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Kişisel Bilgiler

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Publons / Web Of Science ResearcherID: G-4152-2019

ScopusID: 6602100017

Yoksis Araştırmacı ID: 163325

Eğitim Bilgileri

Doktora, University of Colorado at Boulder, Faculty of Engineering, Department Of Civil, Environmental And Architectural Engineering, Amerika Birleşik Devletleri 1997 - 2002

Yüksek Lisans, University of New Mexico, Faculty of Engineering, Department Of Civil Engineering , Amerika Birleşik Devletleri 1987 - 1989

Lisans, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü, Türkiye 1982 - 1987

Yabancı Diller

İngilizce, C1 İleri

Yaptığı Tezler

Doktora, Lifetime System Reliability Prediction of Multiple Structure Types in a Bridge Network, (Volumes I, II, III) Total of 1,150 pages, University of Colorado at Boulder, Faculty of Engineering, Department of Civil, Environmental and Architectural Engineering, 2002

Yüksek Lisans, Computer Aided Structural Design of a Lunar Radio Telescope, University of New Mexico, Faculty of Engineering, Department Of Civil Engineering , 1989

Araştırma Alanları

Yapı , Yapı Mühendisliği, Çelik Yapılar, Yapıların Performansı, Betonarme Yapılar, Yapılarda Onarım ve Güçlendirme

Akademik Unvanlar / Görevler

Doç.Dr., Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Mühendislik Bilimleri Bölümü, 2014 - Devam Ediyor

Yrd.Doç.Dr., Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Mühendislik Bilimleri Bölümü, 2004 - 2014

Araştırma Görevlisi, University of Colorado at Boulder, Faculty of Engineering, Department of Civil, Environmental and Architectural Engineering, 1997 - 2002

Verdiği Dersler

- ES224 - STRENGTH OF MATERIALS, Lisans, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2008 - 2009, 2007 - 2008, 2006 - 2007
- ES223 - STATICS AND STRENGTH OF MATERIALS, Lisans, 2014 - 2015, 2012 - 2013, 2011 - 2012, 2009 - 2010, 2008 - 2009, 2007 - 2008, 2006 - 2007
- ES221 - ENGINEERING MECHANICS, Lisans, 2014 - 2015, 2013 - 2014, 2010 - 2011, 2007 - 2008, 2004 - 2005
- ES506 - RELIABILITY, Yüksek Lisans, 2005 - 2006, 2004 - 2005
- CVEN 3227 - Probability, Statistics, and Decision for Civil Engineers, Lisans, 1999 - 2000
- CVEN 5555 - Structural Reliability, Lisans, 1999 - 2000
- CVEN 3161 - Mechanics of Materials, Lisans, 1997 - 1998

Yönetilen Tezler

- AKGÜL F., Classification of bridge damages and costs for optimal maintenance planing based on markov decision process, Yüksek Lisans, R.ASLZAD(Öğrenci), 2016
- AKGÜL F., Time variant component and system reliability analysis of bridges, Yüksek Lisans, V.GHASEMNEJAD(Öğrenci), 2015
- AKGÜL F., Development of the bridge management system for Turkey by introducing a condition rating model based on damage types, Doktora, F.MASOUMI(Öğrenci), 2014
- AKGÜL F., Lifetime condition prediction for bridges, Doktora, H.BAYRAK(Öğrenci), 2011

Araştırma Altyapısı Bilgileri

- Akgül F., Mühendislik Bilimleri Bölümü Hesaplama Altyapısı - Server (Sistem) Odası Kurulması, Ocak 2010
- Akgül F., Köprü Yönetim Sistemi Geliştirme Laboratuvarının kurulması, Ocak 2010
- Akgül F., Köprü Hasar Tespit ve Muayene Laboratuvarının kurulması, Ocak 2010

