

## CURRICULUM VITAE

# TADEH ZIRAKIAN

*Lecturer, Department of Civil Engineering, Cal Poly Pomona  
Ph.D. Candidate in Structural and Earthquake Engineering, UCLA*

### Contact Information

- University Address: *University of California, Los Angeles  
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### Education

- **Ph.D.** University of California, Los Angeles, U.S.A. (2009-Present)  
Major: Structural and Earthquake Engineering  
Minor: Structural Mechanics  
Thesis: *Seismic Performance and Design of Steel Plate Shear Walls with Low Yield Point Steel Infill Plates*  
Advisor: Dr. Jian Zhang
- **M.Sc.** Urmia University, Iran (2003-2005)  
Major: Civil/Structural Engineering  
M.Sc. with Honors and Distinction  
U.S. Equivalent (IERF)  
Thesis: *Distortional Buckling of Castellated and Plain-Webbed Steel I-Beams*  
Advisor: Dr. Hossein Showkati
- **B.Sc.** Azad University - Urmia Branch, Iran (1998-2002)  
Major: Civil/Civil Engineering  
B.Sc. with Honors and Distinction  
U.S. Equivalent (IERF)

### Honors and Awards

- Azad University - Urmia Branch, Highest G.P.A. of Graduates, Top Student, Urmia, Iran (2002)
- Urmia University, Highest G.P.A. of Graduates, Top Student, Urmia, Iran (2005)
- ASCE-IECC'5 Conference Best Student Paper Award, Irvine, CA, U.S.A. (2008)
- The Armenian Professional Society Scholarship Award, CA, U.S.A. (2009)
- Armenian-American Citizens' League, The Jack Keligian Scholarship Award, CA, U.S.A. (2009, 2010, and 2011)
- UCLA Graduate Quarterly Magazine, Graduate Student Accomplishments  
*Fall 2010, Winter 2010, and Winter 2011 Issues*

- UCLA Graduate Division, Fellowship Award, CA, U.S.A. (2010-2011 and 2011-2012)

## Research Interests

- Structural Stability of Thin-Walled Structures, Steel Structures, Concrete Structures, Composite Structures (Steel/Concrete and Fiber/Matrix), Structural and Seismic Design, Design Codes, Experimental Methods

## Research/Teaching Experience

### Research:

- Urmia University, Iran (2003-2005) - Graduate Research Assistant  
Subject: *Distortional buckling of castellated and plain-webbed steel I-beams*
- Independent Research, Iran and U.S.A. (2003-Present)  
Subject: *Application of the extrapolation techniques in elastic and inelastic buckling*  
Subject: *Lateral-distortional buckling of singly/doubly symmetric I-beams*
- University of California, Irvine, U.S.A. (2007-2009) - Graduate Research Assistant  
Project: *Strengthening of reinforced concrete flexural and shear beams using composite systems*  
Project: *Strengthening of reinforced concrete flexural slabs using composite systems*  
Project: *Evaluation of field repair technologies for sensored and unsensored composite army bridges*
- University of California, Los Angeles, U.S.A. (2009-Present) - Graduate Research Assistant  
Subject: *Seismic performance and design of steel plate shear walls with low yield point steel infill plates*

### Teaching:

- Azad University - Urmia Branch, Iran  
*Structural Analysis (2004-2005), Teaching Assistant*  
*Principles of Earthquake Engineering (2004-2005), Teaching Assistant*
- Andishe Sabze Ehsan English Language Institute, Urmia, Iran  
*English Language Grammar and Speaking (2003-2006), Teacher and Tutor*
- University of California, Irvine, U.S.A.  
*Mechanics of Materials (Fall 2007), Teaching Assistant*  
*Soil Mechanics Laboratory (Winter 2008), Teaching Assistant*  
*Foundation Design (Spring 2008), Teaching Assistant*  
*Civil Engineering Practicum II (Fall 2008), Teaching Assistant*
- University of California, Los Angeles, U.S.A.  
*Statics and Dynamics (Fall 2009), Reader*  
*Elementary Structural Mechanics (Winter 2010), Reader*  
*Applied Numerical Computing and Modeling in Civil and Environmental Engineering (Spring 2010), Reader*  
*Advanced Structural Analysis (Fall 2010), Reader*  
*Elementary Structural Mechanics (Winter 2011), Reader*  
*Design of Reinforced Concrete Structures (Winter 2012), Reader*
- The Princeton Review Company, U.S.A.  
*Mathematics (2011-Present), Tutor*
- California State Polytechnic University, Pomona, U.S.A.  
*Structural Testing Laboratory (Spring 2012), Lecturer*

## Professional Registration

- E.I.T., Engineer-in-Training, California State (2011)

