

Prof. Dr. Can Balkaya

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e-mail: canbalkaya@aydin.edu.tr

Education

June 1992- December 1993 ***Ph.D. in Structural Engineering,***
University of Illinois at Urbana Champaign, USA

September 1985- June 1987 ***M.Sc. in Structural Engineering***
Middle East Technical University, Ankara, Turkey

September 1981- June 1985 ***B.S. in Civil Engineering***
Middle East Technical University, Ankara, Turkey

Honors and Awards

June 1985 ***Honors Students,*** Middle East Technical University, Department of Civil Engineering,
The first rank out of 216 students.

Jan. 1992 ***Fellowship,*** NSF, TUBITAK

Jan. 1992-June 1993 ***Visiting Scholar,*** University of Illinois at Urbana-Champaign

Professional Registration

Passed Structural Engineering (SE) Exams in Illinois, USA

NCEES FE/EIT April 1996

NCEES Structural I April 1998

NCEES Structural II (AM) April 1997 & Take remain exams.

1992-present ***Member, ASCE***

1985-present ***Member, Chamber of Turkish Engineers and Architects***

Technical Committee Works

2011-2012 ***Committee Member, Council of Higher Education, Vocational Qualification Board Construction***

1996-2008 ***Committee Member, Specific and High-Rise Buildings Research Center, METU***

1996-2008 ***Member, Earthquake Engineering Research Center, METU***

Academic Experience

May 2019- present ***Professor, Department of Civil Engineering,***
Istanbul Aydın University, Istanbul, Turkey
Structural Department. Strength of materials, dynamics, statics, construction materials.

April 2019- April 2020 ***Professor, Department of Civil Engineering,***
Beykent University, Istanbul, Turkey
Structural Department. Strength of materials and steel structures.

March 2018- February 2019 ***Professor, Department of Architecture Engineering,***
Nisantasi University, Istanbul, Turkey
Computer aided design, structural systems design, structural analysis, steel structure design,
reinforced concrete design, earthquake engineering, construction materials, computer aided
technical drawing for civil engineers.

February 2017- February 2018 ***Professor, Head of Department of Civil Engineering,***
Gelisim University, Istanbul, Turkey
Statics, strength of materials, structural analysis, reinforced concrete, design of reinforced
concrete structures, graduation projects. Seismic design of tall buildings with multiple mass
dampers by using control systems. Wind force design of tall building with tuned liquid mass
dampers by using control systems.

January 2016- January 2017 ***Associate Professor, Department of Architecture,***
Bilkent University, Ankara, Turkey
Structural design, concrete, design and analysis of reinforced concrete members. Pre-stressed
and post tension techniques. Form and structure, behavior of structures in relation to their
form; spatial structures, shells, domes, cable-nets and fabrics, structural simulations.

September 2011- June 2013 ***Professor, Vice Dean of Engineering Faculty. Hasan Kalyoncu University, Gaziantep, Turkey***
Engineering statics, strength of materials, design of tall building structures

June 1996- October 2008 ***Assistant & Assoc. Professor in Structure Division,***
Middle East Technical University, Ankara, Turkey

Fundamentals of steel design, design of reinforced concrete structures, design of tall building structures, computer applications in structural engineering, engineering mechanics, dynamics, structural analysis

January 1992-June 1993

**Visiting Scholar, Department of Civil Engineering
University of Illinois at Urbana-Champaign, USA**

Material nonlinearity, finite element analysis, POLO-FINITE, ABAQUS, shell structure, 3-D behavior of tunnel form RC building structures.
Worked with Prof. W.J. Hall, Prof. W.C. Schnobrich, Prof. D.A. Pecknold

Industry Work Experience

January 1995- November 1995

**Structural Design Engineer,
Clark-Dietz Inc. (CDI), Champaign, IL, USA**

ADM Industrial Steel Building (BOILER) Project, Decatur, IL.

Representative Projects

ADM Industrial Boiler Steel Structure Project. I designed the heavy boiler steel structure project as well as steel connections. I was also responsible for design and checking industrial steel structures.

