

## **Assoc. Prof. NABI KARTAL TOKER**

### **Personal Information**

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### **Education Information**

Doctorate, Massachusetts Institute of Technology, Civil and Environmental Engineering, United States Of America 2002 - 2007

Postgraduate, Massachusetts Institute of Technology, Civil and Environmental Engineering, United States Of America 1999 - 2002

Undergraduate, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, Turkey 1995 - 1999

### **Foreign Languages**

English, C2 Mastery

### **Dissertations**

Doctorate, Modeling the Relation between Suction, Effective Stress and Shear Strength in Partially Saturated Granular Media, Massachusetts Institute Of Technology, İnşaat Ve Çevre Mühendisliği Bölümü, 2007

Postgraduate, Improvements and Reliability of MIT Tensiometers and Studies on Soil Moisture Characteristic Curves, Massachusetts Institute Of Technology, İnşaat Ve Çevre Mühendisliği Bölümü, 2002

### **Research Areas**

Civil Engineering, Geotechnical, Foundation Engineering, Soil Mechanics, Deep Excavation, Engineering and Technology

### **Academic Titles / Tasks**

Assistant Professor, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, 2018 - Continues

Assistant Professor, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, 2014 - 2018

Lecturer PhD, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, 2008 - 2014

Research Assistant, Massachusetts Institute of Technology, Mühendislik, İnşaat Ve Çevre Mühendisliği, 2004 - 2006

Lecturer, Massachusetts Institute of Technology, Mühendislik, İnşaat Ve Çevre Mühendisliği, 2000 - 2003

### **Academic and Administrative Experience**

Deputy Head of Department, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering,

## Advising Theses

- HUVAJ SARIHAN N., TOKER N. K. , Numerical simulation of infiltration and evaporation for unsaturated infinite soil slopes, Postgraduate, M.BİRHAN(Student), 2017
- TOKER N. K. , Hydro-mechanical behavior of unsaturated specimens isotropically reconstituted from slurry and compacted specimens, Doctorate, R.AHMADİ(Student), 2016
- TOKER N. K. , Development of computer-controlled triaxial test setup and study on multistage triaxial test on sand, Postgraduate, M.ALYOUSIF(Student), 2015
- TOKER N. K. , Obtaining soil-water characteristic curves by numerical modeling of drainage in particulate media /, Postgraduate, A.SHOARIAN(Student), 2014
- HUVAJ SARIHAN N., TOKER N. K. , Shallow landslides triggered by rainfall in nsaturated soils, Doctorate, M.Ahmadi(Student), 2014
- TOKER N. K. , A preliminary study on construction of a high capacity tensiometer and its use in measurement of matric suction in unsaturated soils, Postgraduate, A.OKAN(Student), 2013
- TOKER N. K. , A Preliminary study on construction of a high capacity tensiometer and its use in measurement of matrik suction in unsaturated soils, Postgraduate, A.Okan(Student), 2013
- TOKER N. K. , Three dimensional finite element analysis of a novel bracing system in small deep excavations, Postgraduate, P.ÖZLÜ(Student), 2012
- TOKER N. K. , Cataloging and statistical evaluation of common mistakes in geotechnical investigation reports for buildings on shallow foundations, Postgraduate, G.ÖZYURT(Student), 2012
- TOKER N. K. , Comparison of factor of safety obtained from limit equilibrium methods with strength reduction factors in finite element modeling, Postgraduate, V.ENGİN(Student), 2012

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

- I. **Simulation of hysteresis in soil-water retention with a correlation between the invading pressure to the governing effective flow area**  
Sattari A. S. , Siebelist M., TOKER N. K. , Wuttke F.  
GRANULAR MATTER, vol.22, no.2, 2020 (Journal Indexed in SCI)
- II. **Exponential Equation for Predicting Shear Strength Envelope of Unsaturated Soils**  
Ahmadi Naghadeh R., TOKER N. K.  
International Journal of Geomechanics, vol.19, no.7, 2019 (Journal Indexed in SCI)
- III. **A New Isotropic Specimen Preparation Method from Slurry for both Saturated and Unsaturated Triaxial Testing of a Low-Plasticity Silt**  
Ahmadi-Naghadeh R., TOKER N. K.  
GEOTECHNICAL TESTING JOURNAL, vol.42, no.4, pp.854-879, 2019 (Journal Indexed in SCI)
- IV. **Effect of Unsaturated Soil Properties on the Intensity-Duration Threshold for Rainfall Triggered Landslides**  
Kenanoğlu M. B. , Ahmadi-Adli M., Toker N. K. , Huvaj N.  
TEKNIK DERGI, vol.30, pp.9009-9027, 2019 (Journal Indexed in SCI)
- V. **Rainfall-triggered landslides in an unsaturated soil: a laboratory flume study**  
Ahmadi-Adli M., Huvaj Sarihan N., Toker N. K.  
ENVIRONMENTAL EARTH SCIENCES, vol.76, 2017 (Journal Indexed in SCI)
- VI. **Volume Change Measurement in Triaxial Tests by Monitoring Cell Fluid Volume Based on Viscoelastic Behavior of the Test Setup**  
Ahmadi-Naghadeh R., TOKER N. K.  
GEOTECHNICAL TESTING JOURNAL, vol.40, no.4, pp.683-697, 2017 (Journal Indexed in SCI)