## Engineering Work Experience

- Baroj Civil and Structural Company, Urmia, Iran (2002)  
*Field Civil Engineer in Urmia University Project*  
*Involved in construction of administrative and library buildings*
- Boland Payeh Structural and Construction Company, Tehran, Iran (2003)  
*Field Structural Engineer in Sahand Thermal Power Plant Project*  
*Involved in construction of the concrete cooling towers*
- Hamzeh Structural and Construction Company, Urmia, Iran (2003)  
*Field Structural Engineer in Urmia Shahar-Chayi Dam Project*  
*Involved in construction of the concrete tunnels*
- AlphaSTAR Corporation, Long Beach, California, U.S.A. (April-September 2009)  
*GENOA Software Development Research Assistant*  
*Involved in preparation of the software benchmark problems and user manual*

## Software Skills

- ANSYS, MATLAB, CUFSM, CUTWP, RAM, GENOA, OpenSees, ABAQUS, AutoCAD, MS Office (Word, Excel, PowerPoint)

## Professional Activities

- Journal Paper Reviewer, Structural Engineering and Mechanics, An international Journal
- Journal Paper Reviewer, Steel and Composite Structures, An International Journal
- Journal Paper Reviewer, Journal of Civil Engineering and Architecture
- Journal Paper Reviewer, Mathematical Problems in Engineering
- Journal Paper Reviewer, World Applied Sciences Journal
- Conference Paper Reviewer, CSCE 2007 Annual General Meeting & Conference, Canada
- Attendance at NEES-EERI Webinar Series with PDH Certificates

## Membership in Professional Societies

- American Society of Civil Engineers (ASCE), U.S.A.
- American Institute of Steel Construction (AISC), U.S.A.
- American Concrete Institute (ACI), U.S.A.
- Structural Stability Research Council (SSRC), U.S.A.
- American Standard for Testing and Materials (ASTM), U.S.A.
- Society of American Military Engineers (SAME), U.S.A.
- George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES), U.S.A.
- Armenian Engineers & Scientists of America (AESAs), U.S.A.
- Armenian Professional Society (APS), U.S.A.
- UCLA Student Chapter of the Earthquake Engineering Research Institute (EERI), U.S.A.

## Languages

- Armenian: Mother tongue
- Persian (Farsi): Fluent, written and spoken
- English: Fluent, written and spoken  
*Senior Proficiency Certificate in English, Iran Language Institute (2000)*  
*Junior Proficiency Certificate in English, Iran Language Institute (1999)*

Key English Test Certificate (Pass with Merit), University of Cambridge (2001)  
English Language Teacher, Andishe Sabze Ehsan English Institute, Iran (2003-2006)

- Turkish: General familiarity
- Azeri: General familiarity
- Assyrian: General familiarity

## Publications

### Journal Papers:

- Zirakian T. and Showkati H. (2006). “*Distortional Buckling of Castellated Beams*”, Journal of Constructional Steel Research, 62(9), 863-871.
- Zirakian T. and Showkati H. (2007). “*Experiments on Distortional Buckling of I-Beams*”, Journal of Structural Engineering, ASCE, 133(7), 1009-1017.
- Zirakian T. (2008). “*Lateral-Distortional Buckling of I-Beams and the Extrapolation Techniques*”, Journal of Constructional Steel Research, 64(1), 1-11.
- Zirakian T. (2008). “*Elastic Distortional Buckling of Doubly Symmetric I-Shaped Flexural Members with Slender Webs*”, Thin-Walled Structures, 46(5), 466-475.
- Zirakian T. (2010). “*On the Application of the Extrapolation Techniques in Elastic Buckling*”, Journal of Constructional Steel Research, 66(3), 335-341.
- Zirakian T. and Nojoudi S.A. (2011). “*Elastic Lateral-Distortional Buckling of I-Beams and the Meck Plot*”, Structural Engineering and Mechanics, An International Journal, 37(3), 297-307.
- Zirakian T. and Zhang J. (2012). “*Elastic Distortional Buckling of Singly Symmetric I-Shaped Flexural Members with Slender Webs*”, International Journal of Structural Stability and Dynamics, 12(2), 359-376.
- Showkati H., Ghanbari Ghazijahani T., Noori A. and Zirakian T. (2012). “*Experiments on Elastically Braced Castellated Beams*”, Journal of Constructional Steel Research. (Under Review)
- Zhang J. and Zirakian T. (2012). “*Buckling and Yielding Behavior of Unstiffened Slender, Moderate, and Stocky Low Yield Point Steel Plates*”. (Under Preparation)
- Zhang J. and Zirakian T. (2012). “*Structural Behavior of Shear Wall Systems with Unstiffened Slender, Moderate, and Stocky Low Yield Point Steel Infill Plates*”. (Under Preparation)
- Zhang J. and Zirakian T. (2012). “*Seismic Design and Behavior of Low Yield Point Steel Plate Shear Walls*”. (Under Preparation)

