Prof. Ufuk Yazgan

Personal Information

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International Researcher IDs
ScholarID: kyXZ1ggAAAAJ
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Publons / Web Of Science ResearcherID: B-4614-2015
ScopusID: 8682323900
Yoksis Researcher ID: 23528

Education Information

Doctorate, Eidgenössische Technische Hochschule, ETHZ (The Federal Institute of Technology, Zürich), Institute of Structural Engineering (IBK), Department of Civil, Environmental and Geomatic Engineering (D-BAUG), Switzerland 2004 - 2010
Postgraduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Civil Engineering, Turkey 2001 - 2003
Undergraduate, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, Turkey 1997 - 2001

Foreign Languages

English

Dissertations

Doctorate, THE USE OF POST-EARTHQUAKE RESIDUAL DISPLACEMENTSAS A PERFORMANCE INDICATOR IN SEISMIC ASSESSMENT, Eidgenössische Technische Hochschule, ETHZ (The Federal Institute of Technology, Zürich), Department of Civil, Environmental and Geomatic Engineering (D-BAUG), Institute of Structural Engineering (IBK), 2010
Postgraduate, A methodology for determination of performance based design parameters, Orta Doğu Teknik Üniversitesi, Fen Bilimleri Enstitüsü, İnşaat Mühendisliği (Yl) (Tezli), 2003

Research Areas

Structural Engineering, Earthquake Engineering, Concrete Structures

Academic Titles / Tasks

Assistant Professor, Istanbul Technical University, Afet Yönetimi Enstitüsü, 2011 - Continues
Visiting Lecturer, University of California, San Diego, Jacobs School of Engineering, Structural Engineering Department, 2018 - 2019
Research Assistant, Eidgenössische Technische Hochschule, ETHZ (The Federal Institute of Technology, Zürich), Mühendislik Fakültesi (School Of Engineering), İnşaat, Çevre Ve Geomatik Mühendisliği Bölümü (Department Of Civil, Environmental And Geomatic Engineering, D-Baug), 2004 - 2010
Research Assistant, Middle East Technical University, Graduate School Of Natural And Applied Sciences, İnşaat Mühendisliği (Yl) (Tezli), 2002 - 2004

Academic and Administrative Experience

İstanbul Teknik Üniversitesi, Deprem Mühendisliği Ve Afet Yönetimi Enstitüsü, 2015 - Continues
İstanbul Teknik Üniversitesi, Deprem Mühendisliği Ve Afet Yönetimi Enstitüsü, 2011 - 2012

Courses

Structural Design of Building Envelopes, Postgraduate, 2022 - 2023
ADVANCED DYNAMICS OF STRUCTURES, Postgraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014
ENGINEERING MATHEMATICS, Postgraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013
SEISMIC RELIABILITY ANALYSIS OF STRUCTURES, Postgraduate, 2014 - 2015, 2013 - 2014, 2012 - 2013
STRENGTH OF MATERIALS I, Undergraduate, 2014 - 2015
STRENGTH OF MATERIALS FOR MINING ENGINEERS, Undergraduate, 2013 - 2014, 2012 - 2013

Advising Theses

Yazgan U., Seismic risk of substandard RC frames with foundation settlement, Postgraduate, S.HUSEYNLI(Student), 2022
Yazgan U., Effects of Soil-Structure Interaction on the Seismic Performance of Reinforced Concrete Buildings, Doctorate, Y.AVCI(Student), 2018
Yazgan U., Collapse risk assessment of reinforced concrete buildings subjected to aftershock hazard, Doctorate, Z.MÜDERRİSOĞLU(Student), 2017

Published journal articles indexed by SCI, SSCI, and AHCI

I. **A note on two alternative probabilistic methods to address parametric uncertainty in magnitude frequency distribution (MFD) logic trees (BEEE-D-22-00704)**
Akkar S., Yazgan U., Eroğlu Azak T.
Bulletin of Earthquake Engineering, vol.22, no.4, pp.1581-1604, 2024 (SCI-Expanded)

II. **Critical issues in nonlinear modeling of reinforced concrete buildings: code-compliant modeling approaches and the 2015 E-defense shake table tests on a full-scale 10-story building**
Tura C., Aydın S., Yazgan U., Orakçal K., İlki A., Kabeyasawa T., Kang J.
Bulletin of Earthquake Engineering, vol.22, no.2, pp.329-364, 2024 (SCI-Expanded)

III. **Probabilistic estimation of inelastic displacement demands in soil-structure interaction systems on cohesive soils**
Avci Y., Yazgan U.
EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS, vol.51, no.1, pp.22-43, 2022 (SCI-Expanded)

IV. **Impact of rupture-plane uncertainty on earthquake hazard: observations from the 30 october 2020 Samos earthquake**
Akkar S., Caglar N. M., Kale O., Yazgan U., SANDIKKAYA M. A.

