

## Asst. Prof. Fatih ALEMDAR

### Personal Information

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### Biography

Assistant Professor Fatih Alemdar Ph.D. Fatigue expertise in the Yildiz Technical University. Prof Fatih holds a PhD, in Structural Engineer, The University of Kansas/ USA 2011, an MS degree, in Structural Engineer, The University of Kansas/ USA 2010, BS degree, in civil engineering, Yıldız Technical University,2000, He had been promoted in 2013 to an assistant professor/ Yildiz Technical University. He had supervised more than 10 Ph. D. and M. Sc these in Civil Engineer. He had published 30 scientific articles and conference papers in international refereed journals.

### Education Information

Undergraduate, Yıldız Teknik Üniversitesi, Faculty of Construction, İnşaat Mühendisliği, Turkey 1996 - 2000

### Foreign Languages

English, B2 Upper Intermediate

### Certificates, Courses and Trainings

Education Management and Planning, Statik çekme basma test sistemleri tanıtımı, ITW test sistemleri, 2016

Education Management and Planning, Plastik ve çelik malzeme testleri, ITW test sistemleri, 2016

### Dissertations

Doctorate, Repair of steel bridge girders damaged by distortion-induced fatigue, University of Kansas, yüksek lisans fakültesi, 2011

Postgraduate, Use of Composite Materials to Repair Steel Structures Vulnerable to Fatigue Damage, University of Kansas, yüksek lisans fakültesi, 2010

### Research Areas

Civil Engineering, Structure, Steel Structures, Engineering and Technology

### Academic Titles / Tasks

Assistant Professor, Yildiz Technical University, Faculty Of Construction, Civil Engineering Department, 2018 - Continues  
Assistant Professor, Yildiz Technical University, Faculty Of Construction, Civil Engineering Department, 2013 - 2018

## Courses

Çok Katlı Çelik Yapılar, Undergraduate, 2019 - 2020

Doctorate, 2019 - 2020

Doctorate, 2020 - 2021

## Advising Theses

Alemdar F., ANALYTICAL STUDY OF BOLTED LIGHTWEIGHT COLD FORMED STEEL CONNECTION, Postgraduate, H.DECHASA(Student), 2020

Alemdar F., Use of Carbon Fiber Layers and Steel Plates to Repair Fatigue Damage at the Rib-To-Rib Butt-Welded Connections of Orthotropic Steel Deck under Fatigue Loading, Doctorate, S.ALDIEN(Student), 2020

Alemdar F., EXPERIMENTAL STUDY OF EARTHQUAKE SIMULATOR FOR COLD-FORMED LIGHTWEIGHT STEEL STRUCTURES, Postgraduate, F.MOHAMMED(Student), 2020

Alemdar F., Investigation of elastomeric bearings' behavior under fatigue loading, Postgraduate, K.EKŞİ(Student), 2019

Alemdar F., Çelik çekme kirişlerde bağlantıların yorulmasının deneysel incelenmesi, Postgraduate, N.DAWOOD(Student), 2019

Alemdar F., Sarsma Masası Deneyi Ve Sayısal Analizlerde Elde Edilen Dinamik Parametrelerin Görüntü İşleme Tekniği İle Karşılaştırılması, Postgraduate, N.AVCI(Student), 2019

Alemdar F., Asma Köprülerde Kullanılan Askı Halatlarının İncelenmesi, Postgraduate, A.KAAN(Student), 2019

Alemdar F., Enine takviyenin kirişler üzerindeki davranışının incelenmesi, Postgraduate, H.ALMUKHTAR(Student), 2019

Alemdar F., Eksenel Yüklü Tel Demet ve Halatların Çap ve Tel İlişkilerinin Karşılaştırılması, Postgraduate, A.AYKUT(Student), 2019

Alemdar F., Experimental and analytical investigation of fatigue life on trapezoidal longitudinal ribbed on steel bridge decks, Postgraduate, M.NAJEEB(Student), 2018

Alemdar F., Deprem etkisi altında demiryolu köprülerinin zayıf zeminlerde yapı-kazık-zemin etkileşimi için farklı analiz yöntemleri ile çözümü ve sonuçların karşılaştırılması, Postgraduate, A.GÜLSUYU(Student), 2018

