

# Prof. KURTULUŞ SOYLUK

## Personal Information

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## Education Information

Doctorate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, İnşaat Mühendisliği (Dr), Turkey 1997 - 2002

Postgraduate, Karadeniz Technical University, Fen Bilimleri Enstitüsü, İnşaat Mühendisliği (YI) (Tezli), Turkey 1993 - 1997

Undergraduate, Karadeniz Technical University, Mühendislik-Mimarlık Fakültesi, İnşaat Mühendisliği Pr., Turkey 1988 - 1993

## Foreign Languages

German, C1 Advanced

English, C1 Advanced

## Dissertations

Doctorate, Değişerek yayılan yer hareketi etkisindeki kablolu köprülerin stokastik analizi, Karadeniz Technical University, Fen Bilimleri Enstitüsü, İnşaat Mühendisliği (Dr), 2002

Postgraduate, Kablolu köprülerin stokastik analizi, Karadeniz Technical University, Fen Bilimleri Enstitüsü, İnşaat Mühendisliği (YI) (Tezli), 1996

## Research Areas

Civil Engineering, Engineering and Technology

## Academic Titles / Tasks

Professor, Gazi University, Mühendislik Fakültesi, İnşaat Mühendisliği, 2012 - Continues

Associate Professor, Gazi University, Mühendislik Fakültesi, İnşaat Mühendisliği, 2006 - 2012

Assistant Professor, Gazi University, Mühendislik Fakültesi, İnşaat Mühendisliği, 2003 - 2006

Assistant Professor, Karadeniz Technical University, Gümüşhane Mühendislik Fakültesi, İnşaat Mühendisliği Pr., 2002 - 2003

Research Assistant, Karadeniz Technical University, Gümüşhane Mühendislik Fakültesi, İnşaat Mühendisliği Pr., 1995 - 2002

Research Assistant, Karadeniz Technical University, Mühendislik-Mimarlık Fakültesi, İnşaat Mühendisliği Pr., 1994 - 1995

## Academic and Administrative Experience

Head of Department, Gazi University, Mühendislik Fakültesi, İnşaat Mühendisliği, 2016 - 2020

## Advising Theses

- SOYLUK K., Dynamic Analysis Of Steel Arch Bridges For Near-Fault Ground Motions Travelling With Finite Wave Velocity, Postgraduate, D.Yılmaz(Student), 2018
- SOYLUK K., Sonlu hızla yayılan yakın fay yer hareketi etkisi için çelik kemer köprülerin dinamik analizi, Postgraduate, D.YILMAZ(Student), 2018
- SOYLUK K., Comparison Of Dynamic Responses Of Suspension And Cable-Stayed Bridges Having Equal Center Span Lengths, Doctorate, H.KARTAL(Student), 2018
- SOYLUK K., An Analysis Of Reinforced Concrete Buildings Under Explosive Based Demolition, Doctorate, H.ÖZMEN(Student), 2017
- SOYLUK K., Dynamic analysis of long span bridges under near-fault ground motion effects, Postgraduate, H.KARACA(Student), 2017
- SOYLUK K., Comparative Cost Analysis Of Suspension Bridges And Cable Stayed Bridges, Postgraduate, E.GÖKMEN(Student), 2015
- SOYLUK K., Investigation of the dynamic behaviour of cable - stayed bridges with respect to the earthquake and traffic loads, Postgraduate, H.KARTAL(Student), 2012
- SOYLUK K., Soil-structure interaction analysis of cable-stayed bridges subjected to multiple-support excitations, Doctorate, E.AVANOĞLU(Student), 2011
- SOYLUK K., İki ve üç boyutlu olarak modellenen kablolu köprülerin dinamik davranışlarının karşılaştırılması, Postgraduate, A.ÇELİK(Student), 2010
- SOYLUK K., COMPARISON OF DYNAMIC BEHAVIOUR OF CABLE-STAYED BRIDGES WHICH ARE MODELLED AS 2 AND 3 DIMENSIONAL, Postgraduate, A.ÇELİK(Student), 2010
- SOYLUK K., TIME DEPENDENT NONLINEAR ANALYSIS OF SEGMENTALLY ERECTED CABLE STAYED BRIDGES, Postgraduate, T.Gökhan(Student), 2009
- SOYLUK K., ANALYSIS OF DYNAMIC EFFECTS INDUCED BY TRAFFIC LOADS ON LONG SPAN CABLE STAYED BRIDGES, Postgraduate, A.CENGİZ(Student), 2009
- SOYLUK K., Büyük açıklıklı kablolu köprülerde trafik yüklerinin meydana getirdiği dinamik etkilerin incelenmesi, Postgraduate, A.CENGİZ(Student), 2009
- SOYLUK K., Zamana bağlı çevresel etkiler için konsol dilimler halinde inşaa edilen kablolu köprülerin lineer olmayan analizi, Postgraduate, T.GÖKHAN(Student), 2009
- SOYLUK K., EFFECTS OF BASEMENT RETAINING WALLS TO STRUCTURAL IRREGULARITIES, Postgraduate, İ.YASİN(Student), 2007
- SOYLUK K., Asinkronize ve antisinkronize yer hareketi etkisindeki kemer köprülerinin stokastik analizi, Postgraduate, K.YÜCEL(Student), 2006