Contact

Steven C. Jirschele, SE, Illinois, jirsch1@att.net

July 1994- January 1995

**Project Manager,
Kiska-Kajima J.V. Company with Japanese, Washington D.C., USA**

WMATA 14 th Street Greenbelt Tunnels Project.

Representative Projects

I worked on WMATA 14 th Street Greenbelt Tunnels Project at Washington D.C. as Project Manager. This is the construction of approximately 6,000 feet of 21-ft diameter tunnels and shaft and ventilation structures. I was responsible for the management of construction and subcontractors. I was also responsible for the material orders, quantities, change orders, and daily reports.

Contact

Stephen Price, Manager, NY/NJ Area Walsh Construction Co., US Licensed Engineer.

February 1994- July 1994

**Structural Engineer
G.G. Marino Engineering Consultants, IL, USA**

Earthquake damage, repair, and evaluation of building structures for All-State Insurance Company Project.

Representative Projects

Earthquake Damage, Repair and Evaluation of Building Structures for All State Insurance Company Project. I involved in the structural engineering part, earthquake damage, repair and evaluation of building structures as well as determination of the cost of the loss, preparation and evaluation of bids. A manual is also prepared for All State Insurance Company.

Contact

Dr. Gennaro G. Marino, PE, Illinois, gmarino@meacorporation.com

February 1992- December 1993

**Graduate Research Assistant
U.S. Army Construction Engineering Research Laboratory (USACERL), USA**

MAGLEV-Magnetic Levitation Rapid Transportation Project, Condition Assessment and Maintenance Technologies Team in the Engineering and Materials Division.

Representative Projects

Project Name: MAGLEV-Magnetic Levitation Rapid Transportation Project: MAGLEV Guideway Design TASK-2: Long Term Performance and Seismic Assessment of Maglev Guideways. Basic concept definitions, seismic assessment, and design and evaluation of guideway/bridge structures were done. I worked on the design and long-term performance and seismic performance evaluation of guideway structures including special passes. I also involved other design parameters with coordination other Teams worked in Maglev Project due to magnetic levitation and maintenance works.

This work was undertaken in part under USACERL Contract 0016 with the University of Illinois, with Dr. Can Balkaya, receiving Research Assistant support under noted contract. The work also was undertaken in part by W.J. Hall under provisions of a subcontract with Schmidt and Associates, Cleveland, Ohio (Maglev Guideway and Route Analysis, USACERL Contract DACA88-90-D-0032, Delivery Order 0010, Task 2- Long Term Performance and Seismic Assessment).

Contact

Prof. Dr. W.J. Hall, SE, Illinois, wjefhall@comcast.net

March 1985- March 1987

**Assistant Director of the Computer Center
Yuksel Project Corp., Ankara, Turkey**

Proficient in structural analysis programs: SAP, FINITE, TABS, ETABS, ABAQUS, and PATRAN. Computer aided structural analysis and design of structures.

SWCC Water Transmission Line System and Water Reservoirs Project, Riyadh, Saudi Arabia.

Representative Projects

Water Transmission Line System and Water Reservoirs Project, Salina Water Conversion (SWCC) Riyadh-Quassim, Saudi Arabia.

I designed the Water Reservoirs with storage capacities of 20000m³ and 50000m³ built of a post tension cylindrical wall and precast dome elements. I designed of Water Transmission Line System, 400 km long, 1600mm diameter prestressed concrete pipes. Also, I supervised the construction on site as a Project Engineer at Buraidah, Saudi Arabia. I prepared the structural drawings and details. Special passes are also considered in pipeline design.

Sultansuyu Dam Derivation Tunnels and Water-Intake Structures Project, Malatya, Turkey.

I designed the derivation tunnels and water-intake structures both structural calculations and structural drawings including details.

I designed seaports and waterfront structures.

Contact

Dr. Ahmet Muhtar Citipitioglu, PE, California, ahmetc@tav.aero

January 1988- January 1990

Design Coordinator

Laing-Mapa-Gunal_Redler J.V. with British Firms, Ankara, Turkey

TMO Reinforced Concrete Vertical Port Silos and Ancillary Building Project.