BULLETIN OF EARTHQUAKE ENGINEERING, vol.19, no.7, pp.2739-2761, 2021 (SCI-Expanded)

V. **The effect of finite element modeling assumptions on collapse capacity of an RC frame building**
Ghaemian S., Muderrisoglu Z., Yazgan U.
EARTHQUAKES AND STRUCTURES, vol.18, no.5, pp.555-565, 2020 (SCI-Expanded)

VI. **A practical probabilistic earthquake hazard analysis tool: case study Marmara region**
Sianko I., Ozdemir Z., Khoshkholghi S., Garcia R., Hajirasouliha I., Yazgan U., Pilakoutas K.
BULLETIN OF EARTHQUAKE ENGINEERING, vol.18, no.6, pp.2523-2555, 2020 (SCI-Expanded)

VII. **Development of an aftershock occurrence model calibrated for Turkey and the resulting likelihoods**
Muderrisoglu Z., Yazgan U.
EARTHQUAKE ENGINEERING AND ENGINEERING VIBRATION, vol.19, no.1, pp.149-160, 2020 (SCI-Expanded)

VIII. **Maximum inelastic displacement ratio for systems with soil-structure interaction**
Avci Y., Yazgan U.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.34, no.3, pp.1528-1537, 2019 (SCI-Expanded)

IX. **Aftershock Hazard Assessment Based on Utilization of Observed Main Shock Demand**
Muderrisoglu Z., Yazgan U.
EARTHQUAKE SPECTRA, vol.34, no.2, pp.569-586, 2018 (SCI-Expanded)

X. **Field testing of substandard RC buildings through forced vibration tests**
Goksu Ç., İNCİ P., DEMİR U., Yazgan U., İLKİ A.
BULLETIN OF EARTHQUAKE ENGINEERING, vol.15, no.8, pp.3245-3263, 2017 (SCI-Expanded)

XI. **Seismic performance of buildings during 2011 Van earthquakes and rebuilding efforts**
Yazgan U., OYGUC R. A., ERGUVEN M. E., CELEP Z.
EARTHQUAKE ENGINEERING AND ENGINEERING VIBRATION, vol.15, no.3, pp.591-606, 2016 (SCI-Expanded)

XII. **Empirical seismic fragility assessment with explicit modeling of spatial ground motion variability**
Yazgan U.
ENGINEERING STRUCTURES, vol.100, pp.479-489, 2015 (SCI-Expanded)

XIII. **Discussion of "Simulating Maximum and Residual Displacements of RC Structures: I. Accuracy"**
Yazgan U., Dazio A.
EARTHQUAKE SPECTRA, vol.29, no.2, pp.679-682, 2013 (SCI-Expanded)

XIV. **Post-earthquake damage assessment using residual displacements**
Yazgan U., DAZIO A.
EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS, vol.41, no.8, pp.1257-1276, 2012 (SCI-Expanded)

XV. **Simulating Maximum and Residual Displacements of RC Structures: I. Accuracy**
Yazgan U., DAZIO A.
EARTHQUAKE SPECTRA, vol.27, no.4, pp.1187-1202, 2011 (SCI-Expanded)

XVI. **Simulating Maximum and Residual Displacements of RC Structures: II. Sensitivity**
Yazgan U., DAZIO A.
EARTHQUAKE SPECTRA, vol.27, no.4, pp.1203-1218, 2011 (SCI-Expanded)

XVII. **Enhancement of the national strong-motion network in Turkey**
Gülkan P., ÇEKEN U., ÇOLAKOĞLU Z., UĞRAŞ T., KURU T., APAK A., Anderson J., Sucuoğlu H., ÇELEBİ M., Akkar D., et al.
Seismological Research Letters, vol.78, no.4, pp.429-438, 2007 (SCI-Expanded)

