NURHAN ECEMIS ZEREN
Associate Professor of Civil Engineering

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EDUCATION:

- **State University of New York at Buffalo (UB), USA,** Ph.D. in Civil, Structural and Env. Eng. (Geotechnical Engineering) (01/04 – 06/08)

- **Istanbul Technical University (ITU), Turkey,** MS in Department of Civil Engineering (Geotechnical Engineering) (09/01 – 07/03)

- **Istanbul Kultur University (IKU), Turkey,** BS in Civil Engineering (Geotechnical Engineering) *(first class honors)* (09/97 – 07/01)

EXPERIENCE:

- **Associate Professor:** Department of Civil Engineering, Izmir Institute of Technology, IYTE, Izmir, Turkey (05/2015 – present)
- **Assistant Professor:** Department of Civil Engineering, Izmir Institute of Technology, IYTE, Izmir, Turkey, (02/2009 – 05/2015)
- **Staff Engineer III:** Geotechnical Consultant Company, LANGAN Engineering and Environmental Services, Manhattan, New York, USA (www.langan.com) (01/08 – 11/08)
- **Research and Teaching Assistant:** Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo (UB), Buffalo, New York, USA (01/04 – 01/08)
- **Turkish Graduate Student Association (TGSA) Vice President:** University at Buffalo, USA (2006-2007)
- **Geotechnical Engineer:** ENAR Geotechnical Engineering and Consultant Company, Istanbul, Turkey (www.enargeo.com) (06/02 – 06/03)

RESEARCH AREA OF INTEREST:

Geotechnical Engineering, Geotechnical Earthquake Engineering, In-situ and Laboratory Testing, Liquefaction and post-liquefaction behavior, Soil Dynamics, Geomechanics

SOFTWARE & COMPUTER KNOWLEDGE:

PFC2D, FLAC3D (certificate from ITASCA), PLAXIS (certificate from MIT), ABAQUS, AutoCAD (certificate from Union of Turkish Engineers and Architects), DIANA, TALREN, MATLAB, FORTRAN, MAPLE, GEOOFFICE PROGRAMS (SIGMA/W, SEEP/W,

SLOPE/W), GInt, Adobe Photoshop, Adobe Dream-weaver, Adobe Flash, and Microsoft Office Applications

PUBLICATIONS IN SCIENTIFIC JOURNALS:

1. Yusuf Erzin, **Nurhan Ecemis** (2016) "The use of neural networks for the prediction of cone penetration resistance of silty sands" Neural Computing and Applications, **DOI:** 10.1007/s00521-016-2371-z
2. Latifi, N., Rashid, A.S.A., **Ecemis, N.**, Tahir, M.M., Marto, A. (2016) "Time-dependent physicochemical characteristics of Malaysian residual soil stabilized with magnesium chloride solution" Arabian Journal of Geosciences, Vol.9(1), January 2016, **DOI:** 10.1007/s12517-015-2100-4
3. **Nurhan Ecemis,** Hasan Emre Demirci, Mustafa Karaman (2015) "Influence of consolidation properties on the cyclic re-liquefaction potential of sands" Bulletin of Earthquake Engineering, Vol.13(6), 1655-1673, May 2015, **DOI:** 10.1007/s10518-014-9677-y
4. Yusuf Erzin, **Nurhan Ecemis** (2015) "The use of neural networks for CPT-based liquefaction screening", Bulletin of Engineering Geology and the Environment, Vol.74(1), 103-116, February 2015, **DOI:** 10.1007/s10064-014-0606-8
5. **Nurhan Ecemis**, Mustafa Karaman (2014) "Influence of non/low plastic fines on cone penetration and liquefaction resistance", Engineering Geology**,** Vol.181, 48-57, October 2014, **DOI:** 10.1016/j.enggeo.2014.08.012
6. **Nurhan Ecemis** (2013) "Simulation of seismic liquefaction: 1-g model testing system and shaking table tests", European Journal of Environmental and Civil Eng., Vol.17(10), 899-919, **DOI:**10.1080/19648189.2013.833140
7. Thevanayagam, S., Kanagalingam, T., Reinhorn, A., Tharmendhira, R., Dobry, R., Pitman, M., Abdoun, T., Elgamal, A., Zeghal, M., **Ecemis, N.**, El Shamy, U. (2009) "Laminar box system for 1-g physical modeling of liquefaction and lateral spreading", ASTM Geotechnical Testing Journal, Vol. 32(5), 438-449, **DOI:** 10.1520/GTJ102154
8. Thevanayagam, S., **Ecemis, N.** (2008) "Effects of permeability on liquefaction resistance and cone resistance" Geotechnical Earthquake Engineering and Soil Dynamics IV, ASCE, **DOI:** 10.1061/40975(318)92
9. Georgios Apostolakis, Bing Qu, **Nurhan Ecemis**, Seda Dogruel (2007) "Field Reconnaissance of the 2007 Niigata-Chuetsu Oki Earthquake" Earthquake Engineering and Engineering Vibration, Vol.6(4), 317-330, **DOI:** 10.1007/01803-007-0783-6