### Conference Papers:

- Zirakian T. and Showkati H. (2005). “*Experimental Study of Distortional Buckling of Castellated Beams*”, Proc., International Symposium on Innovation & Sustainability of Structures in Civil Engineering - Including Seismic Engineering, Nanjing, China, 375-385.
- Zirakian T. and Showkati H. (2005). “*Distortional Buckling Tests on Steel I-Beams*”, Proc., International Symposium on Innovation & Sustainability of Structures in Civil Engineering - Including Seismic Engineering, Nanjing, China, 386-397.
- Zirakian T. and Showkati H. (2006). “*Experimental Investigation of Distortional Buckling of I-Shaped Beams*”, The Seventh International Congress on Civil Engineering, Tarbiat Modarres University, Tehran, Iran. (In Persian)
- Zirakian T. (2007). “*Elastic Distortional Buckling Analysis of Steel I-Beams Using CUFSM*”, Proc., 2007 Annual Conference of the Canadian Society for Civil Engineering (CSCE), Yellowknife, Northwest Territories, Canada.
- Zirakian T. (2008). “*Elastic Lateral-Distortional Buckling of Doubly Symmetric I-Beams: The 2005 AISC Specification*”, ASCE 5<sup>th</sup> International Engineering and Construction Conference, University of California, Irvine, U.S.A. (**Conference Best Student Paper Award**)
- Zirakian T., Kim S.B. and Mosallam A.S. (2008). “*Further Studies on the Use of the Extrapolation Techniques in Case of Lateral Buckling of Steel I-Beams*”, ASCE 5<sup>th</sup> International Engineering and Construction Conference, University of California, Irvine, U.S.A.
- Zirakian T., Abumeri G., Abdi F. and Mosallam A.S. (2008). “*Post-Buckling Behavior of Composite Stiffened Panel*”, ASCE 5<sup>th</sup> International Engineering and Construction Conference, University of California, Irvine, U.S.A.
- Zirakian T. and Mosallam A.S. (2009). “*On the Applicability of Southwell, Modified, and Massey Extrapolation*

*Techniques*”, Joint SSRC Annual Stability and North American Steel Construction Conference, Phoenix, Arizona, U.S.A. (**Conference Speaker**)

- Zirakian T. (2010). “*Further Results on the Application of the Extrapolation Techniques*”, 2010 International Colloquium on Stability and Ductility of Steel Structures, Rio de Janeiro, Brazil.
- Zirakian T. and Zhang J. (2010). “*Elastic Lateral-Distortional Buckling of Singly Symmetric I-Beams: The 2005 AISC Specification*”, 2010 International Colloquium on Stability and Ductility of Steel Structures, Rio de Janeiro, Brazil.
- Zirakian T. (2011). “*On the Application of the Meck Plot in Elastic Buckling*”, ASCE Conference Proceedings of the 2011 Structures Congress, Las Vegas, Nevada, U.S.A.
- Zirakian T. and Zhang J. (2012). “*Modified PFI Model for SPSWs with Moderate and Stocky LYP Steel Infill Plates*”, Joint SSRC Annual Stability and AISC Steel Conference, Grapevine, Texas, U.S.A.
- Showkati H., Ghanbari Ghazijahani T., Noori A. and Zirakian T. (2012). “*Assessment of Buckling Stability of Elastically-Braced Castellated Beams*”, Joint SSRC Annual Stability and AISC Steel Conference, Grapevine, Texas, U.S.A.
- Zirakian T. and Zhang J. (2012). “*Structural Performance of SPSWs with Unstiffened Slender, Moderate, and Stocky LYP Steel Infill Plates*”, 15<sup>th</sup> World Conference of Earthquake Engineering. (Accepted)

### **Technical Reports:**

- Mosallam A.S., Miraj R., Zirakian T., Nyknahad D., Nasr A. and Salama M. (2008). “*Structural Evaluation of LinForce<sup>TM</sup> Composite Systems for Strengthening Reinforced Concrete Flexural & Shear Beams*”, Research Report No. SETH-LFB06-08, Department of Civil & Environmental Engineering, University of California, Irvine, U.S.A.
- Mosallam A.S., Miraj R., Nyknahad D., Zirakian T., Nasr A. and Salama M. (2008). “*Structural Evaluation of LinForce<sup>TM</sup> Composite Systems for Strengthening Reinforced Concrete Flexural Slabs*”, Research Report No. SETH-LFS06-08, Department of Civil & Environmental Engineering, University of California, Irvine, U.S.A.
- Abdi F., Mosallam A.S. and Zirakian T. (2008). “*Field Repair Technology for Composite Bridges: Experimental Evaluation of Behavior of the Tested Composite Army Bridges*”, **Phase II Plus** Bi-Monthly Progress Report No. 8, Alpha Star Corporation, Long Beach, California, U.S.A.

### **Miscellaneous:**

- Zirakian T. and Zhang J. (2012). “*On the Improvement of Buckling Stability & Performance of SPSW Systems*”, Structural Stability Research Council (SSRC) Newsletter, Ongoing Stability Research, Volume 2, Issue 1, Page 4.