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Inspection and evaluation of a network of concrete bridges based on multiple NDT techniques**
AKGÜL F.
STRUCTURE AND INFRASTRUCTURE ENGINEERING, cilt.17, ss.1076-1095, 2020 (SCI-Expanded)
- II. **Bridge management in Turkey: a BMS design with customised functionalities**
AKGÜL F.
STRUCTURE AND INFRASTRUCTURE ENGINEERING, cilt.12, sa.5, ss.647-666, 2016 (SCI-Expanded)
- III. **Development of a bridge management system incorporating a newly developed model for element condition evaluation based on damage effects**
AKGÜL F.
STRUCTURE AND INFRASTRUCTURE ENGINEERING, cilt.9, sa.12, ss.1206-1224, 2013 (SCI-Expanded)
- IV. **Lifetime Performance Analysis of Existing Reinforced Concrete Bridges. I: Theory**
Akguel F., Frangopol D. M.
JOURNAL OF INFRASTRUCTURE SYSTEMS, cilt.11, sa.2, ss.122-128, 2005 (SCI-Expanded)
- V. **Lifetime Performance Analysis of Existing Reinforced Concrete Bridges. II: Application**
Akguel F., Frangopol D. M.
JOURNAL OF INFRASTRUCTURE SYSTEMS, cilt.11, sa.2, ss.129-141, 2005 (SCI-Expanded)

- VI. **Lifetime performance analysis of existing steel girder bridge superstructures**
Akgul F., Frangopol D.
JOURNAL OF STRUCTURAL ENGINEERING-ASCE, cilt.130, sa.12, ss.1875-1888, 2004 (SCI-Expanded)
- VII. **Lifetime performance analysis of existing prestressed concrete bridge superstructures**
Akgul F., Frangopol D.
JOURNAL OF STRUCTURAL ENGINEERING-ASCE, cilt.130, sa.12, ss.1889-1903, 2004 (SCI-Expanded)
- VIII. **Time-dependent interaction between load rating and reliability of deteriorating bridges**
Akgul F., Frangopol D.
ENGINEERING STRUCTURES, cilt.26, sa.12, ss.1751-1765, 2004 (SCI-Expanded)
- IX. **Bridge rating and reliability correlation: Comprehensive study for different bridge types**
AKGÜL F., Frangopol D.
Journal Of Structural Engineering-Asce, cilt.130, ss.1063-1074, 2004 (SCI-Expanded)
- X. **Computational platform for predicting lifetime system reliability profiles for different structure types in a network**
AKGÜL F., Frangopol D.
Journal Of Computing In Civil Engineering, cilt.18, ss.92-104, 2004 (SCI-Expanded)
- XI. **Rating and reliability of existing bridges in a network**
AKGÜL F., Frangopol D. M.
Journal Of Bridge Engineering, cilt.8, ss.383-392, 2003 (SCI-Expanded)
- XII. **Structural design of a lunar radio telescope using interactive CAD**
AKGÜL F., Gerstle W. H. , Johnson S.
Journal Of Aerospace Engineering, cilt.5, 1992 (SCI-Expanded)

Diğer Dergilerde Yayınlanan Makaleler

- I. **A Damage-based Maintenance and Repair Optimization Method Using Linear Programming for Deteriorating Systems**
AKGÜL F., Masoumi F.
IACSIT International Journal of Engineering and Technology, 2012 (Hakemli Dergi)
- II. **Yielding and Elastoplastic Deformation of Annular Disks of a Parabolic Section Subject to External Compression**
AKGÜL F., ERASLAN A. N.
Turkish Journal of Engineering and Environmental Sciences, cilt.29, sa.1, ss.51-60, 2005 (Scopus)

