

Asst. Prof. Arcan Yanik

Personal Information

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Biography

Arcan Yanik has been working as an Asst. Prof.Dr. at the Istanbul Technical University, Department of Civil Engineering, Division of Mechanics since April 2018. He has also been teaching numerical analysis course as a part-time lecturer at Yeditepe University since the beginning of 2018. He had worked as a post-doctoral researcher at the Oregon State University School of Civil and Construction Engineering between the years of 2015-2017. During his post-doctoral research he has been involved in a project on determining live load factors for Oregon Bridges funded by the Oregon Department of Transportation. He also has fundamental engineering license from the State of California.

During his doctoral studies he spent one year as a visiting doctoral researcher at Florida Institute of Technology (FIT). He studied Magneto-rheological dampers for seismic hazard mitigation at FIT. His doctoral research focused on structural control, specifically active, passive and semi-active control of structures under earthquake excitations. The majority of his publications are about energy distributions in structures, structural control, structural dynamics, earthquake behavior of controlled structures, magneto-rheological dampers, and high-strength steels in reinforced concrete members.

Arcan Yanik graduated from Civil Engineering Department of Yıldız Technical University in 2006. He obtained a Master of Science degree from İstanbul Technical University in 2008. He received his PhD (2014) in the field of Structural Engineering from Istanbul Technical University where he was awarded by the "Best PhD thesis award". He worked at the Istanbul Technical University, Department of Civil Engineering, Division of Mechanics as a research and teaching assistant between December 2008 and September 2014. He co-authored two university textbooks on Numerical Analysis and Engineering Mechanics: Dynamics.

Education Information

Post Doctorate, Oregon State University, Muhendislik Fakultesi, Insaat Muhendisligi, United States Of America 2015 - 2017

Doctorate, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Insaat Muhendisligi, Turkey 2008 - 2014

Post Graduate, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Insaat Muhendisligi, Turkey 2006 - 2008

Under Graduate, Yıldız Teknik Üniversitesi, Insaat Fakultesi, Insaat Muhendisligi, Turkey 2002 - 2006

Foreign Languages

English, C1 Advanced

Certificates, Courses and Trainings

Other, Californiya Muhendislik Sertifikasi, Board for Professional Engineers Land Surveyors and Geologists, 2016

Dissertations

Doctorate, YAPISAL KONTROL ALTINDA YAPIYA GİREN ENERJİNİN İNCELENMESİ , İstanbul Teknik Üniversitesi, İnşaat Fakültesi, İnşaat Muhendisligi, 2014

Post Graduate, YÜKSEK DAYANIM VE SEKILDEGİTİRME ÖZELLİKLİ ÇELİKLERİN BETONARME KESİTTE DONATI OLARAK KULLANIMI, İstanbul Teknik Üniversitesi, İnşaat Fakültesi, İnşaat Muhendisligi, 2008

Research Areas

Information Systems, Communication and Control Engineering, Control and System Engineering, Optimal Control, Civil Engineering, Mechanical, Building Dynamics, Structure, Structural Engineering, Earthquake Engineering, Mathematics, Numerical Analysis, Natural Sciences, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, İstanbul Teknik Üniversitesi, İnşaat Fakültesi, İnşaat Mühendisligi, 2018 - Continues

Assistant Professor, İstanbul Teknik Üniversitesi, İnşaat Fakültesi, İnşaat Muhendisligi, 2018 - Continues

Research Assistant PhD, Oregon State University, Muhendislik Fakültesi, İnşaat Muhendisligi, 2015 - 2017

Research Assistant, İstanbul Teknik Üniversitesi, İnşaat Fakültesi, İnşaat Muhendisligi, 2009 - 2014

Research Assistant, Florida Institute Of Technology, Muhendislik Fakültesi, İnşaat Muhendisligi, 2012 - 2013

Courses

STATICS, Under Graduate, 2019 - 2020

Engineering Mathematics, Post Graduate, 2018 - 2019

Dynamics, Under Graduate, 2018 - 2019

Statics and Strength of Materials, Under Graduate, 2018 - 2019

Dinamik, Under Graduate, 2017 - 2018

Statics and Strength of Materials, Under Graduate, 2017 - 2018

Engineering Mathematics, Post Graduate, 2017 - 2018

Numerical Analysis, Under Graduate, 2017 - 2018

Advising Theses

Yanık A., Çok Katlı bir Yapıda Yapı-Zemin Etkileşimi İncelenmesi, Post Graduate, E.Çelik(Student), Continues

