

SERKAN BEKİROĞLU

PROF.

Address : Yıldız Teknik Üniversitesi İnşaat Fakültesi İnşaat Mühendisliği Bölüm Başkanlığı, B Blok Zemin Kat, Davutpaşa Kapüsü, 34220, Esenler/İstanbul

International Researcher IDs

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Publons / Web Of Science ResearcherID: AAZ-6866-2020

ScopusID: 22933724600

Yoksis Researcher ID: 3695



Learning Knowledge

Doctorate
2003 - 2010

Karadeniz Technical University, Mühendislik Fakültesi, İnşaat Mühendisliği, Turkey

Postgraduate
2000 - 2003

Karadeniz Technical University, Mühendislik Ve Mimarlık, İnşaat Mühendisliği, Turkey

Undergraduate
1996 - 2000

Karadeniz Technical University, Mühendislik Ve Mimarlık, İnşaat Mühendisliği, Turkey

Certificates, Courses and Trainings

Education Management and Planning, High Performance Computations for Engineering, Faculty of Engineering, University of Pécs, 2006

Education Management and Planning, Erasmus Programı, Ruhr Üniversitesi, 2004

Education Management and Planning, İngilizce Eğitim Programı, Bilkent Üniversitesi, 2002

Dissertations

Doctorate, P-yöntemine dayalı üç boyutlu sonlu elemanlar ile yapıların elastostatik ve elastodinamik analizi, Karadeniz Technical University, 2010

Postgraduate, Genetik algoritma ile çelik çerçevelerin optimum boyutlandırılması, Karadeniz Technical University, 2003

Academic Titles / Tasks

Professor
2023 - Continues

Yıldız Technical University, Faculty Of Civil Engineering, Civil Engineering Department

Associate Professor
2017 - 2023

Yıldız Technical University, Faculty Of Civil Engineering, Civil Engineering Department

Assistant Professor
2012 - 2017

Yildiz Technical University, Faculty Of Civil Engineering, Civil Engineering
Department

Assistant Professor
2010 - 2012

Gumushane University, Mühendislik Fakültesi, İnşaat Mühendisliği

Lecturer
2008 - 2010

Gumushane University, Mühendislik Fakültesi, İnşaat Mühendisliği

Lecturer
2007 - 2008

Karadeniz Technical University, Gümüşhane Mühendislik Fakültesi, İnşaat
Mühendisliği Bölümü

Research Assistant
2001 - 2007

Karadeniz Technical University, - , İnşaat Mühendisliği

Supported Projects

1. BEKİROĞLU S., AYVAZ Y., ARSLAN G., SEVİM B., YILMAZ O., YILMAZ M. O., FIRAT ALEMDAR Z., Koyuncu T., ALEMDAR F., Uludoğan A., Project Supported by Higher Education Institutions, Similasyon Ortamında Geliştirilen Sürtünmeli ve Elastomerli Sismik Birleşim Aparatının Kısmi Prototip Testleri, 2022 - Continues
2. BEKİROĞLU S., MERMER S., Project Supported by Higher Education Institutions, Çok Katlı Betonarme Binaların Deprem Etkisi Altında Göçme Simülasyonları, 2016 - Continues
3. Bekiroğlu S., Alemdar F., Sevim B., Altunışık A. C., Adanur S., Ateş Ş., Genç A. F., Okur F. Y., Günaydın M., Demirkır C., et al., Project Supported by Higher Education Institutions, Mühendislik Yapılarının Dinamik Yükler Altındaki Performanslarının Yüksek Kapasiteli Sarsma Masası Kullanılarak Belirlenmesi, 2018 - 2021
4. SEVİM B., ARSLAN G., BEKİROĞLU S., AYVAZ Y., Project Supported by Higher Education Institutions, Ölçeklendirilmiş Betonarme Çerçevelerin Dinamik Davranışının Belirlenmesi, 2017 - 2020
5. BEKİROĞLU S., ALEMDAR F., ARSLAN G., AYVAZ Y., SEVİM B., 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
6. Bekiroğlu S., Akpınar A., Bingölbali B., TUBITAK Project, Karadeniz'in güney-batı sahillerinin sahip olduğu dalga enerji potansiyelinin zamansal ve mekansal analizi, 2015 - 2017
7. Alemdar F., Fırat Alemdar Z., Sevim B., Arslan G., Ayvaz Y., Şahin A., Bekiroğlu S., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Sönümleyici mesnet test merkezi, 2015 - 2016