PUBLICATIONS IN INTERNATIONAL/NATIONAL PEER-REVIEWED CONFERENCE PROCEEDINGS:

1. Mustafa Karaman, **Nurhan Ecemis** (2017) "Gömülü Borular Etrafında Kullanılan Kum-Lastik Kırpıntı Karışımlarının Sıvılaşma Potansiyeli ve Deformasyonlara Etkileri" *3rd International Soil-Structure Interaction Symposium*, Izmir, Turkey

2. Caglayan Hizal, Hasan Ceylan, Mustafa Karaman, Gursoy Turan, **Nurhan Ecemis** (2017) "Modal Parameter Identification of a Ten Story Soil Structure Interaction Model" *3rd International Soil-Structure Interaction Symposium*, Izmir, Turkey
3. **Nurhan Ecemis**, Mustafa Karaman (2016) "Kumlarda tekrar sıvılaşma direncinin konsolidasyon karakterleri ile ilişkisi' *Zemin Mekaniği ve Geoteknik Mühendisliği 16. Ulusal Kongresi – ZM16*, October 13-14, Ataturk University, Erzurum, Turkey
4. Paulina Bakunowicz, **Nurhan Ecemis** (2014) "Validation of porosity in 2D-DEM CPT model using large scale shaking table tests in saturated sands" *14th International Conference of the International Association for Computer Methods and Advances in Geomechanics*, September 22-25, Kyoto, Japan, ISBN 978-1-138-00148-0
5. Mustafa Karaman, **Nurhan Ecemis** (2014) "Silt oranının ve relatif sıkılığın CPT penetrasyon direncine etkisi" *Zemin Mekaniği ve Temel Mühendisliği Onbeşinci Ulusal Kongresi* –ZM15, October 16-17, Middle East Technical University, Ankara, Turkey
6. **Nurhan Ecemis**, Hasan Emre Demirci, Mustafa Karaman (2014) "Effects of relative density and coefficient of consolidation on re-liquefaction potential of sand" *Second European Conference on Earth Engineering and Seismology*, Istanbul, Turkey
7. **Nurhan Ecemis**, Mustafa Karaman (2013) "Normalleştirilmiş penetrasyon oranının ve siltin koni penetrasyon direncine etkisi" *5. Geoteknik Sempozyumu*, Çukurova University, Adana, Turkey
8. **Nurhan Ecemis,** Irem Kahraman (2012) "Design of Laminar Shear Box for One Dimensional Shaking Table Tests" *10th International Congress on Advances in Civil Engineering*, Middle East Technical University, Ankara, Turkey
9. **Nurhan Ecemis** (2011) "Siltli Arazilerde Konsolidasyon Karakterlerinin CPT Penetrasyon Direncine Etkisi" *4. Geoteknik Sempozyumu*, Adana, Türkiye.
10. **Ecemis, N.** and Ersin, Y. (2010) "Yapay Sinir Ağlarının Koni Penetrasyon Direncini Tahmin Etmede Kullanımı" *Zemin Mekaniği ve Temel Mühendisliği Onüçüncü Ulusal Kongresi - ZM13*, İstanbul, Türkiye.
11. Shannon McKenna, S. Thevanayagam, **Nurhan Ecemis** and Raghudeep Bethapudi (2007) "Preparation and Preliminary Testing of a Small Scale Laminar Box for a Study of Soil Liquefaction" *Proceedings of the 2007 Earthquake Symposium for Young Researchers,* Seattle, Washington.
12. Thevanayagam, S., Dobry, R., Abdoun, T., Elgamal, A., Zeghal, M., **Ecemis, N.**, Reinhorn, A., El Shamy, U. (2007) "Large Scale Laminar Box Experimental Simulation of Liquefaction and Effects on Pile Foundations", *4th Annual NEES Meeting*, Utah.
13. Thevanayagam, S., **Ecemis N.** (2007) "Effects of permeability and compressibility on liquefaction screening using cone penetration resistance", *8th Pacific Conference on Earthquake Engineering*, Singapore.
14. Thevanayagam, S., **Ecemis, N.,** Kanagalingam, T., Martin G. R. (2006) "Effects of Fines on Liquefaction Screening using Penetration Resistance" *8th U.S. National Conference on Earthquake Engineering*, San Francisco, CA.