Alemdar F., Experimental testing of fatigue life and improvement of trapezoidal longitudinal ribbed on bridge decks, Postgraduate, Z.HUSHAM(Student), 2017

Alemdar F., Güçlendirilmiş çelik kirişlerin yorulma analizi, Postgraduate, H.CEM(Student), 2017

Alemdar F., Çelik çubuk takviyeli ahşap kirişlerin taşıyıcı performansının deneysel ve analitik yöntemle incelenmesi, Postgraduate, Ö.FURKAN(Student), 2016

## Research Infrastructure Information

Alemdar F., Arslan G., Bekiroğlu S., Sevim B., Ayvaz Y., Fırat Alemdar Z., Sönümleyici Mesnet Test Merkezi, December 2016

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

- I. **Progressive collapse of a steel structure under expected snow loads**  
FIRAT ALEMDAR Z., ALEMDAR F.  
ENGINEERING FAILURE ANALYSIS, vol.125, 2021 (Journal Indexed in SCI)
- II. **Experimental investigation of bolted stiffened end-plate and bolted flange-plate connections**  
Yılmaz O., Bekiroğlu S., Alemdar F., Arslan G., Sevim B., Ayvaz Y.

LATIN AMERICAN JOURNAL OF SOLIDS AND STRUCTURES, vol.16, 2019 (Journal Indexed in SCI)

- III. **Experimental Study of Fatigue Crack Behavior of Rib-To-Rib Butt Welded Connections in Orthotropic Steel Decks**  
Saifaldien-Shakir S., Alemdar F.  
LATIN AMERICAN JOURNAL OF SOLIDS AND STRUCTURES, vol.15, 2018 (Journal Indexed in SCI)
- IV. **Use of CFRP Overlays to Repair Fatigue Damage in Steel Plates under Tension Loading**  
Alemdar F., Gangel R., Matamoros A., Bennett C., Barrett-Gonzalez R., Rolfe S., Liu H.  
JOURNAL OF COMPOSITES FOR CONSTRUCTION, vol.18, no.4, 2014 (Journal Indexed in SCI)
- V. **Repairing Distortion-Induced Fatigue Cracks in Steel Bridge Girders Using Angles-with-Plate Retrofit Technique. I: Physical Simulations**  
ALEMDAR F., NAGATI D., Matamoros A., Bennett C., Rolfe S.  
JOURNAL OF STRUCTURAL ENGINEERING, vol.140, no.5, 2014 (Journal Indexed in SCI)
- VI. **Repairing Distortion-Induced Fatigue Cracks in Steel Bridge Girders Using Angles-with-Plate Retrofit Technique. II: Computer Simulations**  
ALEMDAR F., Overman T., Matamoros A., Bennett C., Rolfe S.  
JOURNAL OF STRUCTURAL ENGINEERING, vol.140, no.5, 2014 (Journal Indexed in SCI)
- VII. **Use of CFRP overlays to strengthen welded connections under fatigue loading**  
Alemdar F., Matamoros A., Bennett C., Barrett-Gonzalez R., Rolfe S. T.  
Journal of Bridge Engineering, vol.17, no.3, pp.420-431, 2012 (Journal Indexed in SCI)
- VIII. **Fatigue enhancement of welded details in steel bridges using CFRP overlay elements**  
Kaan B. N. , Alemdar F., Bennett C. R. , Matamoros A., Barrett-Gonzalez R., Rolfe S.  
Journal of Composites for Construction, vol.16, no.2, pp.138-149, 2012 (Journal Indexed in SCI)

### Articles Published in Other Journals

- I. **The Effect of Weld Length on the Tension Capacity of Hollow Structural Section (HSS)**  
Alemdar F., Salman N.  
International Journal of Science and Technology, vol.3, no.5, pp.42-58, 2020 (Refereed Journals of Other Institutions)
- II. **Sarsma masası testlerindeki dinamik parametrelerin görüntü işleme yöntemi ile ölçülmesi**  
Alemdar F., Avcı N.  
Dicle Üniversitesi Mühendislik Fakültesi, vol.10, no.3, pp.1099-1112, 2019 (National Refreed University Journal)
- III. **Shaking table test and numerical simulation of 3D steel frame system**  
Alemdar F., Avcı N.  
Journal of Structural Engineering & Applied Mechanics, vol.2, no.2, pp.88-95, 2019 (Other Refereed National Journals)
- IV. **DEFORMATION MEASUREMENT IN A STEEL BRIDGE SYSTEM BY USING IMAGE PROCESSING METHOD**  
FIRAT ALEMDAR Z., BİLİCİ S., Alemdar F.  
Sigma Journal of Engineering and Natural Sciences, vol.9, no.2, pp.149-156, 2018 (National Refreed University Journal)
- V. **DEVELOPMENT OF DESIGN STRENGTH PROGRAM FOR STEEL PROFILES USING THE NEW TURKISH STEEL CODE**  
Aydın I., ALEMDAR F.  
Sigma Mühendislik ve Fen Bilimleri, vol.35, pp.633, 2017 (Journal Indexed in ESCI)