Research Infrastructure Information

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

Published journal articles indexed by SCI, SSCI, and AHCI

1. **Biaxial cyclic behavior of bolted end-plate connection to I-column reformed by box-plates**
Yılmaz O., Bekiroğlu S.
Engineering Structures, vol.255, 2022 (SCI-Expanded)

2. **Prediction of Joint Shear Strain–Stress Envelope Through Generalized Regression Neural Networks**
YILMAZ M. O., BEKİROĞLU S.
Arabian Journal for Science and Engineering, vol.46, no.11, pp.10819-10833, 2021 (SCI-Expanded)
3. **Wave energy potential and variability for the south west coasts of the Black Sea: The WEB-based wave energy atlas**
Bingölbali B., Jafali H., Akpınar A., Bekiroğlu S.
RENEWABLE ENERGY, vol.154, pp.136-150, 2020 (SCI-Expanded)
4. **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, no.3, 2019 (SCI-Expanded)
5. **Seismic Performance of Post-Northridge Welded Connections**
Yılmaz O., Bekiroğlu S.
LATIN AMERICAN JOURNAL OF SOLIDS AND STRUCTURES, vol.15, 2018 (SCI-Expanded)
6. **Determination of structural performance of 3D steel pipe rack suspended scaffolding systems**
ARSLAN G., SEVİM B., BEKİROĞLU S.
STRUCTURAL ENGINEERING AND MECHANICS, vol.64, no.5, pp.671-681, 2017 (SCI-Expanded)
7. **EXPERIMENTAL EVALUATION OF TIE BAR EFFECTS ON STRUCTURAL BEHAVIOR OF SUSPENDED SCAFFOLDING SYSTEMS**
SEVİM B., BEKİROĞLU S., ARSLAN G.
ADVANCED STEEL CONSTRUCTION, vol.13, no.1, pp.62-77, 2017 (SCI-Expanded)
8. **A new developed approach for EDL induced from a single concentrated force**
Bekiroğlu S., Arslan G., Sevim B.
STEEL AND COMPOSITE STRUCTURES, vol.21, pp.1105-1119, 2016 (SCI-Expanded)
9. **THE EFFECT OF REINFORCING PANEL ZONE OF BOLTED END PLATE COLUMN BEAM CONNECTIONS**
Yılmaz O., Bekiroğlu S.
JOURNAL OF THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GAZI UNIVERSITY, vol.31, no.2, pp.241-253, 2016 (SCI-Expanded)
10. **Doğrusal Olmayan Rüzgâr Etkisindeki Dairesel Kesitlerde Geliştirilmiş Sonlu Elemanlar Uygulaması**
Bekiroğlu S., Ayvaz Y.
Teknik Dergi, vol.26, no.2, pp.7027-7054, 2015 (SCI-Expanded)
11. **Performance evaluation of parametric models in the hindcasting of wave parameters along the south coast of Black Sea**
Akpınar A., Özger M., BEKİROĞLU S., Kömürcü M. İ.
INDIAN JOURNAL OF GEO-MARINE SCIENCES, vol.43, no.6, pp.899-914, 2014 (SCI-Expanded)
12. **The comparison of different mathematical methods to determine the BOD parameters, a new developed method and impacts of these parameters variations on the design of WWTPs**
Sibil R., Berkun M., BEKİROĞLU S.
APPLIED MATHEMATICAL MODELLING, vol.38, no.2, pp.641-658, 2014 (SCI-Expanded)
13. **Evaluation of rigid-end offset effect on seismic behavior of a structure subjected to Van earthquake**
Bekiroğlu S., Sahin A., Sevim B., Ayvaz Y.
STRUCTURAL ENGINEERING AND MECHANICS, vol.47, pp.857-879, 2013 (SCI-Expanded)
14. **Weight minimization of trusses with genetic algorithm**
DEDE T., Bekiroglu S., AYVAZ Y.
APPLIED SOFT COMPUTING, vol.11, no.2, pp.2565-2575, 2011 (SCI-Expanded)
15. **Implementation of different encoding types on structural optimization based on adaptive genetic algorithm**
Bekiroglu S., DEDE T., Ayvaz Y.
FINITE ELEMENTS IN ANALYSIS AND DESIGN, vol.45, no.11, pp.826-835, 2009 (SCI-Expanded)
16. **Shear locking-free analysis of thick plates using Mindlin's theory**
Özdemir Y. İ., Bekiroğlu S., Ayvaz Y.
STRUCTURAL ENGINEERING AND MECHANICS, vol.27, pp.311-331, 2007 (SCI-Expanded)