THESIS AND PROJECT REPOTS:

1. **Nurhan Ecemiş** (2014) "Effects of permeability and compressibility on liquefaction assessment of silty soils using cone penetration resistance" *European Union Marie Curie Fellowship, FP7-PEOPLE-2009-RG*, Proje No: PIRG05-GA-2009-248218.
2. **Nurhan Ecemiş** (2013) "Effects of consolidation characteristics on CPT cone resistance and liquefaction resistance in silty soils" *TÜBİTAK (In Turkish)*, Proje No: 110M602, Ankara.
3. **Nurhan Ecemiş** (2012) "Kumlarda ve Siltli Kumlarda Sıvılaşmanın ve Sıvılaşma Sonrası Direncin Belirlenmesinde Sarsma Tablası Deneyleri" *TÜBİTAK (In Turkish)*, Proje No: 111M435, Ankara.
4. **Nurhan Ecemiş** (2012) "Silt Muhtevasının Koni Penetrasyon Direncine Etkisinin Sayısal Analizi" *BAP (In Turkish),* Proje No: BAPİYTE14 , İzmir Yüksek Teknoloji Enstitüsü, İzmir
5. **Ecemis, N.** (2008) "Effects of Permeability and Compressibility on Liquefaction Screening using Cone Penetration Resistance" Ph.D. Dissertation, Department of Civil Structural and Environmental Engineering, State University of New York at Buffalo, 282p.
6. Thevanayagam, S. and **Ecemis N.** (2007) "NEESR-SG Project – Experimental and Micromechanical Computational Study of Pile Foundations Subjected to Liquefaction Induced Lateral Spreading" *Internal Progress Report*, University at Buffalo, SUNY, NY.
7. Thevanayagam, S., Martin, G. R., Nashed, R., Shenthan, T., Kanagalingam, T. and **Ecemis, N**., (2006) "Liquefaction Remediation in Silty Soils Using Dynamic Compaction and Stone Columns" *Highway Project 094, MCEER Report*.
8. **Ecemis, N.** (2003) "Soil Nailing and Stability of Soil Nailed Slopes" *M.S Thesis*, Department of Civil Engineering, Istanbul Technical University (ITU)
9. **Ecemis, N.** (2001) "Consolidation Behaviour of Clays in the Laboratory" *B.S Thesis*, Department of Civil Engineering, Istanbul Kultur University (IKU)

RESEARCH PROJECTS:

Sponsor	Title	Grant Number	Duration	Award	Role
EUROPEAN UNION (FP7-PEOPLE-2009-Reintegration Grant)	Effects of Permeability and Compressibility on Liquefaction Assessment of Silty Soils Using Cone Penetration Resistance	PIRG05-GA-2009-248218	2009–2013 (Completed)	100,000 €	Principle Investigator
BAP	Silt Muhtevasının Koni Penetrasyon Direncine Etkisinin Sayısal Analizi	2010İYTE14	2010-2012 (Completed)	13,000 €	Principle Investigator
TUBITAK – 3501	Siltli Zeminlerde Konsolidasyon	110M602	2011-2013	175,000 TL	Principle Investigator

