

# Curriculum Vitae

## PERSONAL INFORMATION

Bora ACUN, *PhD, P.E.*

📍 16 Helen Street, Apt:211 Dundas L9H 1N4 (ON) (Canada)

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Sex Male | Date of birth 11 October 1977 | Nationality Turkish | Permanent Resident Canada

## WORK EXPERIENCE

10/2015– 04/2018

### Project Engineer

DaRam Engineers Inc.  
5420 Dashwood Dr., Suite 206, 77081 Houston (TX) (United States)

- Analysis and design of steel, concrete and wood structures, drafting technical drawings
- Engineering consultancy for development of in-house design software,
- Condition assessment of existing structures and, inspection and quality control for new construction,
- Windstorm design of steel, concrete and wood structures

Business or sector Engineering and Construction

11/2012–07/2015

### Post-Doctoral Research Fellow

University of Houston  
4800 Calhoun Road, 77024 Houston (TX) (United States)

- Management of research projects and related activities, development of research reports and test procedures,
- Project proposal and technical document drafting,
- Laboratory testing on shear and torsional behaviour of reinforced and FRP strengthened concrete members,
- Co-Principal Investigator of a national research project related to CFRP prestressing of bridge beams,
- Adjunct Instructor for undergraduate course / Engineering Mechanics - Dynamics

Business or sector Education

04/2010–11/2012

### Grantholder - 30 ( Post-Doctoral Researcher)

European Commission - Joint Research Centre  
Via Enrico Fermi, IT-21027 Ispra (VA) (Italy)

- Support to implementation of the Eurocodes,
- Structural performance assessment of existing buildings,
- Database management for Nationally Determined Parameters of the Eurocodes,
- Networking and administrative support related to promotion of the Eurocodes

Business or sector European Research Institution

02/2002–03/2010

### Teaching / Research Assistant

Middle East Technical University  
Civil Engineering Department TR-06531 Ankara (Turkey)

- Structural laboratory management,
- Conducting experimental research on reinforced concrete structures,
- Test setup preparation and specimen instrumentation,
- Assisting under/graduate courses

Business or sector Education

## EDUCATION AND TRAINING

01/02/2002–08/03/2010

### PhD in Civil Engineering

Middle East Technical University  
Department of Civil Engineering TR-06531 Ankara (Turkey)

Thesis Title: 'Energy Based Seismic Performance Assessment of Reinforced Concrete Columns', (*Experimental research on reinforced concrete column members*)

7/08/1999–25/01/2002

### M.Sc. in Structural Engineering

Istanbul Technical University  
Department of Civil Engineering TR-34469 Istanbul (Turkey)

Thesis Title: 'Suitability of Rigid Diaphragm Assumption at Building Slabs under Lateral Load Effects' (in Turkish), (*Analytical study on structural analysis concepts*)

01/09/1995–18/06/1999

### Bachelor of Science in Civil Engineering

Çukurova University  
Civil Engineering Department TR-01330 Adana (Turkey)

- Structural Analysis and Design
- Reinforced Concrete Structures
- Structural Dynamics

## PERSONAL SKILLS

Mother tongue(s) Turkish

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
Italian	B1	A2	A2	A2	A2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user  
[Common European Framework of Reference for Languages](#)

Job-related skills

#### Core:

- Competence in communicating in diverse environments (classroom, laboratory, office gatherings and official meetings), especially with colleagues and clients from different backgrounds,
- Understanding, identifying and solving design problems related to structural engineering with an engineer mind,
- Sharing, disseminating and elaborating information by means of in-person presentation, grant writing, technical document drafting and networking,
- Managing projects and defining action items with priorities,
- Operating all types of instruments and machines in laboratory environment including hydraulic loading systems, forklift and overhead cranes, test setup preparation and instrumentation including strain gage installation, soldering, welding, and wood works,
- Data analysis and post-processing,

#### Soft:

- Good communication skills with main motto of "*silentium est aureum*",
- Adaptability to work in multinational environment (European and American Institutes) as a reliable team member,
- Flexibility to work at every level of a project as a "thinker" and a "doer",
- "Out of the box" thinking for approaching problems and challenges,

Computer skills	<u>Application Development - Engineering related:</u> MATLAB and Mathcad ( <i>efficient use</i> ), Fortran, VB, C++ ( <i>Introductory level</i> ) <u>Package Software:</u> AutoCAD, SAP2000, ANSYS, SPSS, NONLIN, BISPEC, OpenSees, RISA 3D, BricsCAD, VisualAnalysis w/ Design ( <i>efficient use</i> ) <u>Other:</u> Microsoft Office applications (Word, Excel, PowerPoint, Access) ( <i>efficient use</i> )
Other skills	- Basketball player (Power Forward), - Goalie (Floorball small field), - Entertainer (Father of two toddlers)
Driving licence	Turkish and Canadian

