

Assoc. Prof. ZEHRA ERTUĞRUL

Personal Information

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Research Areas

Engineering and Technology

Academic Titles / Tasks

Associate Professor, Middle East Technical University, Faculty Of Engineering, Department Of Engineering Sciences, 2020 - Continues

Associate Professor, Ted University, Faculty Of Engineering-Architecture, Department Of Civil Engineering, 2014 - 2020

Associate Professor, Middle East Technical University, Engineering Faculty, Civil Engineering, 2013 - 2014

Assistant Professor, Middle East Technical University, Engineering Faculty, Civil Engineering, 2008 - 2013

Lecturer, Middle East Technical University, Engineering Faculty, Civil Engineering, 2007 - 2008

Lecturer, Middle East Technical University, Engineering Faculty, Civil Engineering, 2006 - 2007

Courses

Engineering Mechanics I, Undergraduate, 2020 - 2021

Computing Methods in Engineering, Undergraduate, 2020 - 2021

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **On how the ergodic assumption influences seismic risk**
Cagnan Z.
BULLETIN OF EARTHQUAKE ENGINEERING, vol.19, no.1, pp.1-25, 2021 (Journal Indexed in SCI)
- II. **Assessment of Aleatory and Epistemic Uncertainty for Ground-Motion Intensity Measure Prediction in Turkey**
Cagnan Z., Akkar S.
BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA, vol.109, no.1, pp.263-283, 2019 (Journal Indexed in SCI)
- III. **Seismic behaviour of the old-type gravity load designed deteriorated RC buildings in Cyprus**
Safkan I., Sensoy S., Cagnan Z.
ENGINEERING FAILURE ANALYSIS, vol.82, pp.198-207, 2017 (Journal Indexed in SCI)
- IV. **A model for predicting vertical component peak ground acceleration (PGA), peak ground velocity (PGV), and 5% damped pseudospectral acceleration (PSA) for Europe and the Middle East**
Cagnan Z., Akkar S., Kale O., SANDIKKAYA M. A.
BULLETIN OF EARTHQUAKE ENGINEERING, vol.15, no.7, pp.2617-2643, 2017 (Journal Indexed in SCI)
- V. **Numerical models for the seismic assessment of St. Nicholas Cathedral, Cyprus**
Cagnan Z.
SOIL DYNAMICS AND EARTHQUAKE ENGINEERING, vol.39, pp.50-60, 2012 (Journal Indexed in SCI)