	Karakterlerinin CPT Koni Direncine ve Sıvılaşma Direncine Etkisi		(Completed)		
TUBITAK – 1002	Kumlarda ve Siltli Kumlarda Sıvılaşmanın ve Sıvılaşma Sonrası Direncin Belirlenmesinde Sarsma Tablası Deneyleri	111M435	2011-2012 (Completed)	25,000 TL	Principle Investigator
BAP	Silt Muhtevasının Sıvılaşma Direncine Etkisi: Sarsma Tablası Deneyleri	2014İYTE17	2014-2015 (Completed)	5,000 TL	Principle Investigator
TUBITAK – 1002	Gömülü Borular Etrafına yerleştirilen kum-lastik kırpıntı karışımlarının sıvılaşma potansiyelinin sarsma tablası deneyleri ile incelenmesi	215M402	2016-2017 (Completed)	30,000TL	Principle Investigator
BAP	Atık lastik kırpıntılarının zemi nde uygulanabilirliği	2016IYTE14	2016-2017	3,500 TL	Principle Investigator
NEHRP/USGS	Effect of permeability and compressibility on cone penetration resistance and liquefaction screening	---	2006-2008 (Completed)	---	Research Assistant
NSF	Experimental and Micromechanical Computational Study of Pile Foundations Subjected to Liquefaction Induced Lateral Spreading	---	2006-2008 (Completed)	---	Research Assistant
FHWA/MCEER	Liquefaction Remediation in Silty Soils Using Dynamic Compaction and Stone Columns	---	2003-2006 (Completed)	---	Research Assistant

AWARDS AND HONORS:

- TUBITAK (The Scientific and Technological Research Council of Turkey) – Award for Participation in European Union Framework Programme – Marie Curie, 2010
- European Union 7th Framework Programme Marie Curie Fellow (2010-2014)
- Research and Teaching Assistantship, Dept. of Civil, Structural and Env. Eng., State University of New York at Buffalo, Buffalo, NY., USA (January 2004 – 2008).

- MCEER Tri-Center Field Mission Fellowship, Field Mission to Japan (July 21-28, 2007), (http://mceer.buffalo.edu/publications/bulletin/07/21-03/19tricen.asp)
- Istanbul Kultur University (IKU) bursary and first class honors

SUPERVISING, MENTORING AND TEACHING ACTIVITIES:

Courses Taught:

Course Name:	Semester:	Student Level:
Advanced Soil Mechanics I	Fall 2010-2011 Spring 2011-2012 Fall 2012-2013	Graduate
Soil Dynamics	Fall 2010-2011 Fall 2011-2012 Spring 2012-2013	Graduate
Soil Dynamics (Distance learning)	Fall 2014-2015	Graduate
Stability of Soils	Spring 2010-2011 Spring 2012-2013 Fall 2016-2017	Graduate
Geotechnical Earthquake Engineering	ERASMUS – Perugia University, Italy (26/09/2011 - 29/09/2011) ERASMUS – Lunds, Sweden (12/02/2012 - 18/02/2012) Spring 2015-2016 Fall 2017-2018	Graduate
Research Seminar	Fall 2016-2017	Graduate
Soil Mechanics I	Fall 2014-2015 Fall 2015-2016 Fall 2016-2017 Fall 2017-2018	Undergraduate
Foundation Engineering I	Spring 2014-2015 Spring 2015-2016	Undergraduate
Foundation Engineering II	Fall 2016-2017 Fall 2017-2018	Undergraduate

Advised Thesis:

Student's Name	Thesis	Thesis title	Graduation year
İrem Kahraman	MS	Seismic Liquefaction: 1-G Model Testing System and Shake Table Tests	June 2013 *(Completed)*
Mustafa Karaman	MS	Effects of consolidation characteristics on CPT cone resistance and liquefaction resistance in silty soils	December 2013 *(Completed)*

Paulina Bakunowicz	MS	Discrete element simulations of cone penetration in sands and silty sands	June 2014 *(Completed)*
Nuri Nayman	MS	Seismic performance of embankment dams using FLAC2D	June 2018
Mustafa Karaman	PhD	Effects of silt content on liquefaction resistance: Shake table tests	December 2018
Isil Erdem	PhD	Investigation of clayey soils stabilized with Magnesium Chloride Solution (MgCl2) under airport pavements using R-Value tests and its modelling	December 2018
Cagdas Gurbuz	MS	--	June 2018

PROFESSIONAL SOCIETY MEMBERSHIPS:

- Earthquake Engineering Association of Turkey (TDMD) (2010-present)
- Soil Mechanics and Foundation Engineering Turkish Natural Committee (ZMTM) (2003 – present)
- Multidisciplinary Center for Earthquake Engineering Research (MCEER) SLC Member (2004-2008)
- International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) (2009 – present)
- Chamber of Civil Engineers, Turkey (IMO) (2001 – present)
- AGU Member (2009 – present)
- Marie Curie Fellows Association (MCFA) (2010-present)