### Refereed Congress / Symposium Publications in Proceedings

- I. **Investigation of Elastomeric Bearings' Behaviour under Fatigue Loading**  
ALEMDAR F., Ekşi K.

INTERNATIONAL CONGRESS ON ENGINEERING AND LIFE SCIENCE, Kastamonu, Turkey, 26 April 2018, vol.1, no.1, pp.296

**II. Project About Earthquake Simulator**

ALEMDAR F.

Seismic Loss, Rehabilitation and Post-Earthquake Crisis Management of Critical Infrastructure, İstanbul, Turkey, 20 November 2017, vol.1, no.1, pp.1-10

**III. ALIN LEVHALI BULONLU KOLON-KİRİŞ BİRLEŞİMİNİN ÇEVİRİMSEL YÜKLEME ALTINDA DENEYSEL ÇALIŞMASI**

Yılmaz O., Bekiroğlu S., Alemdar F., Arslan G., Sevim B., Ayvaz Y.

4. Uluslararası Deprem Mühendisliği ve Sismoloji Konferansı, Eskişehir, Turkey, 11 - 13 October 2017

**IV. Alın Levhalı Bulonlu Kolon-Kiriş Birleşiminin Çevrimsel Yükleme Altında Deneysel Çalışması**

YILMAZ O., BEKİROĞLU S., ALEMDAR F., ARSLAN G., SEVİM B., AYVAZ Y.

4. Uluslararası Deprem Mühendisliği ve Sismoloji Konferansı, 11 - 13 October 2017

**V. Fatigue Performance of Steel Beams Strengthened with Steel Plates and CFRP Materials**

AKKAYA H. C. , ALEMDAR F.

INTERNATIONAL CONFERENCE ON ADVANCES IN SCIENCE AND ARTS, İstanbul, Turkey, 13 September 2017, vol.1, no.0, pp.267-271

**VI. Parametric studies on trapezoidal longitudinal Ribs on orthotropic Bridge decks**

ALEMDAR F., Abdulghani M. N.

INTERNATIONAL CONFERENCE ON ADVANCES IN SCIENCE AND ARTS, İstanbul, Turkey, 13 September 2017, vol.1, no.0, pp.255-260

**VII. Parametric study of stress and displacement of the trapezoidal rib using 3-D finite element**

ALEMDAR F., Mohamedawi Z. H. J. A.

INTERNATIONAL CONFERENCE ON ADVANCES IN SCIENCE AND ARTS, İstanbul, Turkey, 13 September 2017, vol.1, no.0, pp.261-266

**VIII. Estimation of the Performance of Closed Longitudinal Ribs Orthotropic Bridge deck sections on Stress Distribution**

ALEMDAR F., Shakir S. ..

INTERNATIONAL CONFERENCE ON ADVANCES IN SCIENCE AND ARTS, İstanbul, Turkey, 13 September 2017, vol.1, no.0, pp.250-254

**IX. Türkiye Bina Deprem Yönetmeliğine Taslağına Göre Yalıtım Birimi Testleri**

ALEMDAR F.

SİSMİK İZOLASYON ÇALIŞTAYI, Bursa, Turkey, 14 February 2017

**X. YATAY TAŞIYICI AHŞAP ELEMANLARIN ÇELİK BAZLI ÇUBUKLARLA EĞİLME MOMENTİNE KARŞI PERFORMANSININ ARTIRILMASI**

ALEMDAR F., SARAL Ö. F.

Ahşabın Tasarım Serüveni, Turkey, 23 - 24 October 2016

**XI. Evaluation of the Performance of Stress Measures for Longitudinal Ribs on Orthotropic deck Using Finite Element Analysis**

Alemdar F.

