

Assoc. Prof. BURCU BURAK BAKIR

Personal Information

Office Phone: [+90 312 210 5477](tel:+903122105477)

Email: bburcu@metu.edu.tr

Web: <https://avesis.metu.edu.tr/bburcu>

Address: bburcu@metu.edu.tr

International Researcher IDs

ScholarID: QU4ze7oAAAAJ

ORCID: 0000-0002-6346-3702

Publons / Web Of Science ResearcherID: B-4074-2012

ScopusID: 54980792900

Yoksis Researcher ID: 164015

Education Information

Doctorate, University of Michigan, Faculty of Engineering, Civil And Environmental Engineering/Structural Engineering, United States Of America 2000 - 2005

Postgraduate, University of Michigan, Faculty of Engineering, Civil And Environmental Engineering/Structural Engineering, United States Of America 1998 - 2000

Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, Turkey 1994 - 1998

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, SEISMIC BEHAVIOR OF ECCENTRIC REINFORCED CONCRETE BEAM-COLUMN-SLAB CONNECTIONS, University Of Michigan, Civil And Environmental Engineering/Structural Engineering, 2005

Research Areas

Structure

Academic Titles / Tasks

Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2014 - Continues

Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2007 - 2014

Lecturer, Middle East Technical University, Faculty of Engineering, Department of Civil Engineering, 2005 - 2007

Courses

Fiber Reinforced Cementitious Composite Structures, Postgraduate, 2015 - 2016, 2012 - 2013, 2011 - 2012, 2010 - 2011, 2009 - 2010

Advising Theses

Burak Bakır B., The effect of inelastic behavior of beam-to-column connection regions on the seismic performance of RC frame structures, Doctorate, U.AKIN(Student), 2024

Burak Bakır B., Seismic behavior of fiber reinforced cementitious composite beam-to-column connections, Postgraduate, Y.KANTEKİN(Student), 2023

BURAK BAKIR B., Analytical modeling of fiber reinforced composite deep beams, Doctorate, E.YAĞMUR(Student), 2018

BURAK BAKIR B., Influence of the shear wall area to floor area ratio on the seismic performance of existing reinforced concrete buildings, Postgraduate, A.ORHUN(Student), 2013

BURAK BAKIR B., Seismic assessment of reinforced concrete beam-to-column connections under reversed cyclic loading, Postgraduate, U.AKIN(Student), 2011

BURAK BAKIR B., Analytical modeling of reinforced concrete beam-to-column connections, Postgraduate, M.ÜNAL(Student), 2010

BURAK BAKIR B., Effect of shear walls on the behavior of reinforced concrete buildings under earthquake loading, Postgraduate, H.GÜRHAN(Student), 2009

Designed Lessons

Burak Bakır B., Fiber Reinforced Cementitious Composite Structures, Postgraduate, 2009 - 2010

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Parametric study on the flexural behavior of steel fiber reinforced concrete beams utilizing nonlinear finite element analysis**
Fares A. M., BURAK BAKIR B.
Structures, vol.65, 2024 (SCI-Expanded)
- II. **Joint shear strength prediction for fiber reinforced concrete beam-to-column connections**
Kantekin Y., Burak Bakır B.
ENGINEERING STRUCTURES, vol.308, 2024 (SCI-Expanded)
- III. **Design of Concrete Slabs for Punching Shear: Controversial Concepts DISCUSSION**
Fick D. R., Hueste M. B. D., Kang T., Kreger M. E., LaFave J. M., French C., Bakır B.
ACI STRUCTURAL JOURNAL, vol.114, no.3, pp.787, 2017 (SCI-Expanded)
- IV. **Effect of Shear Wall Area to Floor Area Ratio on the Seismic Behavior of Reinforced Concrete Buildings**
BURAK BAKIR B., Comlekoglu H. G.
JOURNAL OF STRUCTURAL ENGINEERING, vol.139, no.11, pp.1928-1937, 2013 (SCI-Expanded)
- V. **Development and analytical verification of an inelastic reinforced concrete joint model**
Unal M., BURAK BAKIR B.
ENGINEERING STRUCTURES, vol.52, pp.284-294, 2013 (SCI-Expanded)
- VI. **Performance of Beam-to-Column Connection of a Well-Detailed RC Moment Frame Building under Pseudodynamic Loading**
Unal M., BURAK BAKIR B.
JOURNAL OF STRUCTURAL ENGINEERING, vol.139, no.6, pp.886-896, 2013 (SCI-Expanded)

- VII. **Joint shear strength prediction for reinforced concrete beam-to-column connections**
Unal M., BURAK BAKIR B.
STRUCTURAL ENGINEERING AND MECHANICS, vol.41, no.3, pp.421-440, 2012 (SCI-Expanded)
- VIII. **Experimental investigation on seismic behavior of eccentric reinforced concrete beam-column-slab connections**
Canbolat B., Wight J. K.
ACI STRUCTURAL JOURNAL, vol.105, no.2, pp.154-162, 2008 (SCI-Expanded)

