

SERKAN BEKİROĞLU

ASSOC. PROF.

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



Learning Knowledge

Doctorate 2003 - 2010	Karadeniz Technical University, Mühendislik Fakültesi, İnşaat Mühendisliği, Turkey
Postgraduate 2000 - 2003	Karadeniz Teknik Üniversitesi, Mühendislik Ve Mimarlık, İnşaat Mühendisliği, Turkey
Undergraduate 1996 - 2000	Karadeniz Teknik Üniversitesi, 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

Associate Professor 2017 - Continues	Yıldız Technical University, Faculty Of Construction, Civil Engineering Department
Assistant Professor 2012 - 2017	Yıldız Technical University, Faculty Of Construction, Civil Engineering Department
Assistant Professor 2010 - 2012	Gümüşhane Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği

Lecturer
2008 - 2010

Gümüşhane Üniversitesi, Mühendislik Fakültesi, İnşaat Mühendisliği

Lecturer
2007 - 2008

Karadeniz Teknik Üniversitesi, Gümüşhane Mühendislik Fakültesi, İnşaat Mühendisliği Bölümü

Research Assistant
2001 - 2007

Karadeniz Teknik Üniversitesi, Fen Bilimleri Enstitüsü, İnşaat Mühendisliği

Supported Projects

1. BEKİROĞLU S., MERMER S., Project Supported by Higher Education Institutions, Çok Katlı Betonarme Binaların Deprem Etkisi Altında Göçme Simülasyonları, 2016 - Continues
2. Bekiroğlu 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
3. SEVİM B., ARSLAN G., BEKİROĞLU S., AYVAZ Y., ALEMDAR F., Project Supported by Higher Education Institutions, Ölçeklendirilmiş Betonarme Çerçevelerin Dinamik Davranışının Belirlenmesi, 2017 - 2020
4. BEKİROĞLU 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
5. Bekiroğlu S., Akpınar A., Bingölbali B., TÜBİTAK Project, Karadeniz'in güney-batı sahillerinin sahip olduğu dalga enerji potansiyelinin zamansal ve mekansal analizi, 2015 - 2017
6. 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

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

1. **Prediction of Joint Shear Strain–Stress Envelope Through Generalized Regression Neural Networks**
YILMAZ M. O. , BEKİROĞLU S.
Arabian Journal for Science and Engineering, 2021 (Journal Indexed in SCI)
2. **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 (Journal Indexed in SCI Expanded)
3. **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)
4. **Seismic Performance of Post-Northridge Welded Connections**
Yılmaz O., Bekiroğlu S.

- LATIN AMERICAN JOURNAL OF SOLIDS AND STRUCTURES, vol.15, 2018 (Journal Indexed in SCI)
5. **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 (Journal Indexed in SCI)
 6. **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 (Journal Indexed in SCI)
 7. **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 (Journal Indexed in SCI)
 8. **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, pp.241-253, 2016 (Journal Indexed in SCI)
 9. **Doğrusal Olmayan Rüzgâr Etkisindeki Dairesel Kesitlerde Geliştirilmiş Sonlu Elemanlar Uygulaması**
Bekiroğlu S., Ayvaz Y.
Teknik Dergi, vol.26, no.2, pp.7027-7054, 2015 (Journal Indexed in SCI Expanded)
 10. **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 (Journal Indexed in SCI)
 11. **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 (Journal Indexed in SCI)
 12. **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 (Journal Indexed in SCI)
 13. **Weight minimization of trusses with genetic algorithm**
DEDE T., Bekiroglu S., AYVAZ Y.
APPLIED SOFT COMPUTING, vol.11, no.2, pp.2565-2575, 2011 (Journal Indexed in SCI)
 14. **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 (Journal Indexed in SCI)
 15. **Shear locking-free analysis of thick plates using Mindlin's theory**
Özdemir Y. I. , Bekiroğlu S., Ayvaz Y.
STRUCTURAL ENGINEERING AND MECHANICS, vol.27, pp.311-331, 2007 (Journal Indexed in SCI)

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 (Journal Indexed in ESCI)
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 (Refereed Journals of Other Institutions)

3. **Least Weight Design of Space Trusses by using Value Encoding in GA with Discrete Design Variables**
Dede T., Bekirođlu S., Ayvaz Y.
e-Journal of New World Sciences Academy, vol.4, no.3, pp.414-427, 2009 (Refereed Journals of Other Institutions)

