

**Prof. Dr. NURHAN ECEMIS**

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Phone: +90 232 750 6812  
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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)

**PROFESSIONAL EXPERIENCE:**

- **Professor:** Department of Civil Engineering, Izmir Institute of Technology, IYTE, Izmir, Turkey (12/2021)
- **Associate Professor:** Department of Civil Engineering, Izmir Institute of Technology, IYTE, Izmir, Turkey (05/2015 – 12/2021)
- **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 PEER-REVIEWED SCIENTIFIC JOURNALS:**

Publications <b>13</b> Total From 1970 to 2022	Citing Articles <b>98</b> Analyze Total <b>90</b> Analyze Without self-citations	Times Cited <b>110</b> Total <b>95</b> Without self-citations	<b>8.46</b> Average per item	<b>7</b> H-Index
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1. **Nurhan Ecemis**, Hadi Valizadeh, Mustafa Karaman (2021) “Sand-granulated rubber mixture to prevent liquefaction-induced uplift of buried pipes: a shaking table study” Bulletin of Earthquake Engineering, Vol.19 (7), 2817–2838 (2021). DOI: [10.1007/s10518-021-01091-3](https://doi.org/10.1007/s10518-021-01091-3)
2. **Nurhan Ecemis** (2021) “Experimental and numerical modeling on the liquefaction potential and ground settlement of silt-interlayered stratified sands” Soil Dynamics and Earthquake Engineering, Vol.(144), Mayıs 2021, DOI: [10.1016/j.soildyn.2021.106691](https://doi.org/10.1016/j.soildyn.2021.106691)
3. **Nurhan Ecemis** (2020) “Effect of soil type and fines content on liquefaction resistance-shear wave velocity correlation” Journal of Earthquake Engineering, 24(8), 1311-1335, July 2020, DOI: [10.1080/13632469.2018.1475312](https://doi.org/10.1080/13632469.2018.1475312)
4. **Nurhan Ecemis**, Paulina Bakunowicz (2018) “Feasible packing of granular materials in discrete element modelling of cone-penetration testing” Geomechanics and Geoengineering, DOI: [10.1080/17486025.2018.1435912](https://doi.org/10.1080/17486025.2018.1435912)
5. Yusuf Erzin, **Nurhan Ecemis** (2017) “The use of neural networks for the prediction of cone penetration resistance of silty sands” Neural Computing and Applications, Vol.28(1), 727-736, December 2017, DOI: [10.1007/s00521-016-2371-z](https://doi.org/10.1007/s00521-016-2371-z)
6. 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](https://doi.org/10.1007/s12517-015-2100-4)
7. **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](https://doi.org/10.1007/s10518-014-9677-y)
8. 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](https://doi.org/10.1007/s10064-014-0606-8)
9. **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](https://doi.org/10.1016/j.enggeo.2014.08.012)
10. **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](https://doi.org/10.1080/19648189.2013.833140)
11. 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](https://doi.org/10.1520/GTJ102154)

12. 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](https://doi.org/10.1061/40975(318)92)
13. 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](https://doi.org/10.1007/01803-007-0783-6)

#### **PUBLICATIONS IN INTERNATIONAL/NATIONAL PEER-REVIEWED CONFERENCE PROCEEDINGS:**

1. Hakan ELMAS, **Nurhan Ecemis**, Özgür AKARSU (2019) “Investigation of Jet Grout Effect on Lateral Displacements: A case study at Ormara Harbour Dry-Dock Project” *8. Uluslararası Geoteknik Sempozyumu*, 13 - 15 Kasım 2019, İTÜ Süleyman Demirel Kültür Merkezi, İstanbul
2. Karaman Mustafa, **Ecemis Nurhan**, Baba Alper, Ozdemir Berkay (2018). “Kum –Hurda Lastik Kırpıntı Karışımı Dolgu Malzemelerinin Yerlatisuyuna Etkisi” *Zemin Mekaniği ve Geoteknik Mühendisliği 17. Ulusal Konferansı* (Tam Metin Bildiri/Sözlü Sunum)(Yayın No:4650716)
3. Mustafa Karaman, **Nurhan Ecemis** (2017) “Kum - lastik kırpıntı çapının ve karışım oranının sıvılaşma potansiyeline etkisinin sarsma tablası deneyleri ile incelenmesi” *7. Geoteknik Sempozyumu*, 22-24 Kasım 2017, İstanbul
4. Mustafa Karaman, **Nurhan Ecemis** (2017) “Gömülü Borular Etrafında Kullanılan Kum-Lastik Kırpıntı Karışımlarının Sıvılaşma Potansiyeli ve Deformasyonlara Etkileri” *3rd International Soil-Structure Interaction Symposium*, October 18-20, 37-46, Izmir, Turkey
5. 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*, October 18-20, 37-46, Izmir, Turkey
6. **Nurhan Ecemis**, Mustafa Karaman (2016) “Kuumlarda tekrar sıvılaşma direncinin konsolidasyon karakterleri ile ilişkisi” *Zemin Mekaniği ve Geoteknik Mühendisliği 16. Ulusal Kongresi – ZM16*, October 13-14, Ataturk University, Erzurum, Turkey
7. Paulina Bakunowicz, **Nurhan Ecemis** (2014) “Validation of porosity in 2D-DEM CPT model using large scale shaking table tests in saturated sands” *14<sup>th</sup> International Conference of the International Association for Computer Methods and Advances in Geomechanics*, September 22-25, Kyoto, Japan, ISBN 978-1-138-00148-0
8. Mustafa Karaman, **Nurhan Ecemis** (2014) “Silt oranının ve relatif sıklığın CPT penetrasyon direncine etkisi” *Zemin Mekaniği ve Temel Mühendisliği Onbeşinci Ulusal Kongresi –ZM15*, October 16-17, Middle East Technical University, Ankara, Turkey
9. **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
10. **Nurhan Ecemis**, Mustafa Karaman (2013) “Normalleştirilmiş penetrasyon oranının ve siltin koni penetrasyon direncine etkisi” *5. Geoteknik Sempozyumu*, Çukurova University, Adana, Turkey