XVIII. **A screening procedure for seismic risk assessment in urban building stocks**
Sucuoglu H., Yazgan U., YAKUT A.
EARTHQUAKE SPECTRA, vol.23, no.2, pp.441-458, 2007 (SCI-Expanded)

XIX. **Drift estimates in frame buildings subjected to near-fault ground motions**
Akkar S., Yazgan U., GULKAN P.
JOURNAL OF STRUCTURAL ENGINEERING-ASCE, vol.131, no.7, pp.1014-1024, 2005 (SCI-Expanded)

Articles Published in Other Journals

I. **Crime risk assessment in residential buildings: Openings**
Agarbati G., D'Orazio M., Yazgan U.
International Journal for Housing Science and Its Applications, vol.40, no.2, pp.123-132, 2016 (Scopus)

II. **Overview of the critical disaster management challenges faced during Van 2011 earthquakes**
Tolon M., Yazgan U., Ural D. N., Goss K. C.
Journal of Emergency Management, vol.12, no.1, pp.82-96, 2014 (Scopus)

III. **The use of post-earthquake residual displacements as a performance indicator in seismic assessment**
Yazgan U., Dazio A.
GEORISK-ASSESSMENT AND MANAGEMENT OF RISK FOR ENGINEERED SYSTEMS AND GEOHAZARDS, vol.5, no.1, pp.59-76, 2011 (ESCI)

Books & Book Chapters

I. **Post-Earthquake Risk-Based Decision Making Methodology for Turkish School Buildings**
Yazgan U., Oyguç R. A.
in: Seismic Evaluation and Rehabilitation of Structures, Alper Ilki,Michael N. Fardis, Editor, Springer-Verlag , Amsterdam, pp.37-45, 2014

II. **The use of post earthquake residual displacements as a performance indicator in seismic assessment**
Yazgan U.
vdf Hochschulverlag AG, Zürich, 2010

Refereed Congress / Symposium Publications in Proceedings

I. **Estimating Aggregate Earthquake Losses to Portfolios Using Convolution Approach**
Yazgan U., Akkar S., Ülkü O.
12th National Conference on Earthquake Engineering, NCEE 2022, Utah, United States Of America, 27 June - 01 July 2022

II. **Structural Damage Sensitive Content Vulnerability Modeling for Turk Reinsurance Earthquake Loss Modeling Platform**
Akkar S., Yazgan U.
12th National Conference on Earthquake Engineering, NCEE 2022, Utah, United States Of America, 27 June - 01 July 2022

III. **Challenges in Developing Seismic Vulnerability Models for Substandard Building Stocks in Turkey**
YAZGAN U., İLKİ A., DEMİR C., Demir U., Ateş A. O., Küpçü E., Ünal G., Altınok M. A., Karakaya B., Narlıtepe F.
2nd International Workshop on Advanced Materials and Innovative Systems in Structural Engineering: Novel Researches, İstanbul, Turkey, 20 September 2019

IV. **Development of a Framework for Rapid Earthquake Risk Assessment for Substandard Buildings in Turkey**
İLKİ A., YAZGAN U., DEMİR C., Ateş A. O., Demir U., Küpçü E., Ünal G., Altınok M. A., Karakaya B., Narlıtepe F.
2nd International Workshop on Advanced Materials and Innovative Systems in Structural Engineering: Novel Researches, İstanbul, Turkey, 20 December 2019

V. **Post-earthquake collapse safety of damaged RC buildings subjected to aftershock hazard**
Muderrisoğlu Z., YAZGAN U.
Proceedings of the 11th National Conference in Earthquake Engineering, 25 - 29 June 2018

VI. **Post-earthquake collapse safety of damaged buildings subjected to aftershock hazard**
Muderrisoglu Z., Yazgan U.

11th National Conference on Earthquake Engineering 2018: Integrating Science, Engineering, and Policy, NCEE 2018, California, United States Of America, 25 - 29 June 2018, vol.12, pp.7489-7499

VII. **Quantifying the value of SHM for emergency management of bridges at-risk from seismic damage**
Omenzetter P., YAZGAN U., SOYÖZ S., Limongelli M.
JOINT COST TU1402 - COST TU1406 - IABSE WC1 WORKSHOP: The Value of Structural Health Monitoring for the Reliable Bridge Management., 2 - 03 March 2017

