling responses. Ce/Papers, 2017, 1, 3980-3989.	0.3	0
64	Before and after Retrofit Behavior and Performance of a 55-Story Tall Building Inferred from Distant Earthquake and Ambient Vibration Data. Earthquake Spectra, 2017, 33, 1599-1626.	3.1	10
65	Efficient model updating of a multi-story frame and its foundation stiffness from earthquake records using a timoshenko beam model. Soil Dynamics and Earthquake Engineering, 2017, 92, 25-35.	3.8	35
66	Blind modal identification of non-classically damped structures under non-stationary excitations. Structural Control and Health Monitoring, 2017, 24, e1925.	4.0	18
67	Variationally consistent coupling of non-matching discretizations for large deformation problems. Computational Mechanics, 2017, 60, 465-478.	4.0	6
68	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
69	Blind identification of the Millikan Library from earthquake data considering soil-structure interaction. Structural Control and Health Monitoring, 2016, 23, 684-706.	4.0	31
70	Nonlinear Performance Evaluation of Diagonally and X-Braced Moment Resisting Frame Systems: Buckling and Postâ€“Buckling Responses. Procedia Engineering, 2016, 145, 1193-1200.	1.2	3
71	Backbone curves with physical parameters for passive lateral response of homogeneous abutment backfills. Bulletin of Earthquake Engineering, 2016, 14, 3003-3023.	4.1	11
72	An Investigation of Soil-Structure Interaction Effects Observed at the MIT Green Building. Earthquake Spectra, 2016, 32, 2425-2448.	3.1	23

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73	On numerical computation of impedance functions for rigid soil-structure interfaces embedded in heterogeneous half-spaces. Computers and Geotechnics, 2016, 72, 15-27.	4.7	33
74	Validated finite element techniques for quasi-static cyclic response analyses of braced frames at sub-member scales. Engineering Structures, 2016, 106, 222-242.	5.3	13
75	Extended Blind Modal Identification Technique for Nonstationary Excitations and Its Verification and Validation. Journal of Engineering Mechanics - ASCE, 2016, 142, .	2.9	30
76	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. Earthquake Spectra, 2016, 32, 497-522.	3.1	18
77	Responses of Two Tall Buildings in Tokyo, Japan, before, during, and after the M9.0 Tohoku Earthquake of 11 March 2011. Earthquake Spectra, 2016, 32, 463-495.	3.1	28
78	Bridge Instrumentation: Needs, Options, and Consequences. Springer Tracts on Transportation and Traffic, 2016, , 199-210.	0.2	4
79	A divide-alternate-and-conquer approach for localization and shape identification of multiple scatterers in heterogeneous media using dynamic XFEM. Inverse Problems and Imaging, 2016, 10, 165-193.	1.1	14
80	Criteria for balanced design of diagonally braced moment resisting frames based on hierarchical yielding and failure sequences and their application. Engineering Structures, 2015, 87, 198-219.	5.3	5
81	Multiphase Performance Assessment of Structural Response to Seismic Excitations. Journal of Structural Engineering, 2015, 141, .	3.4	7
82	Evaluation of active and passive seismic earth pressures considering internal friction and cohesion. Soil Dynamics and Earthquake Engineering, 2015, 70, 30-47.	3.8	38
83	Moving source localization using seismic signal processing. Journal of Sound and Vibration, 2015, 335, 384-396.	3.9	16
84	High-fidelity inelastic post-buckling response for balanced design and performance improvement of X-braced moment resisting frames. , 2015, , .		1
85	Nonlinear Load-Deflection Behavior of Reinforced Concrete Drilled Piles in Stiff Clay. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2014, 140, .	3.0	16
86	Computationally efficient multi-time-step method for partitioned time integration of highly nonlinear structural dynamics. Computers and Structures, 2014, 133, 51-63.	4.4	15
87	Modeling and identification of an arbitrarily shaped scatterer using dynamic XFEM with cubic splines. Computer Methods in Applied Mechanics and Engineering, 2014, 278, 101-118.	6.6	42
88	Identification of a scatterer embedded in elastic heterogeneous media using dynamic XFEM. Computer Methods in Applied Mechanics and Engineering, 2013, 259, 50-63.	6.6	51
89	Blind modal identification of structures from spatially sparse seismic response signals. Structural Control and Health Monitoring, 2013, 21, n/a-n/a.	4.0	13
90	Blind identification of soilâ€“structure systems. Soil Dynamics and Earthquake Engineering, 2013, 45, 56-69.	3.8	33