Books & Book Chapters

1. **A finite element program based on object-oriented framework for spatial trusses**
Tođan V., Bekirođlu 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. **INVESTIGATION OF REINFORCED CONCRETE BEAM-COLUMN JOINT BEHAVIOUR THROUGH NUMERICAL SIMULATIONS**
Yılmaz M. O. , Demirbađ A. T. , Bekirođlu S.
International Civil Engineering and Architecture Conference 2019, Trabzon, Turkey, 17 - 20 April 2019, pp.1519-1528
2. **A Research Study on Dynamic Interaction of Adjacent Deck on Pile Wharf Modules**
Karakas N., Bekirođlu S.
International Civil Engineering & Architecture Conference (ICEARC 2019), Trabzon, Turkey, 17 - 20 April 2019, pp.2094-2108
3. **ALIN LEVHALI BULONLU KOLON-KİRİŞ BİRLEŞİMİNİN ÇEVİRİMSSEL YÜKLEME ALTINDA DENEYSEL ÇALIŞMASI**
Yılmaz O., Bekirođlu S., Alemdar F., Arslan G., Sevim B., Ayvaz Y.
4. Uluslararası Deprem Mühendisliđi ve Sismoloji Konferansı, Eskişehir, Turkey, 11 - 13 October 2017
4. **Numerical Simulation of a Building on Shaking Table**
Abdulhafoor H. M. , Bekirođlu S.
8th International Advanced Technologies Symposium, Elazığ, Turkey, 19 - 20 October 2017, pp.2461-2467
5. **Investigation of Reinforcing Beam-Web on Bolted Unstiffened End-Plate Connections**
Yılmaz O., Bekirođlu S.
XVII International Scientific Conference VSU'2017, Sofija, Bulgaria, 8 - 09 June 2017, pp.142-149
6. **Finite Element Modelling Of A Retaining Wall With Functionally Graded Material**
Alimam H., BEKİROĐLU S.
1th INTERNATIONAL CONFERENCE ON ADVANCES IN SCIENCE AND ARTS, İstanbul, Turkey, 29 March 2017, pp.278-289
7. **Performance Evaluation of Weak-Axis Steel Moment Connections**
Yılmaz O., Bekirođlu S.
Proceedings ?VI International Scientific Conference VSU'2016, Sofija, Bulgaria, 9 - 10 June 2016, pp.352-358
8. **DBYBHY-2007'deki Moment Aktaran Kaynaklı Birleşimlerin Monotonik Yükleme Altındaki Davranışı**
Yılmaz O., Bekirođlu S.
6. Çelik Yapılar Sempozyumu, Eskişehir, Turkey, 15 - 17 October 2015, pp.117-126
9. **Response spectral analysis of orthotropic steel deck as per Turkish local design spectrums**
Fettahođlu A., Bekirođlu S., Bal İ. E.
International Conference On Civil And Environmental Engineering, Nevşehir, Turkey, 20 - 23 May 2015, pp.1123-1134
10. **DBYBHY-2007'ye Göre Moment Aktaran Bulonlu Birleşimlerin Sonlu Elemanlar Yöntemi ile Analizi**
Yılmaz O., Bekirođlu S.
Sekizinci Ulusal Deprem Mühendisliđi Konferansı, İstanbul, Turkey, 11 - 15 May 2015, pp.383-394

11. **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
12. **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
13. **Betonarme Yapı Üzerine Çelik Taşıyıcı Sistemlere 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
14. **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
15. **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
16. **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
17. **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
18. **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
19. **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
20. **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
21. **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
22. **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
23. **Genetik Algoritmalarda 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. **Optimization of Steel Frame with Genetic Algorithm Using Different Encoding Types**
Bekirođlu 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
25. **Genetik Algoritma ile Çelik Düzlem Çerçevelerin Optimizasyonu**
Bekirođlu S., Ayvaz Y., Dede T.
Türkiye İnşaat Mühendisliği XVII. Teknik Kongre ve Sergisi, İstanbul, Turkey, 15 - 17 April 2004, pp.1-12
26. **Optimization of Truss Structures Using Value Encoding in a Genetic Algorithm**
Dede T., Ayvaz Y., Bekirođlu 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
27. **Deđer Kodlaması Kullanarak Kafes Sistemlerin Genetik Algoritma İle Minimum Ađırlıklı Boyutlandırılması**
Dede T., Ayvaz Y., Bekirođlu S.
3. Uluslararası İleri Teknolojiler Sempozyumu, Ankara, Turkey, 18 - 20 August 2003, pp.287-300
28. **Deđer Kodlaması Kullanarak Uzay Kafes Sistemlerin Genetik Algoritma İle Optimum Tasarımı**
Dede T., Ayvaz Y., Bekirođlu 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**
BEKİROĐLU S.
Other, 2010
2. **Genetik Algoritma ile Çelik Çerçevelerin Optimum Boyutlandırılması**
BEKİROĐLU S.
Other, 2003

Academic and Administrative Experience

2015 - 2020	Assistant Manager of Research and Application Center	Yıldız Technical University
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Courses

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

Advising Theses

- BEKİROĐLU S., Rüzgâr Etkisindeki Binalarda Dış Yüzey Basınçlarının Hesaplamalı Akışkanlar Dinamiđi 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., DBYBHY-2007'deki Moment Aktaran Çelik Birleşimlerin Sonlu Eleman Analizleri, Postgraduate, O.YILMAZ(Student), 2015

BEKİROĞLU S., Sonlu Elemanlar Yöntemi ile Ortotrop Çelik Köprülerin Boyutlandırılmasının Araştırılması, Doctorate, A.FETTAHOĞLU(Student), 2015

Tasks In Event Organizations

Bekiroğlu S., International Civil Engineering and Architecture Conference 2019, Scientific Congress, Trabzon, Turkey, Nisan 2019

Edit 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

Citations

Total Citations (WOS):89

h-index (WOS):4

Research Areas

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