- VII. **Obtaining soil-water characteristic curves by numerical modeling of drainage in particulate media**  
Sattari A. S. , TOKER N. K.  
COMPUTERS AND GEOTECHNICS, vol.74, pp.196-210, 2016 (Journal Indexed in SCI)
- VIII. **Effective Stress and Shear Strength of Moist Uniform Spheres**  
TOKER N. K. , Germaine J. T. , Culligan P. J.  
VADOSE ZONE JOURNAL, vol.13, no.5, 2014 (Journal Indexed in SCI)
- IX. **A new technique for rapid measurement of continuous soil moisture characteristic curves**  
Toker N. K. , Germaine J., Sjoblom K., Culligan P.  
Geotechnique, vol.54, no.3, pp.179-186, 2004 (Journal Indexed in SCI)
- X. **Comment on "Cavitation during desaturation of porous media under tension" by Dani Or and Markus Tuller**  
Toker N. K. , Germaine J., Culligan P.  
WATER RESOURCES RESEARCH, vol.39, 2003 (Journal Indexed in SCI)

### Articles Published in Other Journals

- I. **A Formulation for Scanning Soil-water Characteristic Curves**  
Kenanoğlu M. B. , Toker N. K.  
JOURNAL OF POLYTECHNIC-POLITEKNİK DERGİSİ, vol.21, pp.901-906, 2018 (National Refreed University Journal)
- II. **Water content controlled instead of suction controlled tests**  
Ahmadinaghadeh R., Toker N. K. , Ahmadiadli M.  
Life Science Journal-Acta Zhengzhou University Overseas Edition, vol.10, pp.2023-2030, 2013 (International Refreed University Journal)
- III. **Geoteknik etüt raporlarındaki yaygın hataların belirlenmesi ve istatistiksel değerlendirilmesi**  
Toker N. K. , Özyurt G.  
Türkiye Mühendislik Haberleri, no.476, pp.28-35, 2013 (National Non-Refreed Journal)

### Refereed Congress / Symposium Publications in Proceedings

- I. **Characterization of transverse anisotropy in Poisson's ratio using three-point radial deformation measurements**  
TOKER N. K. , Büyükyılmaz K. S.  
7th International Symposium on Deformation Characteristics of Geomaterials, Glasgow, United Kingdom, 26 - 28 June 2019
- II. **Characterization of transverse anisotropy in Poisson's ratio using radial deformation measurements**  
Toker N. K. , Büyükyılmaz K. S.  
7th International Symposium on Deformation Characteristics of Geomaterials, Glasgow, United Kingdom, 26 - 29 June 2019, pp.1-6
- III. **Kum numuneler için çok aşamalı üç eksenli deney yöntemleri**  
ALYOUSİF M., TOKER N. K.  
Zemin Mekaniği ve Temel Mühendisliği 17. Ulusal Kongresi, İstanbul, Turkey, 26 - 28 September 2018, vol.2, pp.451-462
- IV. **Changing and equilibrating water content of test specimens without suction control**  
KENANOĞLU M. B. , TOKER N. K.  
7th International Conference on Unsaturated Soils, Hong Kong, Hong Kong, 3 - 05 August 2018, vol.2, pp.419-424
- V. **Empirical Prediction Models for the Seismic Response of Pile Foundations**  
UNUTMAZ B., GÜLERCE Z., SANDIKKAYA M. A. , TOKER N. K.  
16th European Conference on Earthquake Engineering (16ECEE), 18 - 21 June 2018
- VI. **Rainfall threshold to trigger landslides in unsaturated soils: A laboratory model study**

Ahmadi-Adli M., Huvaj Sarihan N., Toker N. K.

