

Asst. Prof. BURCU GÜLDÜR ERKAL

Personal Information

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International Researcher IDs

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Education Information

Doctorate, Northeastern University, College of Engineering, Civil and Environmental Engineering, United States Of America 2010 - 2014

Postgraduate, Northeastern University, Mühendislik Fakültesi, İnşaat Ve Çevre Mühendisliği, United States Of America 2008 - 2010

Undergraduate, Middle East Technical University, Faculty Of Engineering, İnşaat Mühendisliği, Turkey 2004 - 2008

Foreign Languages

English, C1 Advanced

Spanish, A1 Beginner

German, A1 Beginner

French, B1 Intermediate

Dissertations

Doctorate, Laser-based Structural Sensing and Surface Damage Detection, Northeastern University, Civil And Environmental Engineering, 2014

Postgraduate, Implementation of Bender Elements in an Automated Triaxial Testing System for Measuring Clay Structure Restoration by Consolidation, Northeastern University, Civil And Environmental Engineering, 2010

Research Areas

Geotechnical Engineering, Remote sensing, Image Processing, Laser scanning, Lidar, Computer Sciences, Artificial Intelligence, Computer Learning and Pattern Recognition, Pattern Recognition and Image Processing, Neural Networks, Civil Engineering, Structure, Performance of Constructed Facilities, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Hacettepe University, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü, 2018 - Continues

Assistant Professor, Hacettepe University, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü, 2015 - 2018

Academic and Administrative Experience

Hacettepe Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü, 2015 - Continues

Courses

STRENGTH OF MATERIALS I, Undergraduate, 2017 - 2018, 2016 - 2017

STEEL STRUCTURES, Undergraduate, 2017 - 2018

STATİK VE MUKAVEMET, Undergraduate, 2016 - 2017

STATICS, Undergraduate, 2016 - 2017

SRENGTH OF MATERIALS II, Undergraduate, 2016 - 2017

DYNAMICS, Undergraduate, 2016 - 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Automated Geometric Imperfection Detection and Quantification of CFS Members from Point Clouds**
GÜLDÜR ERKAL B., Cagrici O. G.
KSCE JOURNAL OF CIVIL ENGINEERING, vol.26, no.9, pp.3888-3904, 2022 (SCI-Expanded)
- II. **Using extracted member properties for laser-based surface damage detection and quantification**
GÜLDÜR ERKAL B., Hajjar J. F.
STRUCTURAL CONTROL & HEALTH MONITORING, vol.27, no.11, 2020 (SCI-Expanded)
- III. **Laser-based surface damage detection and quantification using predicted surface properties**
Erkal B., Hajjar J. F.
AUTOMATION IN CONSTRUCTION, vol.83, pp.285-302, 2017 (SCI-Expanded)
- IV. **Data Processing of Point Clouds for Object Detection for Structural Engineering Applications**
Walsh S. B. , Borello D. J. , Guldur B., Hajjar J. F.
COMPUTER-AIDED CIVIL AND INFRASTRUCTURE ENGINEERING, vol.28, no.7, pp.495-508, 2013 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. **MATHEMATICAL MODEL FOR PREDICTING THE PERIOD OF VIBRATION OF CONCRETE GRAVITY DAMS WITH FULL RESERVOIR CONDITIONS**
ALDEMİR A., Yücel Ö. B. , GÜLDÜR ERKAL B.
5. International Conference on Earthquake Engineering and Seismology, 8 - 11 October 2019
- II. **Image-Based 3D Surface Reconstruction of Cold-Formed Steel C-sections**
Güldür Erkal B.
2019 European Conference on Computing in Construction, Hania, Greece, 10 - 12 July 2019, pp.141-145
- III. **Camera-Based Imperfection Determination of Cold-Formed Steel Members**
Güldür Erkal B., Aktepe R., Alkoyak A. C. , Bayraktar M., Demir B., Ünsal Z.
ASCE Structures Congress 2019, Florida, United States Of America, 24 - 27 April 2019, pp.395-404
- IV. **A Novel MDP Based Decision Support Framework to Restore Earthquake Damaged Distribution Systems**
AYDIN GÖL E., GÜLDÜR ERKAL B., AYDIN GÖL E.
IEEE PES Innovative Smart Grid Technologies Europe (IEEE ISGT-Europe), Bucharest, Romania, 29 September - 02 October 2019
- V. **Automated Structural Modelling of Bridges from Laser Scanning**
Yan Y., GÜLDÜR ERKAL B., Hajjar J. F.
Structures Congress, Colorado, United States Of America, 6 - 08 April 2017, pp.457-468

VI. The Revisions for the Gusset Plate Load Rating Approach: A Comparative Case Study

Boyacı B., GÜLDÜR ERKAL B.

Istanbul Bridge Conference, Turkey, 11 - 13 August 2014, vol.9, pp.41-50

Supported Projects

GÜLDÜR ERKAL B., Project Supported by Higher Education Institutions, Hafif Çelik Elemanlardaki Şekilsel Kusurların Kameralarla Tespit Edilmesi ve Tespit Edilen Kusurların Eleman Davranışı üzerindeki Etkilerinin İncelenmesi, 2017 - 2019

ÖZTÜRK B., GÜLDÜR B., Project Supported by Higher Education Institutions, İnşaat Mühendisliği Bölümü Yapı Mekaniği ve Yapı Malzemesi Laboratuvarları Makine-Teçhizat Alımı, 2016 - 2019

GÜLDÜR ERKAL B., Project Supported by Higher Education Institutions, Uluslararası İnşaat Mühendisliğinde Hasarsız İnceleme Teknikleri Konferansı Katılımı ve Ofis Malzemesi Alımı, 2015 - 2015

GÜLDÜR ERKAL B., Project Supported by Higher Education Institutions, Lazer Tarayıcılar Kullanılarak Köprülerde Durum Tespiti (Condition Assessment of Bridges Using Terrestrial Laser Scanners), 2015 - 2015

Metrics

Publication: 10

Citation (WoS): 64

Citation (Scopus): 63

H-Index (WoS): 2

H-Index (Scopus): 2