VIII. **A new approach for aftershock hazard assessment that takes into account mainshock demand**
Muderrisoğlu Z., Yazgan U.
16th World Conference on Earthquake Engineering, Santiago, Chile, 9 - 13 January 2017

IX. **Quantifying the value of monitoring for post-earthquake emergency management of bridges**
Limongelli M. P., Omenzetter P., Yazgan U., Soyoz S.
39th IABSE Symposium in Vancouver 2017: Engineering the Future, Vancouver, Canada, 21 - 23 September 2017, pp.3245-3252

X. **Effect of Modelling Assumptions on Collapse Capacity Estimation**
Müderrisoğlu Z., Ghaemian S., YAZGAN U.
12th International Conference on Advances in Civil Enginering, 21 - 23 September 2016

XI. **Quantifying the value of seismic structural health monitoring of buildings**
Omenzetter P., Limongelli M. P., Yazgan U.
8th European Workshop on Structural Health Monitoring, EWSHM 2016, Bilbao, Spain, 5 - 08 July 2016, vol.1, pp.510-519

XII. **ARTÇI SARSINTI TEHLİKE ANALİZİ İÇİN YENİ BİR YAKLAŞIM**
MÜDERRİSOĞLU Z., YAZGAN U.
8. Ulusal Deprem Mühendisliği Konferansı, Turkey, 11 - 14 May 2015

XIII. **An improved approach for aftershock hazard assessment**
Müderrisoğlu Z., Yazgan U.
12th International Conference on Applications of Statistics and Probability in Civil Engineering, ICASP 2012, Vancouver, Canada, 12 - 15 July 2015

XIV. **CRIME RISK ASSESSMENT IN RESIDENTIAL BUILDINGS OPENINGS**
AGARBATI G., DORAZIO M., YAZGAN U.
40th International Association for Housing Science World Congress, 16 - 19 December 2014

XV. **EXPLICIT MODELING OF GROUND MOTION VARIABILITY IN THE DEVELOPMENT OF FRAGILITY MODELS**
YAZGAN U.
2nd European Conference on Earthquake Engineering and Seismology, Istanbul, Turkey, 25 - 29 August 2014

XVI. **Empirical vulnerability modeling considering geospatial ground motion variability**
Yazgan U.
11th International Conference on Structural Safety and Reliability, ICOSSAR 2013, New York, United States Of America, 16 - 20 June 2013, pp.4513-4519

XVII. **AN INTERNATIONAL COMPARISON OF THE 2011 VAN EARTHQUAKE IN THE MEANING OF DISASTER MANAGEMENT PRINCIPLES**
TOLON M., YAZGAN U., URAL D.
2013 INTERNATIONAL VAN EARTHQUAKE SYMPOSIUM, VAN, TURKEY, 23 - 27 October 2013

XVIII. **HASAR GÖREBİLİRLİK MODELLERİNİN DOĞRULANMASI İÇİN YENİ BİR YAKLAŞIM**
MÜDERRİSOĞLU Z., YAZGAN U.
2. Türkiye Deprem Mühendisliği ve Sismoloji Konferansı, Turkey, 25 - 27 September 2013

XIX. **October 23rd, 2011 Van Earthquake Preliminary Reconnaissance Report: Structural and Geotechnical Aspects of the Damage**
Yazgan U., Taşkın B., Özdemir Çağlayan P., Erken A., Celep Z., Ergüven M. E., Sezen A., Oyguç R. A., Mert Tuğsal Ü.
15th World Conference on Earthquake Engineering, Lisbon, Portugal, 24 - 28 September 2012, pp.1

XX. **A New Approach to Building Stock VulnerabilityModeling based on Bayesian Analysis**
YAZGAN U.

15th World Conference on Earthquake Engineering, Lisbon, Portugal, 24 - 28 September 2012

XXI. **Critical aspects of finite element modeling of RC structures for seismic performance assessment**
Yazgan U., Dazio A.
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.7, pp.5835-5844

XXII. **UTILIZATION OF RESIDUAL DISPLACEMENTS IN THE POST EARTHQUAKE ASSESSMENT**
YAZGAN U., DAZIO A.
14th World Conference on Earthquake Engineering, 12 - 17 October 2008

XXIII. **Comparison of different finite-element modeling approaches in terms of estimating the residual displacements of RC structures**
Yazgan U., Dazio A.
8th US National Conference on Earthquake Engineering 2006, San Francisco, CA, United States Of America, 18 - 22 April 2006, vol.4, pp.2094-2103