Articles Published in Other Journals

1. **ASSESSMENT OF WIND PRESSURE BY EUROCODE-1, TS 498 AND CFD ANALYSES FOR DOUBLE-SLOPED ROOF BUILDING**
Zeyrek H., Bekiroğlu S.
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES-SIGMA MUHENDISLIK VE FEN BILIMLERI DERGISI, vol.37, pp.251-272, 2019 (Peer-Reviewed Journal)
2. **A Study on Effect of Sizing Bolt Hole in Single-Lap Connection Using FEA**
Zafer A., YILMAZ O., BEKİROĞLU S.
Journal of Scientific Research and Reports, vol.19, no.1, pp.1-14, 2018 (Peer-Reviewed Journal)
3. **Least Weight Design of Space Trusses by using Value Encoding in GA with Discrete Design Variables**
Dede T., Bekiroğlu S., Ayvaz Y.
e-Journal of New World Sciences Academy, vol.4, no.3, pp.414-427, 2009 (Peer-Reviewed Journal)

Books & Book Chapters

1. **A finite element program based on object-oriented framework for spatial trusses**
Toğan V., Bekiroğlu S.
in: Advanced and Innovations in Systems, Computing Sciences and Software Engineering, Khaled Elleithy, Editor, Springer, London/Berlin , Dordrecht, pp.445-450, 2007

Refereed Congress / Symposium Publications in Proceedings

1. **Suggesting Box-plates for I-column around Weak-axis in the Bolted End-plate Connection**
Yılmaz O., Bekiroğlu S.
14th International Congress on Advances in Civil Engineering (ACE2020-21), İstanbul, Turkey, 6 - 08 September 2021, pp.1032-1039
2. **Development of a Frictional and Elastomeric Seismic Joint Apparatus for Use in Buildings**
Yılmaz O., Bekiroğlu S.
14th International Congress on Advances in Civil Engineering (ACE2020-21), İstanbul, Turkey, 6 - 08 September 2021, pp.260-267
3. **A Research Study on Dynamic Interaction of Adjacent Deck on Pile Wharf Modules**
Karakaş N., Bekiroğlu S.
International Civil Engineering & Architecture Conference (ICEARC 2019), Trabzon, Turkey, 17 - 20 April 2019, pp.2094-2108
4. **INVESTIGATION OF REINFORCED CONCRETE BEAM-COLUMN JOINT BEHAVIOUR THROUGH NUMERICAL SIMULATIONS**
Yılmaz M. O., Demirbağ A. T., Bekiroğlu S.
International Civil Engineering and Architecture Conference 2019, Trabzon, Turkey, 17 - 20 April 2019, pp.1519-1528
5. **ALIN LEVHALI BULONLU KOLON-KİRİŞ BİRLEŞİMİNİN ÇEVİRİMSSEL 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
6. **Numerical Simulation of a Building on Shaking Table**
Abdulghafoor H. M., Bekiroğlu S.
8th International Advanced Technologies Symposium, Elazığ, Turkey, 19 - 20 October 2017, pp.2461-2467
7. **Investigation of Reinforcing Beam-Web on Bolted Unstiffened End-Plate Connections**
Yılmaz O., Bekiroğlu S.