Representative Projects

TMO Design and Construction of Reinforced Concrete Vertical Port Silos and Sixteen Different Types of Ancillary Building Project, in Tekirdag (30,000 ton), Bandirma (20,000 ton), Iskenderun (40,000 ton) and Izmir (40,000 ton), Turkey. The contract value of this construction was \$52.168.500 in 1988. I worked as a design coordinator for the construction of reinforced concrete vertical port silos and ancillary buildings. I was responsible for the architectural and structural design of vertical port silos and designed sixteen different types RC and steel ancillary building structures. I supervised the construction sites for the design related problems. Also, I designed retrofitting projects for existing ancillary building structures.

The company LMGR is a joint venture with British firms. Laing (Construction) and Redler (Mechanic) was the British Companies.

Contact

Irfan Mutlu, Project Manager, MNG Construction Co., mimutlu@hotmail.com

June 1990- June 1991

Structural Design Engineer

Ener Project Co., Ankara, Turkey

Izmir Cigli Pumping Station Project.

Representative Projects

Cigli Pumping Station Project, Izmir, Turkey. I worked as a Structural Design Engineer. I was responsible for the design of reinforced concrete pumping station project. I designed the RC pumping station structural project including design calculations and structural detail drawings. Since the pumping station structures very closed to sea level, special water drainage methods were also considered in the construction.

Contact

Dr. Ahmet Muhtar Citipitioglu, PE, California, C76902, ahmetc@tav.aero

(Supervisor Dr. Ergin Citipitioglu PE, Ohio, E41836 practicing structural engineering was dead)

October 2008- January 2016

Project Manager

BUPI International Project & Consulting Co., Ankara, Turkey

International Industrial and Building Projects in Dubai, Kazakhstan and Turkmenistan.

Türkmenistan Tecen Ammonia Urea Industrial Facility Project (Steel Structure)

Dubai Jumeirah Village Project (717 Villas)

Kazakhstan Prime Ministry Building Project (Tall Building Structure)

Türkmenistan Textile Ministry Project and Retrofitting.

Ankara Kazakhstan Embassy Building and House Projects

Forum Mersin Avm Steel Project, Turkey

R&D Projects

- December 2011-December 2013 **European Union Leonardo da Vinci LdV Transfer of Innovation Project No: 2011-1-TR1-LE005-27938.** Rapid damage assessment of building to avoid demolishing. Budget: 400.000 Euro. Project Partners: BUPIM Turkey; University of Pavia & Siart Co., Italy; ARATOS Technologies, S.A. Greece; Kandilli Observatory and Earthquake Research Institute, Bogazici University; Johannes Kepler University of Linz.
- June 2012- December 2013 **International Research Work**, Virginia Tech. Arlington Research Lab. Washington D.C. & Hasan Kalyoncu University; Disaster management by using GIS.
- June 2010-December 2011 **Turkish National Science Foundation (TUBITAK) R&D Project No: 3090193.** Structural building jacketing system with external steel bracing for retrofitting of RC buildings.
- June 2008-December 2009 **Turkish National Science Foundation (TUBITAK) R&D Project No: 3100355.** Improving seismic performance of tunnel form building structures.
- June 2005- June 2006 **UC DAVIS - METU**
Seismic behavior of shear-wall dominant tunnel form building structures.

Patent

- TR2008-08886.**
Earthquake retrofitting with external steel brace structural jacketing system.