Yanık A., Ayarlı kütle sönümleyicisi eklenmiş yapılarda basit yapı-zemin etkileşimi incelenmesi, Post Graduate,

F.KÖSE(Student), Continues

Yanık A., Pasif Kontrol Sistemleri Eklenmiş Yapılarda Hasar Analizi, Doctorate, A.Çağatay(Student), Continues

Yanık A., Çoklu Taban İzolasyon Sistemleri, Post Graduate, H.Topaloğlu(Student), Continues

Yanık A., Akaryakıt Sektöründeki Altyapının Depreme Dayanıklılığı, Post Graduate, T.İbrahimağaoğlu(Student), Continues

Yanık A., Yapısal Kontrol Sistemlerinde Güvenilirlik Analizi, Doctorate, M.Fatih(Student), Continues

Yanık A., Karma (Hibrid) bir Pasif Kontrol Sisteminde Yapı Zemin Etkileşiminin İncelenmesi, Post Graduate,

B.Kılınçaslan(Student), Continues

Yanık A., Bilir Mahçieçek S., Sismik İzolasyonlu bir Yapının İzolasyonsuz bir Yapı ile Deprem Performansı ve Maliyet

Yönünden Karşılaştırılması, Post Graduate, O.Çatlıoğlu(Student), Continues

Yanik A., Soil-structure interaction in a seismically isolated structure, Post Graduate, Y.UJUS(Student), 2019

Jury Memberships

Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, December, 2019

Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, September, 2019

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

- I. **Weigh-in-Motion load effects and statistical approaches for development of live load factors**
Yanik A., Higgins C.
STRUCTURAL ENGINEERING AND MECHANICS, vol.76, pp.1-15, 2020 (Journal Indexed in SCI)
- II. **Seismic control performance indices for magneto-rheological dampers considering simple soil-structure interaction**
Yanik A.
SOIL DYNAMICS AND EARTHQUAKE ENGINEERING, vol.129, 2020 (Journal Indexed in SCI)
- III. **Absolute Instantaneous Optimal Control Performance Index for Active Vibration Control of Structures under Seismic Excitation**
Yanik A.
SHOCK AND VIBRATION, vol.2019, 2019 (Journal Indexed in SCI)
- IV. **A simple structural control model for earthquake excited structures**
Yanik A., Aldemir Ü.
ENGINEERING STRUCTURES, vol.182, pp.79-88, 2019 (Journal Indexed in SCI)
- V. **Seismic Vibration Control of Three Dimensional Structures with a Simple Approach**
Yanik A., Aldemir Ü., BAKIOGLU M.
JOURNAL OF VIBRATION ENGINEERING & TECHNOLOGIES, vol.4, pp.235-247, 2016 (Journal Indexed in SCI)
- VI. **A new active control performance index for vibration control of three-dimensional structures**
Yanik A., Aldemir Ü., BAKIOGLU M.
ENGINEERING STRUCTURES, pp.53-64, 2014 (Journal Indexed in SCI)
- VII. **Control of Structural Response Under Earthquake Excitation**
Aldemir Ü., Yanik A., BAKIOGLU M.
COMPUTER-AIDED CIVIL AND INFRASTRUCTURE ENGINEERING, vol.27, pp.620-638, 2012 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **A Monte-Carlo Simulation for the Estimation of Side-by-Side Loading Events on Oregon Bridges**
YANIK A., Higgins C.
Journal of Polytechnic, vol.23, pp.53-60, 2020 (Other Refereed National Journals)
- II. **Reliability Analysis of Oregon Bridges Using Weigh-in-Motion (WIM) Data**
Yanik A., Higgins C.
El-Cezerî Journal of Science and Engineering, vol.6, pp.736-747, 2019 (Other Refereed National Journals)
- III. **A short review on the Active Control Approaches in Earthquake Engineering at the last 10 Years (2008-2018)**
Yanik A., Aldemir Ü.
International Journal of Engineering and Technology (IJET), vol.11, pp.111-118, 2019 (Refereed Journals of Other Institutions)
- IV. **ÇELİK GUSE (BİRLEŞİM) PLAKLARI ÜZERİNE ANALİTİK BİR ÇALIŞMA**

Yanık A., Higgins C., Scott M.