19th International Conference on Soil Mechanics and Geotechnical Engineering (19th ICSMGE), Seoul, South Korea, 17 - 22 September 2017, pp.3485-3488

- VII. **Elastic-plastic behavior of an unsaturated compacted non-plastic silt**  
AHMADI NAGHADEH R., TOKER N. K.  
9th International Conference on Porous Media, Rotterdam, Netherlands, 8 - 11 May 2017
- VIII. **Numerical simulation of rainfall-induced landslides considering hysteresis and scanning soil-water characteristic curves**  
KENANOĞLU M. B. , TOKER N. K.  
9th International Conference on Porous Media, 8 - 11 May 2017
- IX. **Suya doygun olmayan yamaçlarda yağmurla oluşan heyelanlar ve erken uyarı**  
Huvaj Sarihan N., Ahmadiadli M., Toker N. K.  
Ulusal Heyelan Sempozyumu, Ankara, Turkey, 27 - 29 April 2016
- X. **Yağmurla Tetiklenen Heyelanların Önceden Tahmini: Bir Laboratuvar Model Çalışması**  
Ahmadi-Adli M., Huvaj Sarihan N., Toker N. K.  
6. Geoteknik Sempoyumu, Adana, Turkey, 26 - 27 November 2015, vol.1, pp.1-10
- XI. **Sensitivity of rainfall threshold to unsaturated material properties**  
Huvaj Sarihan N., Kenanoğlu M. B. , Ahmadiadli M., Toker N. K.  
4th Italian Workshop on Landslides, Naples, Italy, 23 - 25 November 2015
- XII. **An analytical approach to link effective stress shear strength and moisture at the micro scale**  
TOKER N. K. , GERMAİNE J. T. , CULLİGAN P. J.  
SIAM Conference on Mathematical and Computational Issues in the Geosciences, San-Francisco, United States Of America, 29 June - 02 July 2015, pp.127-128
- XIII. **Effects of the size of particles on rainfall-induced slope instability in granular soils**  
Ahmad-Adli M., Huvaj N., Kartal Toker N. K.  
2014 Congress on Geo-Characterization and Modeling for Sustainability, Geo-Congress 2014, Atlanta, GA, United States Of America, 23 - 26 February 2014, pp.4027-4036
- XIV. **Effects of the size of particles on rainfall induced slope instability in granular soils**  
Ahmadi-Adli M., Huvaj Sarihan N., Toker N. K.  
ASCE Geo-Congress 2014, Geotechnical Special Publication 234: Geo-Characterization And Modeling For Sustainability, Georgia, United States Of America, 23 - 26 February 2014, vol.1, pp.4027-4036
- XV. **Prediction of seepage and slope stability in a flume test and an experimental field case**  
Ahmadi-Adli M., Toker N. K. , Huvaj N.  
3rd Italian Workshop on Landslides (IWL) - Hydrological Response of Slopes through Physical Experiments, Field Monitoring and Mathematical Modeling, Naples, Italy, 23 - 24 October 2013, vol.9, pp.189-194
- XVI. **Numerical comparison of retaining system behavior for a deep excavation case with and without ground improvement**  
MAGHSOUDLOO A., AHMADİNAGHADEH R., TOKER N. K.  
International Conference on Ground Improvement and Ground Control, Wollongong, Australia, 30 October - 02 November 2012
- XVII. **Rainfall triggered landslides in unsaturated soils A numerical sensitivity analysis**  
Ahmadiadli M., Huvaj Sarihan N., Toker N. K.  
10th International Congress on Advances in Civil Engineering, Ankara, Turkey, 17 - 19 October 2012
- XVIII. **Water content variability of unsaturated soil specimens in conventional strength tests**  
AHMADİNAGHADEH R., TOKER N. K. , AHMADİADLİ M.  
10th International Congress on Advances in Civil Engineering, Ankara, Turkey, 17 - 19 October 2012
- XIX. **Geoteknik etüt raporlarındaki yaygın hataların belirlenmesi ve istatistiksel değerlendirilmesi**  
Özyurt G., TOKER N. K.  
Zemin Mekaniği ve Temel Mühendisliği Ondördüncü Ulusal Kongresi, Isparta, Turkey, 4 - 05 October 2012, vol.2, pp.517-526
- XX. **Comparison of formulae for shear strength of unsaturated soils**

ZEHTAB K. H. , TOKER N. K. , AHMADIADLI M.