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **Multi-Fidelity Aerodynamic Dataset Generation of a Fighter Aircraft with a Deep Neural-Genetic Network**
Millidere M., Gomec F. S. , Kurt H. B. , AKGÜL F.
AIAA Aviation and Aeronautics Forum and Exposition, AIAA AVIATION Forum 2021, Virtual, Online, 2 - 06 Ağustos 2021
- II. **Evaluation of inspection data based on multiple NDT techniques for a bridge network**
Akgül F.
LCM 2019 - Workshop on Life-Cycle Management, Rotterdam, Hollanda, 27 - 29 Ekim 2019, ss.1
- III. **Time-variant reliability analysis incorporating multiple deterioration and live load models**
Berenji V. G. , AKGÜL F.
5th International Symposium on Life-Cycle Civil Engineering (IALCCE), Delft, Hollanda, 16 - 20 Ekim 2016, ss.1033-1037
- IV. **A Correlation Study for Concrete Resistance vs. Ultrasonic Pulse Velocity for a Group of Reinforced**

Concrete Bridges

AKGÜL F.

Proceedings of the 19th Congress of IABSE Stockholm, Challenges in Design and Construction of an Innovative and Sustainable Built Environment, pp. 1834., Stockholm, Sweden, 21 - 23 Eylül 2016

- V. **Condition Assessment Based on Visual Inspection and Nondestructive Evaluation of Highway Bridges in Turkey**
AKGÜL F., Masoumi F.
NDE/NDT for Structural Materials Technology for Highways and Bridges, ASNT, The American Society for Nondestructive Testing, Grand Hyatt Washington, Washington, D.C., USA, 25 - 27 Ağustos 2014
- VI. **Inspection, testing and evaluation of reinforced concrete bridges in Turkey**
AKGÜL F., Masoumi F.
SMAR2013, Second Conference on Smart Monitoring, Assessment and Rehabilitation of Civil Structures, 9-11 September 2013, Istanbul Technical University, ITU, Istanbul, Turkey., 9 - 11 Eylül 2013
- VII. **A pilot study for inspection, damage assessment and management of bridges in Turkey**
AKGÜL F., Masoumi F.
SMAR2013, Second Conference on Smart Monitoring, Assessment and Rehabilitation of Civil Structures, 9-11 September 2013, Istanbul Technical University, ITU, Istanbul, Turkey., 9 - 11 Eylül 2013
- VIII. **Evaluation of Condition States of Bridge Elements Based on the Intensity of Different Damage Types**
AKGÜL F., Masoumi F.
10th International Congress on Advances in Civil Engineering, 17-19 October 2012, Middle East Technical University, Ankara, Turkey, p. 293., 17 - 19 Ekim 2012
- IX. **Optimization of Maintenance, Repair and Rehabilitation Actions in a Novel Bridge Management System**
AKGÜL F., Masoumi F.
10th International Congress on Advances in Civil Engineering, 17-19 October 2012, Middle East Technical University, Ankara, Turkey, p. 261., 17 - 19 Ekim 2012
- X. **A BMS development project with an integrated inspection program**
Akgul F.
6th International Conference on Bridge Maintenance, Safety and Management (IABMAS), Stresa, İtalya, 8 - 12 Temmuz 2012, ss.2659-2665
- XI. **Development of a Computational Tool for Performance Prediction Models for Bridges**
Akgül F., Bayrak H.
9th International Congress on Advances in Civil Engineering, Trabzon, Türkiye, 27 - 30 Eylül 2010
- XII. **Development of a Bridge Inspection and Management Project**
AKGÜL F.
34th IABSE Symposium, Large Structures and Infrastructures for Environmentally Constrained and Urbanized Areas, Venice, Italy, 22 - 24 Eylül 2010
- XIII. **Probabilistic performance prediction modeling for bridges considering maintenance effects within a combined computation, visualization and programming environment**
Akgul F.
5th International Conference on Bridge Maintenance, Safety and Management (IABMAS), Pennsylvania, Amerika Birleşik Devletleri, 11 - 15 Temmuz 2010, ss.1361-1366
- XIV. **Yapıların yaşamboyu yıpranma eğrilerinin simülasyon ile modellenmesi**
AKGÜL F.
Proceedings of the XVI. UMK-Ulusal Mekanik Kongresi Bildiriler (National Mechanics Congress), Kayseri, Turkey, Türkiye, 22 - 26 Haziran 2009
- XV. **Development strategies for a web-based bridge maintenance management system**
AKGÜL F.
Proceedings of the IABSE (International Association for Bridge and Structural Engineering) Symposium, Improving Infrastructure Worldwide, Weimar, Germany, 19 - 21 Eylül 2007
- XVI. **Güvenilirlik analiz metodunun köprülere uygulanması (Applicaton of the reliability methods to**