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91	A generalized log-spiral-Rankine limit equilibrium model for seismic earth pressure analysis. Soil Dynamics and Earthquake Engineering, 2013, 49, 197-209.	3.8	48
92	Partitioning of elastic energy in open-cell foams under finite deformations. Acta Materialia, 2013, 61, 1454-1468.	7.9	6
93	Ambient and Forced Vibration Testing of a Reinforced Concrete Building before and after Its Seismic Retrofitting. Journal of Structural Engineering, 2013, 139, 1741-1752.	3.4	41
94	Responseâ€only modal identification of structures using strong motion data. Earthquake Engineering and Structural Dynamics, 2013, 42, 1221-1242.	4.4	66
95	Blind Modal Identification of Non-Classically Damped Systems from Free or Ambient Vibration Records. Earthquake Spectra, 2013, 29, 1137-1157.	3.1	23
96	Response-only modal identification of structures using limited sensors. Structural Control and Health Monitoring, 2013, 20, 987-1006.	4.0	73
97	A Time-Domain Substructuring Method for Dynamic Soil Structure Interaction Analysis of Arbitrarily Shaped Foundation Systems on Heterogeneous Media. , 2013, , .		3
98	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
99	Experimental Assessment of the Passive Resistance of a Bridge Abutment System with Various Backfill Heights. , 2012, , .		1
100	Seismic behavior of reinforced concrete bridges with skew-angled seat-type abutments. Engineering Structures, 2012, 45, 137-150.	5.3	107
101	Storyâ€byâ€story estimation of the stiffness parameters of laterallyâ€torsionally coupled buildings using forced or ambient vibration data: I. Formulation and verification. Earthquake Engineering and Structural Dynamics, 2012, 41, 1609-1634.	4.4	24
102	Storyâ€byâ€story estimation of the stiffness parameters of laterallyâ€torsionally coupled buildings using forced or ambient vibration data: II. Application to experimental data. Earthquake Engineering and Structural Dynamics, 2012, 41, 1635-1649.	4.4	10
103	Inelastic Buckling Simulation of Steel Braces through Explicit Dynamic Analyses. , 2011, , .		1
104	Performance of equilibrium-based system identification algorithms with incomplete state data. Engineering Structures, 2010, 32, 483-497.	5.3	2
105	Much ado about shear correction factors in Timoshenko beam theory. International Journal of Solids and Structures, 2010, 47, 1651-1665.	2.7	121
106	Nonlinear Efficiency of Bored Pile Group under Lateral Loading. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2010, 136, 1673-1685.	3.0	27
107	Validated Simulation Models for Lateral Response of Bridge Abutments with Typical Backfills. Journal of Bridge Engineering, 2010, 15, 302-311.	2.9	101
108	Shape optimization of piezoelectric devices using an enriched meshfree method. International Journal for Numerical Methods in Engineering, 2009, 78, 151-171.	2.8	4

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109	Localization of short-range acoustic and seismic wideband sources: Algorithms and experiments. Journal of Sound and Vibration, 2008, 312, 74-93.	3.9	13
110	A semi-analytic meshfree method for Almansiâ€“Michell problems of piezoelectric cylinders. International Journal of Solids and Structures, 2008, 45, 2379-2398.	2.7	11
111	System Identification of Constructed Facilities: Challenges and Opportunities across Hazards. , 2008, , .		3
112	Coupled Macroelement Model of Soil-Structure Interaction in Deep Foundations. Journal of Engineering Mechanics - ASCE, 2007, 133, 1326-1340.	2.9	14
113	Parameter identification of framed structures using an improved finite element model-updating methodâ€”Part II: application to experimental data. Earthquake Engineering and Structural Dynamics, 2007, 36, 641-660.	4.4	26
114	Parameter identification of framed structures using an improved finite element model-updating methodâ€”Part I: formulation and verification. Earthquake Engineering and Structural Dynamics, 2007, 36, 619-639.	4.4	28
115	Numerical analysis of end effects in laminated piezoelectric circular cylinders. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 2173-2186.	6.6	7
116	Enriched reproducing kernel particle method for piezoelectric structures with arbitrary interfaces. International Journal for Numerical Methods in Engineering, 2006, 67, 1565-1586.	2.8	10
117	A Robust Macroelement Model for Soilâ€“Pile Interaction under Cyclic Loads. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2006, 132, 1304-1314.	3.0	35
118	Variational Basis of Nonlinear Flexibility Methods for Structural Analysis of Frames. Journal of Engineering Mechanics - ASCE, 2005, 131, 1157-1169.	2.9	20
119	Mixed variational methods for finite element analysis of geometrically non-linear, inelastic Bernoulli-Euler beams. Communications in Numerical Methods in Engineering, 2003, 19, 809-832.	1.3	26
120	Analysis and Implementation of Resilient Modulus Models for Granular Solids. Journal of Engineering Mechanics - ASCE, 2000, 126, 821-830.	2.9	29
121	Novel postâ€tensioned rocking piles for enhancing the seismic resilience of bridges. Earthquake Engineering and Structural Dynamics, 0, , .	4.4	6
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