International Symposium on Steel Bridges, 2014, İstanbul, Turkey, 14 - 16 September 2015, vol.1, no.1, pp.121-128

**XII. Evaluation of the performance of retrofit measures for distortion-induced fatigue using finite element analysis**

ALEMDAR F., Matamoros A., Bennett C., Rolfe S.

World Steel Bridge Symposium (WSBS), 01 April 2012

**XIII. Improved method for bonding CFRP overlays to steel for fatigue repair**

Alemdar F., MATAMOROS A. B. , BENNETT C. R. , BARRETT-GONZALEZ R., ROLFE S. T.

Structures Congress 2011, Las Vegas, NV, United States Of America, 14 - 16 April 2011, pp.133-144

**XIV. Parameters Affecting Behavior of CFRP Overlay Elements asRetrofit Measure for Fatigue Vulnerable Steel Bridge Girders**

ALEMDAR F., KAAAN B., MATAMOROS A., BENNETT C., BARRET R. G. , ROLFE S.

Proceedings of Second International Conference on Fatigue and Fracture in the Infrastructure, 11 - 15 June 2009

**XV. Parameters Affecting Behavior of CFRP Overlay Elements as Retrofit Measures for Fatigue Vulnerable Steel Bridge Girders**

ALEMDAR F.

Proceedings of the Fatigue and Fracture in the Infrastructure Conference, 01 June 2009

## Supported Projects

Bekirođlu S., Alemdar F., Sevim B., Altunışık A. C. , Project Supported by Higher Education Institutions, Mühendislik Yapılarının Dinamik Yükler Altındaki Performanslarının Yüksek Kapasiteli Sarsma Masası Kullanılarak Belirlenmesi, 2018 - 2020

SEVİM B., ARSLAN G., BEKİROĐLU S., AYVAZ Y., ALEMDAR F., Project Supported by Higher Education Institutions, Ölçeklendirilmiş Betonarme Çerçevesinin Dinamik Davranışının Belirlenmesi, 2017 - 2020

ALEMDAR F., FIRAT ALEMDAR Z., Project Supported by Higher Education Institutions, Bogaziçi Köprüsünün 2,5/1000 ölçekli laboratuvar modelinde deney ve simulasyon çalışmaları, 2015 - 2018

BEKİROĐLU S., ALEMDAR F., ARSLAN G., AYVAZ Y., SEVİM B., YILMAZ O., Project Supported by Higher Education Institutions, Alın Levhalı Bulonlu ve Alın Levhasız Bulonlu Çelik Kolon-Kiriş Birleşimlerinin Deneysel ve Sonlu Elemanlar Analizleri ile Karşılaştırılması, 2015 - 2018

Alemdar F., Fırat Alemdar Z., Sevim B., Arslan G., Ayvaz Y., Şahin A., Bekirođlu S., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Sönümleyici mesnet test merkezi, 2015 - 2016

ALEMDAR F., Other Supported Projects, Yapma I profil çelik kirişli köprülerde Distorsiyonun neden olduğu yorulma çatlaklarının iyileştirilmesi, 2008 - 2013

ALEMDAR F., Other Supported Projects, Altyapı İyileştirilmesi Sürdürülebilirlik II: Çelik Köprülerinde Mevcut Yorulma Çatlakların CFRP Malzemelerinin Kullanımı ile Tamiri, 2010 - 2012

ALEMDAR F., Other Supported Projects, Köprü uygulamalarında kullanılmak üzere Kompozit Malzeme Sistemleri, 2006 - 2008

## Scientific Refereeing

Sigma Mühendislik ve Fen Bilimleri Dergisi, National Scientific Refreed Journal, July 2013

## Edit Congress and Symposium Activities

Workshop on Seismic Loss, Rehabilitation and Post-Earthquake Crisis Management of Critical Infrastructure, Invited Speaker, İstanbul, Turkey, 2017

SİSMİK İZOLASYON ÇALIŞTAYI, Invited Speaker, Bursa, Turkey, 2017

## Citations

Total Citations (WOS):45

h-index (WOS):4

## Artistic Activity

Alemdar F., Ahşap Kule Yarışması, Show, April 2019

Alemdar F., Ahşap Kule Yarışması, Show, December 2017