bridges)

AKGÜL F., BAYRAK H.

Proceedings of the XV. UMK-Ulusal Mekanik Kongresi Bildiriler (National Mechanics Congress), Isparta, Turkey. Teorik ve Uygulamalı Türk Milli Komitesi. Süleyman Demirel Üniversitesi Basımevi, Türkiye, 5 - 09 Eylül 2007

- XVII. Criteria for a bridge management system based on inspection, monitoring and maintenance practices**
Akgul F.
5th International Workshop on Life-Cycle Cost Analysis and Design of Civil Infrastructure Systems, Seoul, Güney Kore, 16 - 18 Ekim 2006, ss.79-84
- XVIII. Probabilistic bridge performance assessment, maintenance, monitoring and management**
AKGÜL F., Frangopol D.
Proceedings of ICOSSAR'05 (9th International Conference on Structural Safety and Reliability), Rome, Italy, 19 - 22 Haziran 2005
- XIX. Reliability deterioration prediction of an existing bridge using a probability-based analysis tool**
AKGÜL F., Frangopol D.
Bridge Maintenance, Safety, Management and Cost, Ed. By Watanabe, Frangopol Utsunomiya, Taylor Francis Group, London, Proceedings of IABMAS'04 (International Association for Bridge Maintenance and Safety), Kyoto, Japan, 18 - 22 Ekim 2004
- XX. State of the art versus state of the practice in bridge evaluation**
AKGÜL F., Frangopol D.
Proceedings of the 11th IFIP (International Federation for Information Processing) Working Group 7.5, Working Conference on Reliability and Optimization of Structural Systems, Banff, Calgary, Canada, 1 - 07 Kasım 2003
- XXI. An integrated computational platform for system reliability-based analysis of mixed-type highway bridge networks**
AKGÜL F., Frangopol D.
Proceedings of the 2nd International Structural and Construction Conference ISEC-02, Rome, Italy, 23 - 26 Eylül 2003
- XXII. Probabilistic analysis of bridge networks based on system reliability and Monte Carlo simulation**
AKGÜL F., Frangopol D.
9th International Conference on Applications of Statistics and Probability in Civil Engineering ICASP9, San Francisco, California, USA, 6 - 09 Temmuz 2003
- XXIII. Forecasting the Lifetime Safety and Serviceability for the Management of a Network of Highway Bridges in Colorado**
AKGÜL F., Frangopol D.
9th International Bridge Management Conference IBMC03, Orlando, Florida, USA, 28 - 30 Nisan 2003
- XXIV. Probabilistic Models for Predicting the Failure Time of Deteriorating Systems**
AKGÜL F., Kong J. S. , Frangopol D., Xi Y.
Proceedings of the First M.I.T. Conference in Computational Fluid and Solid Mechanics, Massachusetts Institute of Technology, Cambridge, Massachusetts, USA, Cambridge, Massachusetts, Amerika Birleşik Devletleri, 12 - 14 Haziran 2001
- XXV. Maintaining Reliability of Steel Bridges Based on Minimum Expected Cost**
AKGÜL F., Kong J. S. , Gharaibeh E. S. , Frangopol D.
IFIP WG 7.5 on Reliability and Optimization of Structural Systems, Ann Arbor, Michigan, Amerika Birleşik Devletleri, 25 - 27 Eylül 2000
- XXVI. Computer Aided Analysis of a Lunar Radio Telescope Antenna**
AKGÜL F., Gerstle W., Johnson S. W.
Proceedings of SPACE 90 Conference: Engineering, Construction and Operations in Space, Albuquerque, New Mexico, Sponsored by the Aerospace Division of the American Society of Civil Engineers, pp. 697-706, 7 - 14 Nisan 1990
- XXVII. A Lunar steerable parabolic dish design**
AKGÜL F., Gerstle W., Johnson S. W.
Proceedings of SPACE 88 Conference: Engineering, construction, and operations in space, Albuquerque, New