XXIV. **CAPABILITIES OF THE BAYESIAN PROBABILISTIC NETWORKS APPROACH FOR EARTHQUAKE RISK MANAGEMENT**
BAYRAKTARLI Y., YAZGAN U., DAZIO A., FABER M.
First European Conference on Earthquake Engineering and Seismology, Geneva, Switzerland, 3 - 08 September 2006

XXV. **Management of Earthquake Risks Using Condition Indicators**
DAZIO A., YAZGAN U.
1st International Workshop on An Earthquake Loss Estimation Program for Turkey, 1 - 02 December 2005

XXVI. **On the Application of Bayesian Probabilistic Networks for Earthquake Risk Management**
BAYRAKTARLI Y., ULKFJAER J., YAZGAN U., FABER M.
9th International Conference on Structural Safety and Reliability, Rome, Italy, 19 June 2005 - 23 June 2004

XXVII. **Raised drift demands for framed buildings during near-field earthquakes**
Gulkan P., Yazgan U.
Workshop on Future Directions in Instrumentation for Strong Motion and Engineering Seismology, Kusadasi, Turkey, 17 - 21 May 2004, vol.58, pp.61-81

XXVIII. **INTER STORY DRIFT REQUIREMENTS FOR NEAR FIELD EARTHQUAKES**
GÜLKAN H. P., YAZGAN U.
OECD Nuclear Energy Agency-NIED CSNI Workshop on Seismic Input Motions Incorporating Recent Geological Studies Tsukuba, Japan, 15 - 19 November 2004

XXIX. **DEFORMATION LIMITS FOR SIMPLE NON DEGRADING SYSTEMS SUBJECTED TO NEAR FAULT GROUND MOTIONS**
AKKAR D. S., YAZGAN U., GÜLKAN H. P.
13th World Conference on Earthquake Engineering, Vancouver, B.C., Canada, 1 - 06 August 2004

XXX. **A SIMPLE PROCEDURE TO COMPUTE THE INTERSTORY DRIFT FOR FRAME TYPE STRUCTURES**
AKKAR D. S., YAZGAN U., GÜLKAN H. P.
13th World Conference on Earthquake Engineering, Vancouver, B.C., Canada, 1 - 06 August 2004

XXXI. **An Approximate Procedure to Compute the Drift Demands on Frame Type Structures**
AKKAR D. S., YAZGAN U., GÜLKAN H. P.
Skopje Earthquake -40 Years Of European Earthquake Engineering (SE 40EEE), 26 - 29 August 2003

XXXII. **Simple survey procedures for seismic risk assessment in urban building stocks**
SUCUOĞLU H., Yazgan U.
Workshop on Seismic Assessment and Rehabilitation of Existing Buildings, İzmir, Turkey, 13 May 2003, vol.29, pp.97-118

Supported Projects

Yazgan U., Project Supported by Public Organizations in Other Countries, Post-Earthquake Safety Assessment of

Structures based on Joint Utilization of Vibration Sensor Data and Visual Inspection Results (Fulbright Project), 2018 - 2019
Yazgan U., Project Supported by Higher Education Institutions, Gözleem Dayalı Deprem Hasar Görebilirlik Modellerinde Yer Hareketi Değişkenliğinin Dikkate Alınması, 2013 - 2018
Yazgan U., Project Supported by Higher Education Institutions, Yapı Stoklarının Deprem Hasar Görebilirliğinin Modellenmesi İçin Yeni Bir Yöntem, 2012 - 2018
Yazgan U., TUBITAK Project, Depremde Hasar Görmüş Az Katlı Betonarme Çerçeve Binaların Artçı Sarsıntı Etkisiyle Göçme Riskinin Derecelendirilmesi, 2014 - 2017
Yazgan U., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Mevcut Binalarda Tam Ölçekli Deneylerle Deprem Performansının Saptanması, 2013 - 2014

Metrics

Publication: 60
Citation (WoS): 397
Citation (Scopus): 481
H-Index (WoS): 9
H-Index (Scopus): 9

Awards

Yazgan U., ETH Zurich Silver Medal, Eth Zurich, March 2010

Non Academic Experience

Company, Swiss Reinsurance Co., Property & Casualty
Swiss Reinsurance Company, Zürih, İsviçre