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Seismic response of nuclear containment structures due to recorded and simulated near-fault ground motions**  
Soyluk K., Azar H., Yilmaz D.  
STRUCTURAL ENGINEERING AND MECHANICS, vol.87, no.5, pp.431-450, 2023 (SCI-Expanded)
- II. **Soil-Structure Analyses of Cable-Supported Bridges under Multiple-Support Excitation**  
Kartal H., SOYLUK K.  
TURKISH JOURNAL OF CIVIL ENGINEERING, vol.34, no.2, pp.1-33, 2023 (SCI-Expanded)
- III. **Analysis of RC structures with different design mistakes under explosive based demolition**  
Ozmen H., SOYLUK K., ANIL Ö.  
STRUCTURAL CONCRETE, vol.22, no.3, pp.1462-1486, 2021 (SCI-Expanded)

- IV. **Asynchronous dynamic analyses of cable-supported bridges under near-fault ground motions**  
SOYLUK K., KARACA H.  
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.36, no.2, pp.727-742, 2021 (SCI-Expanded)
- V. **STATIONARY AND TRANSIENT RESPONSES OF SUSPENSION BRIDGES TO SPATIALLY VARYING GROUND MOTIONS INCLUDING SITE RESPONSE EFFECT**  
ADANUR S., ALTUNIŞIK A. C., SOYLUK K., Dumanoglu A. A.  
ADVANCED STEEL CONSTRUCTION, vol.13, no.4, pp.378-398, 2017 (SCI-Expanded)
- VI. **Wave-passage effect on the seismic response of suspension bridges considering local soil conditions**  
ADANUR S., ALTUNIŞIK A. C., BAŞAĞA H. B., SOYLUK K., Dumanoglu A. A.  
INTERNATIONAL JOURNAL OF STEEL STRUCTURES, vol.17, no.2, pp.501-513, 2017 (SCI-Expanded)
- VII. **Stochastic response of suspension bridges for various spatial variability models**  
ADANUR S., ALTUNIŞIK A. C., SOYLUK K., Dumanoglu A. A.  
STEEL AND COMPOSITE STRUCTURES, vol.22, no.5, pp.1001-1018, 2016 (SCI-Expanded)
- VIII. **Contribution of local site-effect on the seismic response of suspension bridges to spatially varying ground motions**  
ADANUR S., ALTUNIŞIK A. C., SOYLUK K., Dumanoglu A. A., Bayraktar A.  
EARTHQUAKES AND STRUCTURES, vol.10, no.5, pp.1233-1251, 2016 (SCI-Expanded)
- IX. **Stochastic dynamic analysis of a historical masonry bridge under surface blast-induced multi-point ground motion**  