## ADDITIONAL INFORMATION

Teaching Experience	<u>University of Houston (Houston-Texas):</u> <b>Adjunct Lecturer</b> 2013 Spring Semester Engineering Mechanics -Dynamics  <u>ROSE School (Pavia-Italy):</u> <b>Teaching Assistant</b> 10-11/2008 Structural Dynamics  <u>Middle East Technical University (Ankara-Turkey)</u> <b>Teaching Assistant</b> 2002-2008 Engineering Mechanics - Statics Engineering Mechanics - Dynamics Introduction to Structural Dynamics Introduction to Earthquake Resistant Design
Academic Interests	Structural Dynamics, Structural Performance Assessment of Reinforced Concrete Structures, Laboratory Testing of Reinforced Concrete and Masonry Structures/Members, Assessment of Existing Buildings and Retrofitting, FRP Strengthening of Concrete Structures, CFRP Prestressed Concrete Bridges

**Honours and awards** 2012 – Best PhD Thesis of the Year. Graduate School of Middle East Technical University, Ankara, Turkey.  
1999 – Graduated 1<sup>st</sup> rank in the Civil Engineering Department and 4<sup>th</sup> rank in the Faculty of Engineering at the Cukurova University, Adana, Turkey

**Affiliations** PROFESSIONAL AFFILIATIONS:  
2017- 2018: Foundation Performance Association, Structural Committee member  
2011 – 2012 : CEN/TC250 “Structural Eurocodes”, Work Group-2, “Existing Structures”, Participating member,  
2010 - present: American Concrete Institute (ACI Structural Journal), Reviewer,  
2008 – 2010 : American Concrete Institute (ACI), Student Member  
2006 – 2008 : American Society of Civil Engineers (ASCE), Student Member

**Certifications** Professional Engineer, TEXAS Board of Professional Engineers, Licence # 125255,  
Appointed Qualified Inspector for Windstorm design, Texas Department of Insurance

**Publications** See attached.

## **List of Publications**

### **Publications in Refereed International Journals**

- 1-Poudel, P., Belarbi, A., Dawood, M., Gencturk, B., and **Acun, B.**, 2017. “*Prestressing bridge girders with carbon fiber–reinforced polymer: State of knowledge and research needs*”, Advances in Structural Engineering, Vol: 21, Issue: 4, pp 598-612.
- 2- Belarbi, A. and **Acun, B.**, 2013. “*FRP Systems in Shear Strengthening of Reinforced Concrete Structures*”, Procedia Engineering, Vol 57, pp 2-8.
- 3- **Acun, B.** and Sucuoglu, H., 2012. “*Energy Dissipation Capacity of R/C Columns under Cyclic Displacements*”, ACI - Structural Journal, Vol: 109, No.4, pp. 531-540
- 4- Sucuoglu, H. and **Acun, B.**, 2012. “*Energy-Based Hysteresis Model for the Flexural Response of R/C Columns*”, ACI -Structural Journal, Vol: 109, No.4, pp. 541-550
- 5- Erberik, M.A., Sucuoglu, H. and **Acun, B.**, 2012 “*Inelastic Displacement Response of R/C Systems with Cyclic Deterioration – An Energy Approach*”, Jour. of Earthquake Engineering, vol. 16 no. 7 pp. 937-962
- 6- **Acun, B.** and Sucuoglu, H., 2010. “*Performance of Reinforced Concrete Columns Designed for Flexure under Severe Displacement Cycles*”, ACI - Structural Journal, Vol:107, No.3, pp. 364-371

### **Book Chapters**

- 1- Belarbi, A., Dawood, M., and **Acun, B.**, 2017, “*Sustainability of Fiber-Reinforced Polymers (FRP’s) as a Construction Material*”, Sustainability of Construction Materials, Second Edition, p.p: 521-537, Editor: Jamal M. Khatib, Woodhead Publishing
- 2- **Acun, B.** and Sucuoglu, H., 2010. “*The Effect of Displacement History on the Performance of Concrete Columns in Flexure*”, Advances in Performance-Based Earthquake Engineering, pp. 373-382, Editor: M.N. Fardis, Springer.

### **Editor**

- 1- Denton, S. and Tsionis G., 2012. “*The Evolution of Eurocodes for Bridge Design*”, EUR - Scientific and Technical Research Reports, Editors: Pinto, A.V., Athanasopoulou, A., **Acun, B.**, Publications Office of the European Union, 36 pp.
- 2- Bisch, P., Carvalho, E., Degee, H., Fajfar, P., Fardis, M., Franchin, P., Kreslin, M., Pecker, A., Pinto, P., Plumier, A., Somja, H., and Tsionis, G., 2012. “*Eurocode 8: Seismic Design of Buildings - Worked examples*”, EUR - Scientific and Technical Research Reports, Editors: Carvalho, E., Fardis, M., **Acun, B.**, Athanasopoulou, A., Pinto, A.V., Publications Office of the European Union, 515 pp.
- 3- Feldmann, M., Eichler, B., Kuhn, B., Stranghoner, N., Dahl, W., Langenberg, P., Kouhi, J., Pope, R., Sedlacek, G., Ritakallio, P., Iglesias, G., Puthli, R.S., Packer, J.A., and Krampen, J., 2012. “*Choice of Steel Material to Avoid Brittle Fracture for Hollow Section Structures*”, EUR - Scientific and Technical Research Reports, Editors: Pinto, A.V., Varum, H., and **Acun, B.**, Publications Office of the European Union, 204 pp.