XVII International Scientific Conference VSU'2017, Sofija, Bulgaria, 8 - 09 June 2017, pp.142-149

8. **Finite Element Modelling Of A Retaining Wall With Functionally Graded Material**
Alimam H., BEKİROĞLU S.
1th INTERNATIONAL CONFERENCE ON ADVANCES IN SCIENCE AND ARTS, İstanbul, Turkey, 29 March 2017, pp.278-289
9. **Performance Evaluation of Weak-Axis Steel Moment Connections**
Yılmaz O., Bekiroğlu S.
Proceedings ?VI International Scientific Conference VSU'2016, Sofija, Bulgaria, 9 - 10 June 2016, pp.352-358
10. **DBYBHY-2007'deki Moment Aktaran Kaynaklı Birleşimlerin Monotonik Yükleme Altındaki Davranışı**
Yılmaz O., Bekiroğlu S.
6. Çelik Yapılar Sempozyumu, Eskişehir, Turkey, 15 - 17 October 2015, pp.117-126
11. **Response spectral analysis of orthotropic steel deck as per Turkish local design spectrums**
Fettahoğlu A., Bekiroğlu S., Bal İ. E.
International Conference On Civil And Environmental Engineering, Nevşehir, Turkey, 20 - 23 May 2015, pp.1123-1134
12. **DBYBHY-2007'ye Göre Moment Aktaran Bulonlu Birleşimlerin Sonlu Elemanlar Yöntemi ile Analizi**
Yılmaz O., Bekiroğlu S.
Sekizinci Ulusal Deprem Mühendisliği Konferansı, İstanbul, Turkey, 11 - 15 May 2015, pp.383-394
13. **Numerical Simulations of Bolted Steel Connections in Single and Double Shear Under Pretension Effect**
Bekiroğlu S., Yılmaz O.
11th International Congress on Advances in Civil Engineering (ACE 2014), İstanbul, Turkey, 21 - 25 October 2014, pp.1-7
14. **Behaviour of Pretensioned Bolted Steel Column – Beam Connections Subjected to Monotonic Loading**
Yılmaz O., Bekiroğlu S.
11th International Congress on Advances in Civil Engineering (ACE 2014), İstanbul, Turkey, 21 - 25 October 2014, pp.1-8
15. **Betonarme Yapı Üzerine Çelik Taşıyıcı Sisteme Sahip Çok Amaçlı Salon Tasarımı**
Sevim B., Şahin A., Ayvaz Y., Bekiroğlu S.
5. Çelik Yapılar Sempozyumu, İstanbul, Turkey, 13 - 15 November 2013, pp.297-305
16. **Usage of An Infill-Wall Model Having Only Compression Capacity to Determine Seismic Behavior.**
Eser N., Bekiroğlu S., Ayvaz Y.
International Van Earthquake Symposium, Van, Turkey, 23 - 27 October 2013, pp.1-10
17. **Van Gar Binası Modelinde Rijit Birleşim Bölgesi Tanımlamanın Van Depremleri Altında Doğrusal Olmayan Dinamik Analiz ile İrdelenmesi**
Bekiroğlu S., Şahin A., Sevim B., Ayvaz Y.
İnşaat Mühendisliğinde 100. Yıl Teknik Kongresi, İstanbul, Turkey, 22 November 2012, pp.1-11
18. **Effects of Considering Kinematic Hardening in Stress Calculations**
Fettahoğlu A., Bekiroğlu S.
10th International Congress on Advances in Civil Engineering, Ankara, Turkey, 17 - 19 October 2012, pp.1-10
19. **Nonlinear Modeling of Reinforced Concrete Beam**
Dede T., Ayvaz Y., Bekiroğlu S., Çelik H.
The 8th International Congress on Advances in Civil Engineering, Gazimagusa, Cyprus (Kkct), 15 - 17 September 2008, pp.133-140
20. **Evaluation of h, p and hp FEM for Elastostatic Plane Problems**
Bekiroğlu S., Ayvaz Y., İtir Özdemir Y.
The 8th International Congress on Advances in Civil Engineering, Gazimagusa, Cyprus (Kkct), 15 - 17 September 2008, pp.123-131
21. **Effects of Some Parameters in a Genetic Algorithm for Large Truss Structures**
Dede T., Bekiroğlu S., Ayvaz Y.