11. **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
12. **Nurhan Ecemis** (2011) “Siltli Arazilerde Konsolidasyon Karakterlerinin CPT Penetrasyon Direncine Etkisi” *4. Geoteknik Sempozyumu*, Adana, Türkiye.
13. **Ecemis, N.** and Ersin, Y. (2010) “Yapay Sınır Ağlarının Koni Penetrasyon Direncini Tahmin Etmede Kullanımı” *Zemin Mekaniği ve Temel Mühendisliği Onüçüncü Ulusal Kongresi - ZM13*, İstanbul, Türkiye.
14. 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.
15. 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”, *4<sup>th</sup> Annual NEES Meeting*, Utah.
16. Thevanayagam, S., **Ecemis N.** (2007) "Effects of permeability and compressibility on liquefaction screening using cone penetration resistance", *8<sup>th</sup> Pacific Conference on Earthquake Engineering*, Singapore.
17. Thevanayagam, S., **Ecemis, N.**, Kanagalingam, T., Martin G. R. (2006) “Effects of Fines on Liquefaction Screening using Penetration Resistance” *8<sup>th</sup> U.S. National Conference on Earthquake Engineering*, San Francisco, CA.

#### THESIS AND PROJECT REPOTS:

1. **Nurhan Ecemis** (2021) “Gömülü Borular Etrafına Yerleştirilen Kum-Lastik Kırpinti Karışımlarında Boru Hareketinin İncelenmesi: Nümerik Modelleme Ve Geliştirme” *TÜBİTAK Raporu, 1002-Hızlı destek projesi*, Proje No:119M885, Ankara, Türkiye.
2. Seismological and Engineering Effects of the M 7.0 Samos Island (Aegean Sea) Earthquake, (December, 2020), DOI: 10.18118/G6H088, Report number: GEER-069
3. **Nurhan Ecemis** (2020) “Siltli kum zeminlerde konsolidasyon karakterlerinin CPT direncine etkisi” *BAP Raporu, İYTE Bilimsel Araştırma Projesi, Proje No: BAP2019IYTE0290*, İzmir Yüksek Teknoloji Enstitüsü, Ocak 2020, İzmir, Türkiye.
4. **Nurhan Ecemis** (2018) “Atık lastik kırpıntılarının zeminde uygulanabilirliği” *BAP Raporu, İYTE Bilimsel Araştırma Projesi, Proje No:BAP2016IYTE14*, İzmir Yüksek Teknoloji Enstitüsü, Temmuz 2018, İzmir, Türkiye.
5. **Nurhan Ecemis** (2017) “Gömülü Borular Etrafına yerleştirilen kum-lastik kırpinti karışımlarının sıvılaşma potansiyelinin sarsma tablası deneyleri ile incelenmesi” *TÜBİTAK (In Turkish)*, Proje No: 215M402, Ankara.
6. **G5. Nurhan Ecemis** (2015) “Silt Muhtevasının Sıvılaşma Direncine Etkisi: Sarsma Tablası Deneyleri” *BAP Raporu, İYTE Bilimsel Araştırma Projesi, Proje No:BAP2014IYTE17*, İzmir Yüksek Teknoloji Enstitüsü, Mart 2015, İzmir, Türkiye.