3rd International Conference on New Developments in Soil Mechanics and Geotechnical Engineering, Lefkoşa, Cyprus (Kkct), 28 - 30 June 2012

**XXI. Volume change measurement in triaxial testing of unsaturated soils**

AHMADINAGHADEH R., TOKER N. K.

3rd International Conference on New Developments in Soil Mechanics and Geotechnical Engineering, Lefkoşa, Cyprus (Kkct), 28 - 30 June 2012

**XXII. Comparison of safety factors obtained from limit equilibrium methods and finite element analyses**

ENGİN V., TOKER N. K.

3rd International Conference on New Developments in Soil Mechanics and Geotechnical Engineering, Lefkoşa, Cyprus (Kkct), 28 - 30 June 2012

**XXIII. Comparative study of soil water characteristic curve prediction methods**

Ahmadiadli M., Huvaj Sarıhan N., Toker N. K. , Kürkçü M. G.

3rd International Conference on New Developments in Soil Mechanics and Geotechnical Engineering, Lefkoşa, Cyprus (Kkct), 28 - 30 June 2012

**XXIV. Rainfall triggered landslides in unsaturated soils a numerical sensitivity analysis for rainfall threshold**

Ahmadiadli M., Huvaj Sarıhan N., Toker N. K.

General Assembly 2012 of the European Geosciences Union, Vienna, Austria, 22 - 27 April 2012

**XXV. Metro tünellerinin yanında ankrajlı derin kazı iksası tasarımı**

TOKER N. K. , ÖZLÜ P., MAGHSOUDLOO A., AHMADI NAGHADEH R.

Prof.İsmet Ordemir'i Anma Toplantısı ve 6. ODTÜ Geoteknik Mühendisliği Sempozyumu, Ankara, Turkey, 23 November 2011, pp.1-20

## Other Publications

**I. Comment on "Cavitation during desaturation of porous media under tension" by Dani Or and Markus Tuller**

Toker N. K. , Germaine J. T. , Culligan P. J.

Other, pp.1305-1307, 2003

## Supported Projects

TOKER N. K. , TUBITAK Project, Doygun Olmayan Zeminlerin Statik Davranışlarının Bünyesel Modellenmesi ve Mühendislik Uygulamalarında Kullanımı, 2017 - Continues

TOKER N. K. , Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2016

TOKER N. K. , Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2014

TOKER N. K. , Project Supported by Other Private Institutions, Bilgisayar Kontrollü Otomatik Üç Eksenli Deney Düzeneği Geliştirme, 2013 - 2014

TOKER N. K. , AHMAD NAGHADEH R., Project Supported by Higher Education Institutions, DOYGUN OLMAYAN ZEMİNLERDE ÜÇ EKSENLI DENEYLERLE BÜNYE MODELLEMESİ, 2013 - 2013

## Memberships / Tasks in Scientific Organizations

ISSMGE Technical Committee 106 - Unsaturated Soils, Member of Science Committee, 2018 - Continues, United Kingdom

ISSMGE Technical Committee 101 - Laboratory Testing, Member of Science Committee, 2018 - Continues, United

Kingdom

## **Scientific Refereeing**

INTERNATIONAL JOURNAL OF GEOMECHANICS, Journal Indexed in SCI-E, October 2019

PHYSICS AND CHEMISTRY OF THE EARTH, Journal Indexed in SCI-E, August 2019

INTERNATIONAL JOURNAL OF GEOMECHANICS, Journal Indexed in SCI-E, June 2019

TEKNIK DERGI, National Scientific Refreed Journal, November 2018

JOURNAL OF POROUS MEDIA, Journal Indexed in SCI-E, May 2018

7th International Conference on Unsaturated Soils, Conference Paper (Full Text), January 2018

## **Scientific Consultations**

ALFA Test Ekipmanları Ltd.Şti., Scientific Consultancy, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, Turkey, 2019 - Continues

Toker Drilling and Construction, Scientific Consultancy, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, Turkey, 2017 - 2019

TOKER Drilling & Construction, Scientific Consultancy, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, Turkey, 2018 - 2018

Gümrük ve Turizm İşletmeleri Tic.A.Ş., Scientific Consultancy, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, Turkey, 2018 - 2018

ALFA Testing Equipment, Scientific Consultancy, Middle East Technical University, Faculty Of Engineering, Department Of Civil Engineering, Turkey, 2018 - 2018

## **Citations**

Total Citations (WOS):84

h-index (WOS):5