Major Consulting Activities

- 1996, METU *Dinar Earthquake Retrofitting Project: Seismic Evaluation and Retrofitting of Building Structures.*
- 1997, METU *Seismic Evaluation and Retrofitting of Yalova Municipality Service Buildings.*
- 1998, METU *Adana-Ceyhan Earthquake Project: Seismic Evaluation and Retrofitting of Building Structures.*
- 1999, METU *Seismic Evaluation and Retrofitting of Golbasi Hospital Building.*
- 1999, METU *Seismic Evaluation and Retrofitting of Ankara Namik Kemal School Building.*
- 2000-2002, METU *Seismic Evaluation and Retrofitting of 160 Existing Branch Buildings of a Commercial Bank in Marmara and West Part of Turkey.*
- 2000, METU *Seismic Evaluation and Retrofitting of Izmit DMO Storage and Office Buildings.*
- 2000, METU *Seismic Evaluation and Retrofitting of Bursa DMO Storage and Office Buildings*
- 2000, METU *Seismic Evaluation and Retrofitting of a Building belonging to Insurance Company.*
- 2000, METU *Seismic Evaluation and Retrofitting of Electronic Computer Center belonging to a Bank.*
- 2000, METU *Seismic Evaluation and Retrofitting of a Building, Bolu Civil Defense Department.*
- 2000, METU *Seismic Evaluation and Retrofitting of a Telecommunication and Residential Building.*
- 2001, METU *Seismic Evaluation of Antalya Olympic Closed Swimming Pool for 2500 people.*
- 2002, METU *TCDD Under additional crane loads, capacity check and retrofitting of pile foundation of Izmir, Mersin and Iskenderun Sea Ports in Turkey.*
- 2003, METU *Seismic Assessment and Retrofitting of Tokat Revenue Service Building.*
- 2003, METU *Seismic Assessment of Kahta Girne Primary School.*
- 2003, METU *Seismic Assessment of Fevzi Cakmak Primary School.*
- 2003, METU *Seismic Assessment of Adiyaman PTT Telecommunication Building.*
- 2003, METU *Seismic Assessment and Retrofitting of Old Halk Bank Building.*
- 2004, METU *Seismic Assessment of Center Adiyaman Anadolu Primary School.*
- 2004, METU *Investigation of cracks in Gelibolu Reinforced Concrete Residential Building.*
- 2004, METU *Investigation of Existing Foundation System of Diyarbakir Police Headquarters Building.*
- 2004, METU *Control of Structural Projects of Antalya Airport Flight Control Tower.*
- 2005, METU *Seismic and Soil Investigation of Ibni-Sina Hospital High-rise Building A-B-C-D Blocks.*
- 2006, METU *Seismic Assessment of Retrofitting of Konya Telecommunication and Service Building A and B Blocks.*
- 2006, METU *Seismic Assessment and Retrofitting Projects of Drivers and Vehicle Federation of Guest House.*
- 2006, METU *Control of Retrofitting Projects of Istanbul MNG Cargo Airport Building.*
- 2006, METU *Control of Structural Projects of Trabzon Airport 40m antenna, Mast of Communication Tower.*
- 2006, METU *Control of Ericson-Turkcell Structural Steel Projects for 95HYE (95m), 95YE, 75 HYE, 75YE, 50YE Antenna Types.*
- 2007, METU *Control of Structural Projects of Trabzon Airport New Terminal Building and Viaduct Project.*
- 2007, METU *Afyon Marble Factory, Foundation Cracks and Foundation Investigation and Retrofitting Projects.*
- 2007, METU *Evaluation Report of Kralkizi-Dicle, Diyarbakir Main Channel for Irrigation, Tunnel Passage Project.*
- 2007, METU *Seismic Assessment of Ibni-Sina Hospital High-rise Building A-B-C-D Blocks according to constructed Earthquake Code in 1968.*
- 2007, METU *Investigation of Cracks in the Basisen Unions Building in Izmir due to neighboring deep foundation excavation.*
- 2008, METU *Structural Project of Habur Customs Vehicle Inspection Facility and Operations Room.*
- 2008, METU *Investigation of Afyon Kocatepe University Cultural Convention A,B,C and E Blocks.*
- 2008, METU *Seismic Assessments of Prime Ministry MIT Intelligence Service Buildings.*
- 2008, METU *Investigation of Building in Dikmen Valley, Ankara and Control of Retrofitting Projects.*
- 2008, METU *Control of Old Istanbul MNG Seismic Steel Retrofitting Projects.*