### **Publications in Refereed National Journals**

**1- Acun, B.** ve Sucuoğlu, H., 2011. “*Evaluation of the Performance Limit States of Reinforced Concrete Columns in View of Experimental Observations*”, IMO-Teknik Dergi, Vol:22, No.3, pp. 5523-5541 (in Turkish)

### **Publications at International Conferences**

**1-** Zomorodian, M., Yang, G., Belarbi, A., Ayoub, A., and **Acun, B.**, 2015. “*Pure Shear Tests on FRP Strengthened Membrane Elements*”, Conference of Structural Failures, Awarie Budowlane 2015 Szczecin-Miedzyzdrze, Poland

**2-** Belarbi, A., Dawood, M., Gencturk, B., and **Acun, B.**, 2014. “*Advanced Composite Materials for Prestressed Concrete Bridge Girders*”, Transportation Research Arena, Paris, France.

**3- Acun, B.**, Belarbi, A., Dawood, M., and Gencturk, B., 2014. “*Prestressing Applications with Composite Materials for Bridge Beams*,” 7th International Conference on Fiber Reinforced Polymer Composites in Civil Engineering (CICE 2014), Vancouver, Canada, August 20-22

**4-** Gencturk, B., Kaymaz, I., and **Acun, B.**, 2014. “*Development of Seismic Design Parameters for HPFRC and Multi-Material Buildings*”, 10th US National Conference on Earthquake Engineering, Anchorage, Alaska, USA.

**5-** Yang, G., Zomorodian, M., Belarbi, A., and **Acun, B.**, 2014. “*Tension stiffening of reinforced concrete shear elements strengthened with externally bonded FRP sheets*”, IABSE Symposium Report, Volume 102, Issue 42, pp: 145-152

**6-** Yang, G., Zomorodian, M., Belarbi, A., Ayoub, A., and **Acun, B.**, 2013. “*Experimental and Analytical Investigations on the Behavior of FRP-Reinforced Concrete Element Subjected to Pure Shear*”, FRPRSC 11, Guimaraes, Portugal.

**7-** Yang, G., Zomorodian, M., Belarbi, A., Ayoub, A., and **Acun, B.**, 2013. “*Constitutive Laws of FRP-Reinforced Concrete Element under Pure Shear*”, 2nd Conference on Smart Monitoring, Assessment and Rehabilitation of Civil Structures, Istanbul, Turkey.

**8-** Zomorodian, M., Yang, G., Belarbi, A., Ayoub, A., and **Acun, B.**, 2013. “*Effects of Carbon Fiber Anchors on the Behavior of FRP Strengthened RC Elements Subjected to Pure Shear*”, 2nd Conference on Smart Monitoring, Assessment and Rehabilitation of Civil Structures, Istanbul, Turkey.

**9-** Zomorodian, M., Yang, G., Belarbi, A., Ayoub, A., and **Acun, B.**, 2013. “*Behavior of FRP Strengthened RC Elements with Carbon Fiber Anchors under Pure Shear*”, 2nd Conference on Smart Monitoring, Assessment and Rehabilitation of Civil Structures, Istanbul, Turkey.

**10-** Pinto, A.V., Athanasopoulou, A., **Acun, B.** and Poljansek, M., 2012. “*Achievements in Eurocodes implementation. Where do we stand?*”, 3rd International Workshop: Design of Concrete Structures and Bridges using Eurocodes”, Vienna, Austria

**11-** Pinto, A.V., Athanasopoulou, A., Poljansek, M. and **Acun, B.**, 2011. “*Implementation, Harmonization and Further Development of Eurocodes- A Case Study on Eurocode 2*”, 2nd International Workshop: Design of Concrete Structures and Bridges using Eurocodes”, Bratislava, Slovakia

- 12- Acun, B.** and Sucuoglu, H., 2010. “*Performance Limits for Reinforced Concrete Columns Under Severe Displacement Cycles*”, 3rd fib International Congress, Paper No:322, Washington D.C., USA
- 13- Acun, B.** and Sucuoglu, H., 2007. “*Seismic Response of RC Columns with Strength Deterioration*”, 9th Canadian National Conference on EQ. Eng., Paper No:1030, Ottawa, Canada
- 14- Acun, B.** and Sucuoglu, H., 2006. “*Strengthening Of Masonry Infill Walls In Reinforced Concrete Frames With Wire Mesh Reinforcement* “, 8th U.S. National Conference on EQ. Eng., Paper No: 1852, California, USA
- 15- Erberik, A.** and **Acun, B.**, 2005. “*An Energy-based Softening Index for Seismic Performance Evaluation of Reinforced Concrete Column Members*“, Earthquake Engineering in the 21st Century, Skopje, Macedonia

**PhD Thesis:**

**Acun, B.**, 2010. “*Energy-Based Seismic Performance Assessment of Reinforced Concrete Columns*”, PhD Thesis, Middle East Technical University, Ankara, Turkey, pp. 237.