Articles Published in Other Journals

- I. **Eccentric Beam-Column Connections**
LaFave J. M., Bonacci J. F., BURAK BAKIR B., Myoungsu S.
CONCRETE INTERNATIONAL, vol.27, no.9, pp.58-62, 2005 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Hybrid Testing of Beam-to-Column Connection Regions of a Code Compliant RCMoment Frame Building**
BURAK BAKIR B.
in: SP-311: James K. Wight: A Tribute from his Students and Colleagues, , Editor, ACI, pp.1-16, 2016
- II. **Development of a Parametric Equation to Predict the Joint Shear Strength**
Burak Bakır B.
in: Structures Congress 2013: Bridging Your Passion with Your Profession, Brian J. Leshko, Jonathan McHugh, Editor, American Society of Civil Engineers (ASCE) , Pennsylvania, pp.1616-1628, 2013
- III. **Analytical verification of a simplified reinforced concrete joint model**
Burak Bakır B.
in: 9th US National and 10th Canadian Conference on Earthquake Engineering 2010, Including Papers from the 4th International Tsunami Symposium, Earthquake Engineering Research Institute, Editor, Earthquake Engineering Research Institute (EERI) , California, pp.25-29, 2010
- IV. **Seismic Behavior of Eccentric R/C Beam-Column-Slab Connections under Sequential Loading in Two Principal Directions**
Burak B., Wight J. K.
in: Innovations in Design with Emphasis on Seismic Wind and Environmental Loading Quality Control and Innovations in Materials Hot Weather Concreting, V. M. Malhotra, Editor, ACI, Michigan, pp.863-880, 2002
- V. **Modeling and Software Issues for Pushover Analysis of RC Structures**
Wight J. K., Burak Bakır B., Canbolat B. A., Liang X.
in: U.S.-Japan Workshop on Performance-Based Earthquake Engineering Methodology for Reinforced Concrete Building Structures, Toshimi Kabeyasawa, Jack P. Moehle, Editor, University of California Press, Berkeley (CA), USA , California, pp.133-143, 1999

Refereed Congress / Symposium Publications in Proceedings

- I. **DİNAMİK BENZERİ DENEYLERLE YETERLİ DAYANIMA SAHİP BİR BETONARME ÇERÇEVENİN BİRLEŞİM BÖLGELERİNİN PERFORMANSININ İRDELENMESİ**
BURAK B., ün al m.
2. TÜRKİYE DEPREM MÜHENDİSLİĞİ VE SİSMOLOJİ KONFERANSI, Turkey, 25 - 27 September 2013
- II. **Inelastic Modeling of Reinforced Concrete Beam-to-Column Connections**
BURAK BAKIR B., ün al m.

10th International Congress on Advances in Civil Engineering (ACE), 17 - 19 October 2012

- III. **Analytical Evaluation of the Cyclic Response of Reinforced Concrete Beam-to-Column Connections**
BURAK BAKIR B., ünäl m.
15th World Conference on Earthquake Engineering, 24 - 28 September 2012
- IV. **Effect of Shear Wall Area to Floor Area Ratio on the Seismic Behavior of Reinforced Concrete Buildings**
BURAK BAKIR B.
ACI Sixth International Workshop on Concrete in the Americas, Chicago, United States Of America, 19 - 25 March 2010
- V. **Influence of Shear Wall Index on the Seismic Performance of Reinforced Concrete Buildings**
BURAK CANBOLAT B., SOYDAŞ O., YAKUT A.
WCEE-ECCE-TCCE Joint Conference on Earthquake and Tsunami, 22 - 24 June 2009
- VI. **Structural Applications of a Reinforced Concrete Beam-Column-Slab Connection Model for Earthquake Loading**
BURAK CANBOLAT B.
14th World Conference on Earthquake Engineering, 12 - 17 October 2008
- VII. **Experimental Investigation of Eccentric RC Beam-Column-Slab Connections under Earthquake Loading**
BURAK B., WIGHT J. K.
13th World Conference on Earthquake Engineering, 1 - 06 August 2004
- VIII. **Seismic behavior of eccentric R/C beam-column-slab connections under sequential loading in two principal directions**
Burak B., Wight J.
5th International Conference of the American-Concrete-Institute, Cancun, Mexico, 01 December 2002, pp.863-880
- IX. **Behavior of Eccentric Reinforced Concrete Beam-Column-Slab Connections under Cyclic Loading**
BURAK B., WIGHT J. K.
US-Japan Cooperative Research on Urban Earthquake Disaster Mitigation, US-Japan Joint Workshop and Third Grantees Meeting, 16 - 18 August 2001

Supported Projects

Burak Bakır B., Hou T., Other International Funding Programs, Developing the Resilience of RC Street Houses Threatened by Near Fault Earthquakes -First Year, 2020 - 2021

BURAK BAKIR B., Project Supported by Higher Education Institutions, Kiriş-Kolon Birleşim Bölgelerinin Sismik Davranışı İçin Geliştirilen Analitik Modelin Kalibrasyonu, 2009 - 2009

BURAK BAKIR B., Project Supported by Higher Education Institutions, Kiriş-Kolon Birleşim Bölgelerinin Modellenmesinin Nonlinear Analize Etkisi, 2008 - 2008

Burak Bakır B., Project Supported by Higher Education Institutions, Kiriş Kolon Birleşim Bölgelerinin Deprem Yüğü Altındaki Davranışını Gösteren bir Model Geliştirilmesi, 2006 - 2007

Memberships / Tasks in Scientific Organizations

ACI-ASCE Committee 352, Principal Member, 2008 - Continues, United States Of America

Scientific Refereeing

BULLETIN OF EARTHQUAKE ENGINEERING, SCI Journal, October 2022

JOURNAL OF EARTHQUAKE ENGINEERING, SCI Journal, October 2022

JOURNAL OF EARTHQUAKE ENGINEERING, SCI Journal, May 2022
TEKNIK DERGI, National Scientific Refreed Journal, December 2020
JOURNAL OF STRUCTURAL ENGINEERING-ASCE, SCI Journal, June 2020

Metrics

Publication: 24
Citation (WoS): 123
Citation (Scopus): 155
H-Index (WoS): 5
H-Index (Scopus): 5

Non Academic Experience

METU
METU
University of Michigan
University of Michigan