Seismic Performance Evaluation and Retrofitting Projects

- Ibni Sina High-Rise Hospital Building Blocks Seismic Performance Evaluation Project
- Chest Illnesses and Chest Surgery Education and Research Hospital Buildings Seismic Performance Evaluation Project
- Oncology Education and Research Hospital Buildings Seismic Performance Evaluation and Retrofitting Project
- Child Illnesses Education and Research Hospital Buildings Seismic Performance Evaluation and Retrofitting Project
- Golbasi Hospital Seismic Performance Evaluation Project
- Yalvaç Government Hospital Complex Structures Seismic Performance Evaluation and Retrofitting Projects
- Antalya Government Hospital and Old Health Profession School Seismic Performance Evaluation and Retrofitting Project
- Tepecik Education and Research Hospital D-F Blocks Seismic Performance Evaluation and Retrofitting Project
- Yoncali Hydrotherapy and Physical Treatment Hospital Seismic Performance Evaluation and Retrofitting Project
- Ruhi Tingiz Government Hospital Seismic Performance Evaluation and Retrofitting Project
- Sungurlu Government Hospital Building Blocks Seismic Performance Evaluation and Retrofitting Project
- Niksar Government Hospital Seismic Performance Evaluation and Retrofitting Project
- Gumushane Government Hospital A, B, C and D Blocks Seismic Performance Evaluation and Retrofitting Project
- Diyarbakir Child Illnesses Hospital Seismic Performance Evaluation Project
- Diyarbakir Government Hospital (Additional Service Building) Seismic Performance Evaluation and Retrofitting Project
- Beydagi Government Hospital Seismic Performance Evaluation Project
- Istanbul University Avcilar Campus Faculty of Engineering Damaged Blocks and Profession School Building Earthquake Retrofitting Projects
- G.O.P University Public House Earthquake Seismic Performance Evaluation and Retrofitting Project
- Beypazari Industrial Profession High School Soil Settlement and Investigation of Structural Damage Project
- Kahta Girne Primary School Investigation of Earthquake Seismic Performance Evaluation Project
- Adiyaman Fevzi Cakmak Primary School Investigation of Earthquake Seismic Performance Evaluation Project
- Adiyaman Mustafa Yucel Ozbilgin Primary School Earthquake Seismic Performance Evaluation Project
- Kocatepe University Culture Congress A, B, C and E Blocks Performance Evaluation Project
- Fevzi Cakmak Primary School Earthquake Seismic Performance Evaluation Project
- Adiyaman Country and Towns Safety of Management Service Buildings and Public Buildings, Traffic Service Buildings Earthquake Seismic Performance Evaluation and Earthquake Retrofitting Projects
- Bayburt Country and Towns Safety Management Buildings Earthquake Seismic Performance Evaluation Project
- Afyon Finance Office Blocks Seismic Performance Evaluation Project
- Eskisehir PTT Post Office Earthquake Seismic Performance Evaluation Project
- Tokat Internal Revenue Office of Service Building Earthquake Seismic Performance Evaluation and Retrofitting Project
- Konya Telekom Management Station and Service Building A and B Blocks Retrofitting Projects
- Istanbul MNG Office Building Earthquake Safety Seismic Performance Evaluation and Retrofitting Projects
- Ankara Hosdere Halit Ziya Street 20-22-24-26-28-30 Number Buildings Retrofitting of Foundation Projects
- Historical Ankara Ulus Monopoly Management Building, Investigation of Restoration work and Projects

Reviewer

Journal of Engineering Structures
Gazi University of Engineering and Architectural Journal
International Journal of Engineering and Technologies

PUBLICATIONS

BOOKS

2013

Editor,

VET in Rapid Earthquake Damage Assessment of Buildings to Avoid the Demoslihing,
LdV Project No: 2011-1-TR1-LEO05-27938.

2002

Editor,

ECAS2002 International Symposium on Structural and Earthquake Engineering
Middle East Technical University.

PUBLISHED PAPERS

October 2020

Etemadi A. and Balkaya C.

Collapse-RC Buildig Failure Mechanism with a Forensic Engineering Approach
Journal of Performance of Constructed Facilities, ASCE, 34 (5), 2020.

June 2018

Balkaya C.

Information Systems for Repair Alternatives and Initial Cost Estimation of Damaged Building Structures
International Journal of Engineering and Technologies, IJET, 4(2), 80-88, 2018.

June 2018

Saglik H., Duran B. and Balkaya C.

Investigation of Natural Frequency for Continuous Steel Bridges with Variable-sections by using Finite Element Method
International Journal of Engineering and Technologies, IJET, 4(2), 89-101, 2018.

June 2017

Balkaya C. and Hall William J.