HACIEFENDİOĞLU K., Banerjee S., SOYLUK K., ALPASLAN E.  
STOCHASTIC ENVIRONMENTAL RESEARCH AND RISK ASSESSMENT, vol.29, no.5, pp.1275-1286, 2015 (SCI-Expanded)
- X. **Multi-point response spectrum analysis of a historical bridge to blast ground motion**  
HACIEFENDİOĞLU K., Banerjee S., SOYLUK K., KÖKSAL O.  
STRUCTURAL ENGINEERING AND MECHANICS, vol.53, no.5, pp.897-919, 2015 (SCI-Expanded)
- XI. **Investigation of the effect of spatially varying ground motion components on the dynamic behaviour of cable-stayed bridges depending on soil conditions Yer hareketi degisim bileşenlerinin kablolu köprülerin dinamik davranışı üzerindeki etkisinin zemin koşullarına bağlı olarak incelenmesi**  
Avanoglu Sicacik E., SOYLUK K.  
Journal of the Faculty of Engineering and Architecture of Gazi University, vol.27, no.4, pp.881-889, 2012 (SCI-Expanded)
- XII. **Effects of blast-induced random ground motions on the stochastic behaviour of industrial masonry chimneys**  
HACIEFENDİOĞLU K., SOYLUK K.  
STRUCTURAL ENGINEERING AND MECHANICS, vol.43, no.6, pp.835-845, 2012 (SCI-Expanded)
- XIII. **Numerical investigation of stochastic response of an elevated water tank to random underground blast loading**  
HACIEFENDİOĞLU K., SOYLUK K., BİRİNCİ F.  
STOCHASTIC ENVIRONMENTAL RESEARCH AND RISK ASSESSMENT, vol.26, no.4, pp.599-607, 2012 (SCI-Expanded)
- XIV. **Soil-structure interaction analysis of cable-stayed bridges for spatially varying ground motion components**  
SOYLUK K., Sicacik E.  
Soil Dynamics and Earthquake Engineering, vol.35, pp.80-90, 2012 (SCI-Expanded)
- XV. **Comparison of Stochastic Responses of Asphaltic Concrete Core and Asphaltic Lining Dams with Clay Core Dams to Stationary and Nonstationary Excitation**  
HACIEFENDİOĞLU K., SOYLUK K., BİRİNCİ F.  
ADVANCES IN STRUCTURAL ENGINEERING, vol.15, no.1, pp.91-105, 2012 (SCI-Expanded)
- XVI. **Nonlinear Response of Earthfill Dams to Spatially Varying Ground Motion Including Site Response Effect**

HACIEFENDİOĞLU K., SOYLUK K.

ADVANCES IN STRUCTURAL ENGINEERING, vol.14, no.2, pp.223-234, 2011 (SCI-Expanded)