Mexico, Sponsored by the Aerospace Division of the American Society of Civil Engineers, Ed. Stewart W. Johnson and John P. Wetzel, 29 - 31 Ağustos 1988

Diğer Yayınlar

- I. **RELNET (2002), Sistem Ağlarının Güvenilirliği**
Akgül F.
Teknik Rapor, 2002
- II. **REHAB (2000), Yıpranan bir Sistemler Grubunun Bakım/Onarım Olasılığı ve Maliyetinin Tahmini için bir Program**
Akgül F.
Teknik Rapor, 2000
- III. **MONTE (2000) Monte Karlo Simülasyon Programı**
Akgül F.
Teknik Rapor, 2000
- IV. **FMAINT (2000) Yıpranan bir Sistemin Performans Hedefinin İlk Geçiş Zamanının Olasılık Dağılımının Tahmini için bir Program**
Akgül F.
Teknik Rapor, 2000

Desteklenen Projeler

AKGÜL F., TÜBİTAK Projesi, Karayolları Köprü Yönetim Sisteminin Geliştirilmesi, 2009 - 2012

Akgül F., Yükseköğretim Kurumları Destekli Proje, Köprüler için Yaşamboyu Durum Tahmini, 2005 - 2008

Akgül F., Yükseköğretim Kurumları Destekli Proje, Betonarme Yapıların Sismik Yükleme Karşı Güvenilirliği, 2004 - 2007

Akgül F., Yükseköğretim Kurumları Destekli Proje, Zamanla Değişken Yük ve Mukavemet Özelliklerine sahip Yapı Sistemlerinin Güvenilirlik Endeksinin Belirlenmesi , 2005 - 2006

Akgül F., Yükseköğretim Kurumları Destekli Proje, Zamana bağlı yük ve mukavemet özelliklerine sahip yapı sistemlerinin güvenilirlik endeksinin belirlenmesi, 2005 - 2006

Akgül F., Frangopol D., Desteklenmiş Diğer Projeler, Life-Cycle Cost Model Simulator for Decision Making in Bridge Network Management, NSF, CMMI Division of Civil, Mechanical, and Manufacturing Innovation, Award Number: CMS-0217290, University of Colorado at Boulder, Colorado, USA, October 1, 2002 - August 31, 2006, (Prof. Dan M. Frangopol, project director), researcher., 2002 - 2006

Akgül F., Frangopol D., Desteklenmiş Diğer Projeler, Optimum Life-Cycle Bridge Maintenance Planning Based on System Reliability, NSF, CMMI Division of Civil, Mechanical, and Manufacturing Innovation, Award Number: CMS-9912525, University of Colorado at Boulder, Colorado, USA, April 19, 2000 - April 19, 2004, (Prof. Dan M. Frangopol, project director), researcher., 2000 - 2004

Akgül F., Gerstle W., Desteklenmiş Diğer Projeler, Finite Element and Boundary Element Modeling of Crack Propagation in Three-Dimensional Structures, NSF, CMMI Division of Civil, Mechanical, and Manufacturing Innovation, Award Number: CMS- 8706409, University of New Mexico, Albuquerque, New Mexico, USA, August 1, 1987- January 31, 1990, (Prof. Walter H. Gerstle, project director), researcher., 1987 - 1990