Mühendislik Bilimleri ve Tasarım Dergisi, vol.7, pp.330-336, 2019 (National Refreed University Journal)

V. **Passive Stiffness Modification of a Seismically Isolated Bridge Deck under Seismic Excitation**

Yanık A., Aldemir Ü.

Journal of Strategic Innovation and Sustainability, vol.13, no.5, pp.141-152, 2018 (Refereed Journals of Other Institutions)

VI. **A Numerical Study on Semi-Active Control of a Bridge Deck under Seismic Excitation**

Yanık A., Aldemir Ü.

World Academy of Science, Engineering and Technology International Journal of Civil and Environmental Engineering, vol.12, pp.773-779, 2018 (Refereed Journals of Other Institutions)

VII. **Energy Distributions in Actively and Passively Controlled Nonlinear Structures.**

Yanık A., Aldemir Ü., Bakioglu M.

International Journal of Computational Methods and Experimental Measurements., vol.2, no.1, pp.14-29, 2014 (Refereed Journals of Other Institutions)

Books & Book Chapters

I. **Evaluation of High-deformation Capability and High-strength Steels as Reinforcement in Reinforced Concrete Members**

Yanık A., Yüksel E., Yalcin C.

in: Urban Planning and Civil Engineering, Virginia P. Sisiopiku & Ossama E. Ramadan, Editor, Athens Institute For Education And Research, Athens, pp.231-242, 2015

II. **Mühendislik Mekaniği Dinamik Çözümlü Problemler**

Bakioğlu M., Yanık A.

Beta Basım Yayım Dağıtım, İstanbul, 2013

III. **Energy-based evaluation of seismic response of structures with passive and active systems.**

Yanık A., Aldemir Ü., Bakioglu M.

in: Seismic Control Systems: Design and Performance Assessment, S. Syngellakis, Editor, WIT Press , Southampton, pp.99-111, 2013

IV. **Sayısal Analiz Problemleri**

BAKIOĞLU M., KADIOĞLU F., BARLAS B., YANIK A.

Birsen Yayınevi, İstanbul, 2011

Refereed Congress / Symposium Publications in Proceedings

I. **Semi-Active Control Performance Index for magnetorheological dampers considering s-structure interaction**

YANIK A.

4th International Conference on Buildings, Construction and Environmental Engineering, İstanbul, Turkey, 7 - 09 October 2019, vol.737, pp.1-9

II. **YARI AKTİF KONTROL UYGULANMIŞ BİR YAPIDA YAPI ZEMİN ETKİLEŞİMİNİ GÖZ ÖNÜNE ALAN BİR ANALİZ**

Yanık A.

21. ULUSAL MEKANİK KONGRESİ, Niğde, Turkey, 2 - 06 September 2019, pp.24-33

III. **Contact Problem for Layered Medium Supported by a Wedge**

Yanık A., Bakioglu M.

4th World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium, WMCAUS 2019, Prague, Czech Republic, 17 - 21 June 2019, vol.603

IV. **An analytical study about a tier building model with magneto-rheological dampers.**

Yanık A., Pinelli J., Gutierrez H.

ACE2014, 11th International Congress on Advances in Civil Engineering, İstanbul, Turkey, 21 - 25 October 2014, pp.1-7

V. Control of a three-dimensional structure with magneto-rheological dampers

Yanık A., Pinelli J., Gutierrez H.

11th International Conference on Vibration Problems (ICOVP-2013), Lisbon, Portugal, 9 - 12 September 2013, pp.1-11

VI. TIME DELAY CONSIDERATION ON A NEW ACTIVE CONTROL ALGORITHM

Yanık A., Aldemir Ü., Bakioglu M.

ASME 2015 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference IDETC/CIE, Boston, United States Of America, 2 - 05 August 2015, pp.1-7

VII. WAVELET PSO-BASED LQR ALGORITHM FOR OPTIMAL STRUCTURAL CONTROL USING ACTIVE TUNED MASS DAMPERS

Abdollahirad M., Yanık A., Aldemir Ü.