Conceptual Guideway Structural Design for MAGLEV High-speed Ground Transportation System. *International Journal of Engineering and Technologies, IJET, 3(2), 61-71.*

September 2017 Okatan A., Balkaya C. and Arslan M.
Investigation of Seismic Behavior of High Rise Buildings by using Control Systems Engineering ISITES2017 *5th International Symposium on Innovative Technologies in Engineering and Science*, Baku-Azerbaijan, 799-808.

September 2017 Etemadi A. and Balkaya C.
Nonlinear Integrated Design of Lattice Domes with Supporting Substructures *International Journal of Engineering and Technologies, IJET*, 3(3).

June 2017 Balkaya C.
Lessons Learned from Collapse of Zumrut Building under Gravity Loads. *International Journal of Engineering and Technologies, IJET*, 3(2), 44-49.

September 2017 Balkaya C., Karagoz I., and Gunal I.
Improving Torsional Rigidity and Seismic Performance of Tunnel Form Building Structures *International Journal of Engineering and Technologies, IJET*, 3(3).

September 2017 Balkaya C.
Invention: Seismic Retrofitting by Exterior Steel Brace Structural Building Jacketing System ISITES2017 *5th International Symposium on Innovative Technologies in Engineering and Science*, Baku-Azerbaijan, 679-688.

October 2015 Balkaya C., Casciati F., Casciati S., Faravelli L., Vece M.
Real-time Identification of Disaster Areas by an Open Access Vision-Based Tool. *Advances in Engineering Software*.

November 2015 Balkaya C., Erdik, M., Tuzun, C.
Rapid Seismic Damage Assessment of Existing Buildings by Integrating Structural Information in a GIS. *ASCE, Journal of Performance of Constructed Facilities*, accepted for publication.

2013 Balkaya Can, Yuksel S. Bahadir, Derinoz Okan
Soil Structure Interaction Effects on the Fundamental Periods of the Shear-wall Dominant Buildings. *The Structural Design of Tall and Special Buildings*.

2013 Balkaya C., Erdik M., Tuzun C., Kostopoulos G.
A New Methodology in Rapid Earthquake Damage Assessment of Buildings to Avoid the Demolishing by GIS. *VEESD2013, Vienna Congress on Recent Advances in Earthquake Engineering and Structural Dynamics*.

2013 Balkaya C., Karagoz I.
Innovative Seismic Retrofitting Technique of Structural Building Jacketing System. *VEESD2013, Vienna Congress on Recent Advances in Earthquake Engineering and Structural Dynamics*.

June 2012 Balkaya C., Casciati F., Bortoluzzi D., Kostopoulos G., Bogonikolos N.
System Architecture for an Interactive Database to Structural Control of Transport Network Infrastructure: A Case Study of Railroad Bridge. *EACS2012, 5th European Conference on Structural Control*, Genoa, Italy.

2008 Balkaya C.
Investigation of Collapsed Zumrut Building in Konya and Progressive Collapse Mechanisms. *Advances in Civil Engineering*, 8 th International Congress

2006 Balkaya C., Kalkan E., Yuksel S.B.
Finite Element Analysis and Practical Modeling of Reinforced Concrete Multi-Bin Circular Silos. *ACI Structural Journal*, 103(3), 365-371.

2005 Durmus G., Balkaya C.
Irregular Steel Structures Periods and Comparison with 1998 Earthquake Code. *TMMOB Steel Structures Symposium*, 181-194.

2004 Balkaya C., Kalkan E.
Three-Dimensional Effects on Openings of Laterally Loaded Pierced Shear Walls. *ASCE, Journal of Structural Engineering*, 130(10), 1506-1514.

2004 Balkaya C., Kalkan E.
Seismic Vulnerability, Behavior and Design of Tunnel Form Building Structures. *Engineering Structures*, 26(2004), 2081-2099.

2004 Balkaya C.
Failure Reasons of Zumrut Building in Konya. *TMMOB Teknik Guc*, 135

2003 Balkaya C., Kalkan E.
Estimation of Fundamental Periods of Shear-Wall Dominant Building Structures. *Earthquake Engineering and Structural Dynamics*, 3(7), 985-998.