- XVII. **Dynamic effects induced by traffic loads on cable-stayed bridges** Kablolu köprülerde trafik yüklerinin neden olduğu dinamik etkiler  
Cengiz A., SOYLUK K., Sicacik E.  
Journal of the Faculty of Engineering and Architecture of Gazi University, vol.26, no.1, pp.243-252, 2011 (SCI-Expanded)
- XVIII. **Effect of Basement Retaining Walls to Torsional Irregularity in Frame Type Buildings**  
SOYLUK K., Yavuz I. Y.  
TEKNIK DERGI, vol.20, no.2, pp.4653-4673, 2009 (SCI-Expanded)
- XIX. **Earthquake response of isolated cable-stayed bridges under spatially varying ground motions**  
ATEŞ Ş., SOYLUK K., Dumanoglu A. A., Bayraktar A.  
STRUCTURAL ENGINEERING AND MECHANICS, vol.31, no.6, pp.639-662, 2009 (SCI-Expanded)
- XX. **Stochastic dynamic response of dam-reservoir-foundation systems to spatially varying earthquake ground motions**  
Bilici Y., Bayraktar A., SOYLUK K., HACIEFENDİOĞLU K., ATEŞ Ş., Adanur S.  
SOIL DYNAMICS AND EARTHQUAKE ENGINEERING, vol.29, no.3, pp.444-458, 2009 (SCI-Expanded)
- XXI. **Comparison of random vibration methods for multi-support seismic excitation analysis of long-span bridges**  
Soyluk K.  
ENGINEERING STRUCTURES, vol.26, no.11, pp.1573-1583, 2004 (SCI-Expanded)
- XXII. **Random vibration and deterministic analyses of cable-stayed bridges to asynchronous ground motion**  
Soyluk K., Dumanoglu A., Tuna M.  
STRUCTURAL ENGINEERING AND MECHANICS, vol.18, no.2, pp.231-246, 2004 (SCI-Expanded)
- XXIII. **Spatial variability effects of ground motions on cable-stayed bridges**  
Soyluk K., Dumanoglu A.  
SOIL DYNAMICS AND EARTHQUAKE ENGINEERING, vol.24, no.3, pp.241-250, 2004 (SCI-Expanded)
- XXIV. **A stochastic analysis of long span structures subjected to spatially varying ground motions including the site-response effect**  
Dumanoglu A., Soyuk K.  
ENGINEERING STRUCTURES, vol.25, no.10, pp.1301-1310, 2003 (SCI-Expanded)
- XXV. **Comparison of asynchronous and stochastic dynamic responses of a cable-stayed bridge**  
Soyluk K., Dumanoglu A.  
ENGINEERING STRUCTURES, vol.22, no.5, pp.435-445, 2000 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Effets of Near-Fault and Far-Fault Ground Motions on Cable-Stayed Bridges**  
KARACA H., SOYLUK K.  
Disaster Science and Engineering, vol.4, no.21, pp.12-21, 2018 (Peer-Reviewed Journal)
- II. **Çelik Kemer Köprülerin Rasgele Titreşim Analizinde Filtre Edilmiş Beyaz Gürültü Modelinin Tahkiki**  
SOYLUK K., YÜCEL K.  
Gazi Üniversitesi Mühendislik Mimarlık Fakültesi Dergisi, vol.22, no.4, pp.933-939, 2007 (Peer-Reviewed Journal)
- III. **Kablo Köprülerin Asinkronize Antisinkronize ve Stokastik Karşılaştırmalı Dinamik Analizleri**  
DUMANOĞLU A. A., SOYLUK K.  
İMO Teknik Dergi, pp.2121-2137, 2000 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **YAPI STATİĞİ**  
SOYLUK K., GÜLTOP T.  
PALME, Ankara, 2017