Akgül F., Burns J., Desteklenmiş Diğer Projeler, NSF Project, Physics and Astronomy Department, University of New Mexico, Albuquerque, New Mexico, USA, September 1987- December 1989, (Prof. Jack O. Burns, project director), researcher., 1987 - 1989

Bilimsel Kuruluşlardaki Üyelikler / Görevler

IALCEE, International Association for Life-Cycle Civil Engineering, Üye, 2006 - Devam Ediyor
IABMAS, Member, International Association for Bridge Maintenance and Safety, Üye, 1997 - Devam Ediyor
IABSE, International Association of Bridge and Structural Engineering, Üye, 2007 - 2010
ASCE, American Society of Civil Engineers, Üye, 2004 - 2007

Bilimsel Hakemlikler

JOURNAL OF BRIDGE ENGINEERING, SCI Kapsamındaki Dergi, Mayıs 2011
JOURNAL OF BRIDGE ENGINEERING, SCI Kapsamındaki Dergi, Nisan 2011
STRUCTURE AND INFRASTRUCTURE ENGINEERING, SCI Kapsamındaki Dergi, Şubat 2011
Korean Journal of Civil Engineering, Diğer Dergiler, Şubat 2011
STRUCTURE AND INFRASTRUCTURE ENGINEERING, SCI Kapsamındaki Dergi, Ocak 2011
Korean Journal of Civil Engineering, Diğer Dergiler, Ocak 2011
JOURNAL OF BRIDGE ENGINEERING, SCI Kapsamındaki Dergi, Mart 2010
JOURNAL OF BRIDGE ENGINEERING, SCI Kapsamındaki Dergi, Şubat 2010
JOURNAL OF BRIDGE ENGINEERING, SCI Kapsamındaki Dergi, Ocak 2010
JOURNAL OF COMPUTING IN CIVIL ENGINEERING, SCI Kapsamındaki Dergi, Ocak 2008
JOURNAL OF COMPUTING IN CIVIL ENGINEERING, SCI Kapsamındaki Dergi, Şubat 2007
ENGINEERING STRUCTURES, SCI Kapsamındaki Dergi, Ocak 2007
JOURNAL OF COMPUTING IN CIVIL ENGINEERING, Hakemli Bilimsel Dergi, Ocak 2007

Bilimsel Araştırma / Çalışma Grubu Üyelikleri

Task Group 2 (Reliability-Based Structural System Performance Indicators) Of The Asce Technical Council On Life-Cycle Performance, Safety, Reliability, And Risk Of Structural Systems. Chair: Prof. Michel Ghosn., Lehigh University, United States Of America, Task Group 2 (Reliability-Based Structural System Performance Indicators) of the ASCE Technical Council on Life-Cycle Performance, Safety, Reliability, and Risk of Structural Systems., 2010 - 2013

Metrikler

Yayın: 45
Atıf (WoS): 294
Atıf (Scopus): 351
H-İndeks (WoS): 9
H-İndeks (Scopus): 9

Kongre ve Sempozyum Katılımı Faaliyetleri

Tahratsız Betonarme Muayene Cihazları Semineri, ODTÜ Kültür ve Kongre Merkezi, C Salonu, Ankara, in collaboration with James Instruments, Inc. (USA), Fore Test Cihazları A.Ş., 4-7 Mayıs 2010., Çalışma Grubu, Ankara, Türkiye, 2010

Akademi Dışı Deneyim

Şirket, University of Colorado at Boulder, Boulder, Colorado
Şirket, GAMA Industrial Plants Manufacturing and Erection Corporation, Turkey
Şirket, Flintco Builders, Inc, USA
Şirket, Bradbury & Stamm Construction Inc, USA

Şirket, Sargent & Lundy Engineers, USA

Şirket, University of New Mexico , Albuquerque, New Mexico,