The Ninth International Conference on the Application of Artificial Intelligence to Civil, Structural and Environmental Engineering: Soft Computing Tools for Structural Optimisation, Sighghiewi, Malta, 18 - 21 September 2007, pp.1-11

22. **Parallelization of A Serial Frame Analysis Program Based on MPI**

Bekiroğlu S., Lembach K. R.

Proceeding of ACE 2006 Advances in Civil Engineering 7th International Conference, İstanbul, Turkey, 11 - 13 October 2006, pp.1-12

23. **Genetik Algoritmalarıda Bazı Parametrelerin Etkisi**

Bekiroğlu S., Ayvaz Y., Dede T.

The seventh International Congress on Advances in Civil Engineering, ACE 2006, İstanbul, Turkey, 11 - 13 October 2006, pp.1-10

24. **Development and Verification of hp-FEM for Elastostatic Plane Problems**

Bekiroğlu S., Kuhl D.

Proceeding of ACE 2006 Advances in Civil Engineering 7th International Conference, İstanbul, Turkey, 11 - 13 October 2006, pp.1-11

25. **Betonarme Yapıların Lineer Olmayan Davranışının Modellenmesi**

Dede T., Çelik H., Bekiroğlu S.

Proceeding of ACE 2006 Advances in Civil Engineering 7th International Conference, İstanbul, Turkey, 11 - 13 October 2006, pp.1-10

26. **Optimization of Steel Frame with Genetic Algorithm Using Different Encoding Types**

Bekiroğlu S., Ayvaz Y., Dede T.

The 6th International Conference on Advances in Civil Engineering, ACE 2004, İstanbul, Turkey, 6 - 08 October 2004, pp.241-250

27. **Genetik Algoritma ile Çelik Düzlem Çerçvelerin Optimizasyonu**

Bekiroğlu S., Ayvaz Y., Dede T.

Türkiye İnşaat Mühendisliği XVII. Teknik Kongre ve Sergisi, İstanbul, Turkey, 15 - 17 April 2004, pp.1-12

28. **Optimization of Truss Structures Using Value Encoding in a Genetic Algorithm**

Dede T., Ayvaz Y., Bekiroğlu S.

The Seventh International Conference on the Application of Artificial Intelligence to Civil and Structural Engineering, Enschede, Netherlands, 2 - 04 September 2003, pp.1-15

29. **Değer Kodlaması Kullanarak Kafes Sistemlerin Genetik Algoritma İle Minimum Ağırlıklı Boyutlandırılması**

Dede T., Ayvaz Y., Bekiroğlu S.

3. Uluslararası İleri Teknolojiler Sempozyumu, Ankara, Turkey, 18 - 20 August 2003, pp.287-300

30. **Değer Kodlaması Kullanarak Uzay Kafes Sistemlerin Genetik Algoritma İle Optimum Tasarımı**

Dede T., Ayvaz Y., Bekiroğlu S.