2003 Balkaya C., Kalkan E.
Nonlinear Seismic Response Evaluation of Tunnel Form Building Structures.

- 2003 Computers Structures, 81(2003), 153-165.
Balkaya C.
Closure to 'Behavior and Modeling of Nonprismatic Members Having T-Sections'.
ASCE, Journal of Structural Engineering, 129(3), 419-421.
- 2001 Balkaya C.
Behavior and Modeling of Nonprismatic Members Having T-Sections.
ASCE, Journal of Structural Engineering, 127(8), 940-946.
- 1999 Yilmaz C., Keyder E. and Balkaya C.
Evaluation of Response Modification Factor R in Steel Structures in the Turkish Earthquake Code.
Proceedings of the Ugur Ersoy Symposium on Structural Engineering, 221-223.
- 1997 Balkaya C. and Citipitioglu E.
Discussion on 'Stiffness Formulation for Nonprismatic Beam Elements by Tena-Colunga A.'
ASCE, Journal of Structural Engineering, 123(12), 1694-1695.
- 1993 Balkaya C., Schnobrich W.C.
Nonlinear 3D Behavior of Shear-Wall Dominant RC Building Structures.
Structural Engineering and Mechanics, 1(1), 1-16.
- 1991 El Mezaini N., Balkaya C. and Citipitioglu E.
Analysis of Frames with Nonprismatic Members.
ASCE, Journal of Structural Engineering, 117(6), 1573-1592.
- 1990 Ergun U., Citipitioglu E and Balkaya C.
Soil-Structure Interaction Problem under a Foundation.
Soil Mechanics and Foundation Engineering 3rd National Congress, 1, 181-196.

Citation

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Given Courses:

ARCH 333 Form and Structure, Bilkent University
ARCH 332 Design of Concrete Structures, Bilkent University
Fundamentals of Steel Design
Design of Steel Structures
Design of Reinforced Concrete Structures
Design of Tall Building Structures
Computer Applications in Structural Engineering
Structural Systems Design
Structural Analysis
Statics
Strength of Materials
Construction Materials
Dynamics
Introduction to Earthquake Engineering
Introduction to Civil Engineering
Steel Structures
Reinforced Concrete
Computer Aided Technical Drawing for Civil Engineers
Computer Aided Design (SAP2000)
Finite Element Analysis
Project Management and Site Construction

Thesis:

- 2019 * SDÜ Gunal I. 'Tünel Kalıp Sistemiyle Yapılan Betonarme Perdeli Yapılarda Burulma Rijitliğinin Arttırılması' SDÜ, Fen Bilimleri Enstitüsü, *devam ediyor.
- 2018, Yildiz Technical University Saglik H. 'Estimation of Natural Frequency in Continuous Bridges with Variable Cross-section.' M.Sc. in Structural Engineering.
- 2017, Gelisim University Genc, O. 'Design of Shear-Wall Frame Reinforced Concrete Structures by using Direct Displacement Method.', M.Sc. in Structural Engineering.
- 2006, METU Derinoz, O. 'Impacts of Soil-Structure Interaction on the Fundamental Period of Shear-Wall Dominant Buildings.' M.Sc. in Structural Engineering.
- 2004, METU On, Selim. 'Seismic Performance Evaluation and Analysis of Steel Structures with Semi-rigid Connections.' M.Sc. in Structural Engineering.
- 2003, METU Dipcin C. 'Design Alternatives and Failure Mechanisms for the World Trade Center in the Concept of Tubular Form Tall Building Structures', M.Sc. In Structural Engineering.
- 2002, METU Yavuz, H. '3D Effects on the Capacity Spectrum Evaluation of Existing RC Building Structures Subjected to EQ Loads.', M.Sc. in Structural Engineering.
- 2000, METU Ciliz M. 'Information Systems for the Condition Assessment and Evaluation of Bridge Structures in Turkey.' M.Sc. in Structural Engineering.