- VI. **A Predictive Ground-Motion Model for Turkey and Its Comparison with Recent Local and Global GMPEs**
Cagnan Z., Akkar S., Guelkan P.
EARTHQUAKE DATA IN ENGINEERING SEISMOLOGY: PREDICTIVE MODELS, DATA MANAGEMENT AND NETWORKS, vol.14, pp.39-52, 2011 (Journal Indexed in SCI)
- VII. **A Local Ground-Motion Predictive Model for Turkey, and Its Comparison with Other Regional and Global Ground-Motion Models**
Akkar S., Cagnan Z.
BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA, vol.100, no.6, pp.2978-2995, 2010 (Journal Indexed in SCI)
- VIII. **Rapid earthquake hazard and loss assessment for Euro-Mediterranean region**
Erdik M., Sesetyan K., Demircioglu M., Hancilar U., Zulfikar C., Cakti E., Kamer Y., Yenidogan C., Tuzun C., Cagnan Z., et al.
ACTA GEOPHYSICA, vol.58, no.5, pp.855-892, 2010 (Journal Indexed in SCI)
- IX. **The recently compiled Turkish strong motion database: preliminary investigation for seismological parameters**
Akkar S., Cagnan Z., Yenier E., Erdogan O., Sandikkaya M. A. , Gulkan P.
JOURNAL OF SEISMOLOGY, vol.14, no.3, pp.457-479, 2010 (Journal Indexed in SCI)
- X. **Seismic hazard assessment for Cyprus**
Cagnan Z., TANIRCAN G.
JOURNAL OF SEISMOLOGY, vol.14, no.2, pp.225-246, 2010 (Journal Indexed in SCI)
- XI. **Development of earthquake lossmap for Europe**
Cagnan Z., ŞEŞETYAN K., Zulfikar C., DEMİRCİOĞLU M. B. , Kariptas C., Durukal E., Erdik M.
JOURNAL OF EARTHQUAKE ENGINEERING, vol.12, pp.37-47, 2008 (Journal Indexed in SCI)
- XII. **A comparative study of European earthquake loss estimation tools for a scenario in Istanbul**
Strasser F. O. , Bommer J. J. , ŞEŞETYAN K., ERDİK M. Ö. , Cagnan Z., Irizarry J., Goula X., Lucantoni A., Sabetta F., Bal I. E. , et al.
JOURNAL OF EARTHQUAKE ENGINEERING, vol.12, pp.246-256, 2008 (Journal Indexed in SCI)
- XIII. **Optimizing scheduling of post-earthquake electric power restoration tasks**
Xu N., Guikema S. D. , Davidson R. A. , Nozick L. K. , Cagnan Z., Vaziri K.
EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS, vol.36, no.2, pp.265-284, 2007 (Journal Indexed in SCI)
- XIV. **Post-earthquake restoration planning for Los Angeles electric power**
Cagnan Z., Davidson R. A. , Guikema S. D.
EARTHQUAKE SPECTRA, vol.22, no.3, pp.589-608, 2006 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **Discrete event simulation of the post-earthquake restoration process for electric power systems**
ERTUĞRUL Z., Davidson R. A.
International Journal of Risk Assessment and Management, vol.7, no.8, pp.1138-1156, 2007 (Refereed Journals of Other Institutions)

Refereed Congress / Symposium Publications in Proceedings

- I. **Advantages of industry-academia partnerships for the development of professional competences in civil engineering**
Akan O. D. , Bilgin G., ERTUĞRUL Z.
10th International Symposium on Project Approaches in Engineering Education, PAEE 2018 and 15th Active Learning in Engineering Education Workshop, ALE 2018, Brasilia, Brazil, 28 February - 02 March 2018, vol.8,

pp.90-98

- II. **Single station sigma for Turkish strong motion stations**
ERTUĞRUL Z., Akkar S.
6th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, COMPDYN 2017, Rhodes Island, Greece, 15 - 17 June 2017, vol.2, pp.4527-4545
- III. **Dynamic response of a gothic cathedral in Cyprus**
ERTUĞRUL Z., Chrysostomou C. Z. , Kyriakides N., Votsis R. A.
5th ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, COMPDYN 2015, Hersonissos, Crete, Greece, 25 - 27 May 2015, pp.3726-3738
- IV. **Computer modelling and seismic performance assessment of a byzantine basilica**
ERTUĞRUL Z.
3rd International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, COMPDYN 2011, Corfu, Greece, 25 - 28 May 2011
- V. **Seismic hazard of Eastern Mediterranean region**
ERTUĞRUL Z., Akkar S.
9th US National and 10th Canadian Conference on Earthquake Engineering 2010, Including Papers from the 4th International Tsunami Symposium, Toronto, Canada, 25 - 29 July 2010, vol.4, pp.3251-3260
- VI. **Optimization of crews in post-earthquake electric power restoration**
Guikema S., Xu N., Davidson R., Nozick L., ERTUĞRUL Z.
8th US National Conference on Earthquake Engineering 2006, San Francisco, CA, United States Of America, 18 - 22 April 2006, vol.7, pp.3727-3736
- VII. **Efficient simulation-based discrete optimization**
Guikema S., Davidson R., Cagnan Z.
Winter Simulation Conference 2004, Washington, Kiribati, 5 - 08 December 2004, pp.536-544
- VIII. **Post-Earthquake Lifeline Service Restoration Modeling**
ERTUĞRUL Z., Davidson R.
Proceedings of the Sixth U.S. Conference and Workshop on Lifeline Earthquake Engineering, Long Beach, CA, United States Of America, 10 - 13 August 2003, pp.255-264

Citations

Total Citations (WOS):390

h-index (WOS):8