Deprem Sempozyumu Kocaeli 2003, Kocaeli, Turkey, 12 - 14 March 2003, pp.498-507

Other Publications

1. **p-Yöntemine Dayalı Üç Boyutlu Sonlu Elemanlar ile Yapıların Elastostatik ve Elastodinamik Analizi**
BEKİROĞLU S.
Other, 2010
2. **Genetik Algoritma ile Çelik Çerçvelerin Optimum Boyutlandırılması**
BEKİROĞLU S.
Other, 2003

Academic and Administrative Experience

Courses

Çelik Yapılar 2, Undergraduate, 2019 - 2020
Depreme Dayanıklı Çelik Yapılar, Postgraduate, 2020 - 2021
Sonlu Elemanlar Metodu, Doctorate, 2019 - 2020
Yapı Statiği-1, Undergraduate, 2016 - 2017
Sonlu Elemanlar Yöntemi İle Bilgisayar Uygulamaları, Doctorate, 2015 - 2016
Yapı Statiği-2, Undergraduate, 2015 - 2016

Advising Theses

Bekiroğlu S., Geliştirilmiş Sonlu Elemanlar Algoritması İle Düzlem Elasto-Plastik Betonarme Çerçeve Sisteminin Modellenmesi, Postgraduate, S.HAYRİOĞLU(Student), 2022
Bekiroğlu S., Kazıklı bitişik rihtim yapılarının dinamik etkileşiminin incelenmesi, Postgraduate, N.KARAKAŞ(Student), 2020
Bekiroğlu S., Betonarme kiriş-kolon birleşiminin sayısal benzetim ile incelenmesi, Postgraduate, A.TAHA(Student), 2020
BEKİROĞLU S., Rüzgâr Etkisindeki Binalarda Dış Yüzey Basınçlarının Hesaplamalı Akışkanlar Dinamiği ile Analizi, Postgraduate, H.Zeyrek(Student), 2019
BEKİROĞLU S., Çok Katlı Ahşap Yapıların Deprem Yüğü Altında Performanslarının İncelenmesi, Postgraduate, Y.Gürel(Student), 2018
BEKİROĞLU S., Takviyeli Alın Levhalı Bulonlu Kiriş-Kolon Birleşimlerinin Sonlu Eleman Analizleri, Postgraduate, A.Zafer(Student), 2018
BEKİROĞLU S., Numerical Simulation for Investigation of Dynamic Behavior of Buildings with a Shaking Table, Postgraduate, H.Mohammed(Student), 2018
BEKİROĞLU S., Finite Element Analyses of Structural Problems With FGM Using High Order Elements, Postgraduate, H.Alimam(Student), 2017
BEKİROĞLU S., Sonlu Elemanlar Yöntemi ile Ortotrop Çelik Köprülerin Boyutlandırılmasının Araştırılması, Doctorate, A.FETTAHOĞLU(Student), 2015
BEKİROĞLU S., DBYBHY-2007'deki Moment Aktaran Çelik Birleşimlerin Sonlu Eleman Analizleri, Postgraduate, O.YILMAZ(Student), 2015

Patent

Yılmaz O., Bekiroğlu S., BİLHASSA BİNALARDA KULLANILMAK ÜZERE SÜRTÜNME Lİ VE ELASTOMER Lİ SİSMİK BİRLEŞİM APARATI, Patent, CHAPTER E Constructed Constructions (Construction), The Invention Recourse Number: 2020/18195 , Standard Registration, 2020

Tasks In Event Organizations

Bekiroğlu S., 6 Şubat Kahramanmaraş-Hatay Depremlerine Dair Saha Çalışmaları ve Gözlemleri Paneli, Workshop Organization, İstanbul, Turkey, Mayıs 2023
Bekiroğlu S., International Civil Engineering and Architecture Conference 2019, Scientific Congress, Trabzon, Turkey, Nisan 2019

Metrics

Publication: 53

Citation (WoS): 138

Citation (Scopus): 147

H-Index (WoS): 5

H-Index (Scopus): 6

Congress and Symposium Activities

International Civil Engineering and Architecture Conference 2019, Session Moderator, Trabzon, Turkey, 2019

Structural System Tests Using Shaking Table , Working Group, Trabzon, Turkey, 2019

Research Areas

Civil Engineering, Structure, Structural Engineering, Steel Structures, Performance of Constructed Facilities, Concrete Structures, Engineering and Technology