7. **Nurhan Ecemis** (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.
8. **Nurhan Ecemis** (2013) “Effects of consolidation characteristics on CPT cone resistance and liquefaction resistance in silty soils” *TÜBİTAK (In Turkish)*, Proje No: 110M602, Ankara.
9. **Nurhan Ecemis** (2012) “Kumlarda ve Siltli Kumlarda Sıvılaşmanın ve Sıvılaşma Sonrası Direncin Belirlenmesinde Sarsma Tablası Deneyleri” *TÜBİTAK (In Turkish)*, Proje No: 111M435, Ankara.
10. **Nurhan Ecemis** (2012) “Silt Muhtevasının Koni Penetrasyon Direncine Etkisinin Sayısal Analizi” *BAP (In Turkish)*, Proje No: BAPİYTE14 , İzmir Yüksek Teknoloji Enstitüsü, İzmir
11. **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.
12. 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.
13. 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*.
14. **Ecemis, N.** (2003) “Soil Nailing and Stability of Soil Nailed Slopes” *M.S Thesis*, Department of Civil Engineering, Istanbul Technical University (ITU)
15. **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	Duration	Role
EUROPEAN UNION (2020-1-TR01- KA203-093522)	Integration of Sustainable Design and Circular Economy Concepts in Civil Engineering Curricula (SUSTAIN – CE)	2020–2023	Researcher
TUBİTAK - 221M071 (1002-Hızlı destek projesi)	Dolgu Barajdaki Filtre Kumunun Performansinin Statik Ve Dinamik Durumlarda Araştırılması	2021-2022	Principle Investigator
TUBİTAK (1002-Hızlı destek projesi)	Gömülü Borular Etrafına Yerleştirilen Kum-Lastik Kirpinti Karışımlarında Boru Hareketinin İncelenmesi: Nümerik Modelleme Ve Geliştirme	2019-2021 (Completed)	Principle Investigator
BAP (2019İYTE0290)	Siltli kum zeminlerde konsolidasyon karakterlerinin CPT direncine etkisi	2019-2020 (Completed)	Principle Investigator

BAP (2016İYTE14)	Atık lastik kırıntılarının zeminde uygulanabilirliği	2016-2017 (Completed)	Principle Investigator
TUBİTAK (1002-Hızlı destek projesi)	Shake table tests on investigation of liquefaction potential of sand-tire chips mixture that used around the buried pipes	2016-2017 (Completed)	Principle Investigator
BAP (2014İYTE17)	Silt Muhtevasının Sıvılaşma Direncine Etkisi: Sarsma Tablası Deneyleri	2014-2015 (Completed)	Principle Investigator
TÜBİTAK (3501-Kariyer Projesi)	Siltli Zeminlerde Konsolidasyon Karakterlerinin CPT Koni Direncine ve Sıvılaşma Direncine Etkisi	2011-2013 (Completed)	Principle Investigator
TÜBİTAK (1002-Hızlı destek projesi)	Kumlarda ve Siltli Kumlarda Sıvılaşmanın ve Sıvılaşma Sonrası Direncin Belirlenmesinde Sarsma Tablası Deneyleri	2011-2012 (Completed)	Principle Investigator
EUROPEAN UNION (FP7-PEOPLE-2009-Reintegration Grant)	Effects of Permeability and Compressibility on Liquefaction Assessment of Silty Soils using Cone Penetration Resistance	2010 –2014 (Completed)	Principle Investigator
BAP (2010İYTE14)	Silt Muhtevasının Koni Penetrasyon Direncine Etkisinin Sayısal Analizi	2010-2012 (Completed)	Principle Investigator
NEHRP/USGS	Effect of permeability and compressibility on cone penetration resistance and liquefaction screening	2006-2008 (Completed)	Researcher
NSF	Experimental and Micromechanical Computational Study of Pile Foundations Subjected to Liquefaction Induced Lateral Spreading	2006-2008 (Completed)	Researcher
FHWA/MCEER	Liquefaction Remediation in Silty Soils Using Dynamic Compaction and Stone Columns	2003-2006 (Completed)	Researcher

### EDITORIAL ACTIVITIES:

- Arabian Journal of Geosciences (Editor at Geological Engineering and Geotechnical Engineering Topic) - <https://www.springer.com/journal/12517/editors>

### AWARDS AND HONORS:

- TUBİTAK (The Scientific and Technological Research Council of Turkey) – Award for Participation in European Union Framework Programme – Marie Curie, 2010
- European Union 7<sup>th</sup> 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:****Advised Thesis:**

	<b>Student's Name</b>	<b>Thesis</b>	<b>Thesis title</b>	<b>Graduation year</b>
1	İrem Kahraman	MSc	Seismic Liquefaction: 1-G Model Testing System and Shake Table Tests	June 2013
2	Mustafa Karaman	MSc	Effects of consolidation characteristics on CPT cone resistance and liquefaction resistance in silty soils	December 2013
3	Paulina Bakunowicz	MSc	Discrete element simulations of cone penetration in sands and silty sands	June 2014
4	Hakan Elmas	MSc	A Case Study on Settlement Analysis of Geothermal Power Plant Foundation	December 2018
5	Cagdas Gurbuz	MSc	Numerical Modeling of Jet Grouting Cells to Reduce Liquefaction	June 2019
6	Volkan Gokce Eren	MSc	A Case Study: Site-Specific Seismic Response Analysis for Base-Isolated Building In Duzce	December 2020
7	Mustafa Sezer Arık	MSc	Effect of Fines Content on CPT Resistance in Silty Sands	June 2021
8	Hazal Taneri	MSc	Field Investigation – Effect of Coefficient of Consolidation and Relative Density on Cone Penetration Resistance	December 2021
9	Hadi Valizadeh	MSc	Investigation on Liquefaction Potential of Sand-Granulated Rubber Mixture That Used Around the Buried Pipes: Numerical Modeling and Developing	December 2021

**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)