1999, METU	Mutlu S.D. 'Analysis and Behavior of Reinforced Concrete Grouped Silos.' M.Sc. in Structural Engineering.
1998, METU	Ilikkan S. 'Information Systems for the Evaluation of Repair Alternatives of Earthquake Damaged Building Structures.' M.Sc. in Structural Engineering.
Committee Member of M.Sc. & Ph.D. Thesis	
2019, METU	Bilgen Sinan (2019). 'Investigation of Aerodynamic and Structural Features of Twisting Tall Buildings'. M.Sc. Thesis, Department of Architecture, METU, 2019.
2019, METU	Taskin, Gokce Nihan (2019). 'A Comparative Study on Alternative Structural System Layouts of Twisted Tall Buildings' M.Sc. Thesis, Department of Architecture, METU, 2019.
2019, METU	Fakioğlu, Beste (2019). 'Evaluation of the Effects of Service Core Reduction on Tall Building Structures. M.Sc. Thesis, Department of Architecture, METU, 2019.
2018, Gelisim University	Yasemin Kılıç Erdim (2018). 'Betonarme Binalarda Rijit Bodrum Kat Sayısının Yapısal Davranışa Etkisi'. M.Sc. Thesis.
2018, Gelisim University	Ömer Faruk Çift (2018). 'Dengeli Konsol Köprü Analizi ve Performans Değerlendirmesi'. M.Sc. Thesis.
2008, METU	Turkmen, Kursat Haydar (2008). 'An Experimental Study into Bearing of Rigid Piled Rafts under Vertical Loads' Ph.D. Thesis.
2008, METU	Altunlu, Kartal (2008). 'Safety Assessment of R/C Columns Against Explosive Attacks by Vehicle or Human from Exterior.'
2007, METU	Tahmilci, Fatih (2007). 'Analysis of Blast Loading Effect on Regular Steel Building Structures.'
2006, METU	Uygar, Celalettin 'Seismic Design of Cold-form Steel Structures in Residential Applications.'
2006, METU	Bakir, Serhan (2006). 'Evaluation of Seismic Response Modification Factors for Steel Frames by Nonlinear Analysis.'
2005, METU	Sarac, Yavuz 'Optimum Design of Pin-jointed 3-D Dome Structures using Global Optimization Techniques.'
2003, Suleyman Demirel University	Durmus, Gulhan (2003). 'Nonlinear Seismic Behavior of Steel Frame Structures.'
2003, METU	Akkas, Tolga (2003). 'The Use of Expanded Metal as Composite Slab.'
2001, METU	Sahin, Aydin (2001). 'Computer Aided Design and Analysis of Post-Tensioned Mat Foundations.'
1998, METU	Sonaer, Gokhan 'Nonlinear Analysis of Concentrically and Eccentrically Braced Steel Frames.'
1998, METU	Bugra, B. Niksarlioglu 'Punching Shear Reinforcement for Flat Plates.'
1998, METU	Inceleme, Ilker 'Circular Plates on Elastic Foundations Modeled with Annular Plates.'
1997, METU	Dogruer, Alper 'Evaluation of Seismic Response Modification Factors for Steel Structures.'
1997, METU	Bozkurt, Ahmet 'Analysis, Design and Construction Criteria of Submerged Tunnels.'
1997, METU	Acar, Fikri 'Effects of Barcuttoff on Flexural Behavior of Reinforced Concrete Beams.'
1996, METU	Coskun, Safa Bozkurt 'Analysis of Shells of Revolution.'

Given Educational Seminars:

November 2014	Bilkent University Invention: Seismic Retrofitting by Exterior Steel Brace Structural Building Jacketing System. A new technique for retrofitting of reinforced concrete buildings.
May 2012	Forest and Water Ministry, Vocational Educational Seminar Assessment of Existing Buildings and Seismic Retrofitting Methods & Seismic Performance Evaluation of Reinforced Concrete Buildings.
May 2011	Hasan Kalyoncu University and Gaziantep Chamber of Turkish Engineers and Architects, Retrofitting of RC Building Structures.
November 2010	Urfa Chamber of Turkish Engineers and Architects Evaluation of Existing RC Buildings and Retrofitting Techniques by using steel structures.
May 2000	For Engineers and Architectures, Before and After Earthquake Seminars, INISEV Before Earthquake and After Earthquake Repair and Strengthening of Existing Building Structures.
June-October 2000	Middle East Technical University, Continuing Education Center Repair and Strengthening of Reinforced Concrete Building Structures.