ASME 2015 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference IDETC/CIE, Boston, United States Of America, 2 - 05 August 2015, pp.7-19

VIII. Active control of three-dimensional structures

Yanık A., Aldemir Ü., Bakioglu M.

32nd IMAC Conference and Exposition on Structural Dynamics, 2014, Orlando, FL, United States Of America, 3 - 06 February 2014, vol.4, pp.479-486

IX. A new simple passive approach for vibration mitigation of 3-dimensional structures

Yanık A., Aldemir Ü., Bakioglu M.

11th International Conference on Vibration Problems (ICOVP-2013), Lisbon, Portugal, 9 - 12 September 2013, pp.1-11

X. Yüksek Dayanım ve Şekil Değiştirme Özellikli Çeliklerin Kolon Kesitinde Donatı Olarak Kullanımı.

Yanık A.

XVIII. Ulusal Mekanik Kongresi, Manisa, Turkey, 26 - 30 August 2013, pp.667-677

XI. YÜKSEK DAYANIM VE ŞEKİL DEĞİŞTİRME ÖZELLİKLİ ÇELİKLERİN KOLON KESİTİNDE DONATI OLARAK KULLANIMI

YANIK A.

XVIII. Ulusal Mekanik Kongresi, Manisa, Turkey, 26 - 30 August 2013

XII. Evaluation of High-Deformation Capability and High-Strength Steels As Reinforcement in Reinforced Concrete Members.

Yanık A., Yüksel E., Yalcin C.

ATHENS INSTITUTE FOR EDUCATION AND RESEARCH 3rd Annual International Conference on Civil Engineering, Atina, Greece, 10 - 13 June 2013, pp.1-12

XIII. Energy-based evaluation of seismic response of structures with passive and active systems.

Yanık A., Aldemir Ü., Bakioglu M.

8th International Conference on Earthquake Resistant Engineering Structures,, Chianciano Terme, Italy, 7 - 11 September 2011, pp.99-111

XIV. Deprem etkisi altındaki yapıların aktif kontrolü

Yanık A., Aldemir Ü., Bakioglu M.

7. Ulusal Deprem Mühendisliği Konferansı, İstanbul, Turkey, 31 May - 03 June 2011, pp.1-11

XV. Taban izolasyonlu ve izolasyonsuz yapılarda sismik enerjinin dağılımı

YANIK A., ALDEMİR Ü.

XVI. Ulusal Mekanik Kongresi, Kayseri, Turkey, 22 - 26 June 2009, vol.2, pp.1091-1100

XVI. Taban İzolasyonlu Ve İzolasyonsuz Yapılarda Sismik Enerjinin Dağılımı

Bakioglu M., Yanık A., Aldemir Ü.

16. Ulusal mekanik kongresi, Kayseri, Turkey, 22 - 26 June 2009, pp.1091-1100

Supported Projects

Yanık A., Aldemir Ü., Project Supported by Higher Education Institutions, Deprem Etkisi Altındaki Yapıların Yeni bir Aktif Kontrol Performans İndeksi ile Yapi-Zemin Etkileşimi Göz Önüne Alınarak Kontrolü, 2018 - 2019

Scientific Refereeing

ENGINEERING STRUCTURES, SCI Journal, November 2019

NİĞDE ÜNİVERSİTESİ MÜHENDİSLİK BİLİMLERİ DERGİSİ, National Scientific Refreed Journal, November 2019

JOURNAL OF STRUCTURAL ENGINEERING-ASCE, SCI Journal, September 2019

ENGINEERING STRUCTURES, SCI Journal, June 2019

Engineering Structures, SCI Journal, March 2018

Engineering Structures, SCI Journal, January 2018

Soil Dynamics and Earthquake Engineering, SCI Journal, June 2017

Soil Dynamics and Earthquake Engineering, SCI Journal, April 2017

Journal of Sound and Vibration, SCI Journal, June 2014

Citations

Total Citations (WOS):88

h-index (WOS):4

Scholarships

Oregon Department of Transportation Technical Project Grant for Post-Doctoral Researcher, Official Institutions of Foreign Countries, 2015 - Continues

2214 Yurtdışı Araştırma Burs Programının (Doktora Öğrencileri için), TÜBİTAK, 2012 - Continues