## Refereed Congress / Symposium Publications in Proceedings

- I. **Effects of Near-Fault Ground Motions on Nuclear Power Plant Containment Structures**  
Soyluk K., Sadegh-Azar H., Yılmaz D.  
26th International Conference on Structural Mechanics in Reactor Technology , Potsdam, Germany, 10 - 15 July 2022, pp.1-12
- II. **Değişerek Yayılan Yer Hareketi Etkisi Altındaki Karayolu Köprülerinin Dinamik Davranışı**  
HACİFENDİOĞLU K., ALTUNIŞIK A. C., SOYLUK K.  
4. Köprüler ve Viyadükler Sempozyumu, Ankara, Turkey, 1 - 02 November 2019
- III. **Asma Köprülerin Dinamik Davranışına Yapı-Zemin Etkileşiminin Etkisi**  
KARTAL H., SOYLUK K.  
8th International Steel Structures Symposium, Konya, Turkey, 24 - 26 October 2019, pp.96-107
- IV. **Directivity-Pulse and Fling-Step Effects on Steel Arch Bridges**  
YILMAZ D., SOYLUK K.  
13th International Conference on Advances in Civil Engineering, İzmir, Turkey, 12 - 14 September 2018
- V. **Dynamic Responses of Steel Arch Bridges under Near-Fault Ground Motion Characteristics of Directivity-Pulse and Fling-Step Effects**  
YILMAZ D., SOYLUK K.  
3. International Conference on Civil and Environmental Engineering, ÇEŞME, Turkey, 24 - 27 April 2018
- VI. **Yakın Fay Yer Hareketi Etkisindeki Asma Köprülerin Asinkronize Dinamik Analizi**  
KARACA H., SOYLUK K.  
7. Çelik Yapılar Sempozyumu, Gaziantep, Turkey, 26 - 28 October 2017
- VII. **YAKIN FAY VE UZAK FAY YER HAREKETLERİNİN EĞİK KABLO ASKILI KÖPRÜLER ÜZERİNDEKİ ETKİLERİ**  
KARACA H., SOYLUK K.  
4. Uluslararası Deprem Mühendisliği ve Sismoloji Konferansı, Eskişehir, Turkey, 11 - 13 October 2017
- VIII. **Betonarme Binaların Patlayıcı Kullanılarak Yıkımında Yapı Davranışının Analizi**  
ÖZMEN H., SOYLUK K., ANIL Ö.  
4. Uluslararası Deprem Mühendisliği ve Sismoloji Konferansı, Eskişehir, Turkey, 11 - 13 October 2017
- IX. **Near-fault and Far-fault Ground Motion Effects on Cable-supported Bridges. X International Conference on Structural Dynamics**  
SOYLUK K., KARACA H.  
X International Conference on Structural Dynamics, Roma, Italy, 10 - 13 September 2017
- X. **Near-fault and far-fault ground motion effects on cable-supported bridges**  
SOYLUK K., Karaca H.  
10th International Conference on Structural Dynamics (EURODYN), Rome, Italy, 10 - 13 September 2017, vol.199, pp.3077-3082
- XI. **Soil-structure Interaction Analysis of Cable-stayed Bridges for Delayed Excitations**  
Soyluk K., Avanoğlu Sıcacık E.  
Ninth International Congress on Advances in Civil Engineering, Trabzon, Turkey, 27 - 30 September 2010, pp.1-10
- XII. **Time Dependent Nonlinear Analysis of Segmentally Erected Cable-Stayed Bridges**  
Soyluk K., Avanoğlu Sıcacık E.  
Ninth International Congress on Advances in Civil Engineering, Trabzon, Turkey, 27 - 30 September 2010, pp.1-10
- XIII. **Zemin Sınırlarının Geçirgen Sınırlarla Modellendiği Kablolü Köprülerin Dinamik Analizi**

Soyluk K., Avanođlu Sıcacık E.

Uluslararası Sakarya Deprem Sempozyumu, Sakarya, Turkey, 1 - 02 October 2009, pp.440-450

XIV. **Asynchronous and antisynchronous effects of ground motion on the stochastic response of suspension bridges**

Adanur S., SOYLUK K., Dumanoglu A., Bayraktar A.

7th International Conference on Vibration Problems (ICOVP 2005), İstanbul, Turkey, 5 - 09 September 2005, vol.111, pp.1-2

## **Supported Projects**

Soyluk K., Other International Funding Programs, Effect of Different Seismic Wave Incoherence Models on Foundation Responses, 2023 - 2023

Soyluk K., TUBITAK Project, Beyond-Design Basis Analyses of Nuclear Power Plant Structures, 2021 - 2022

SOYLUK K., Project Supported by Higher Education Institutions, Deprem Hareketinin Zemin Durumuna Bağlı Olarak Deđişimi ve Bu Deđişimin Uzun Açıklıklı Köprü Sistemler Üzerinde Etkileri, 2008 - 2011

## **Metrics**

Publication: 43

Citation (WoS): 371

Citation (Scopus): 496

H-Index (WoS): 10

H-Index (Scopus): 11