

David B. Garber, PhD, PE

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PROFESSIONAL LICENSURE

Professional Engineer (Civil), Florida Board of Professional Engineers License #82344

EDUCATION

PhD, Structural Engineering, The University of Texas at Austin 2014
MS, Structural Engineering, The University of Texas at Austin 2011
BSc, Civil Engineering, Johns Hopkins University 2009

APPOINTMENTS

Assistant Professor, Florida International University 2014 – pres.
Co-Director, ABC-UTC, Florida International University 2014 – pres.
Graduate Research Assistant, The University of Texas at Austin 2009 – 2014

RESEARCH EXPERIENCE

- Accelerated Bridge Construction University Transportation Center (co-PI, US DOT) 2013 – pres.
- Evaluation of Corrosion Sensors (PI, FDOT) 2016 – pres.
- Development of FSB with UHCP Closure Pour for ABC (PI, FDOT) 2016 – pres.
- Strut Behavior and Efficiency in Strut and Tie Modeling (PI, FIU / WJE) 2014 – pres.
- International Database of ABC Related Projects and Research (PI, ABC-UTC) 2014 – pres.
- Demolition Requirements for Bridge Construction Projects – Best Practices Guidelines (Phase I) 2016
- Design Implications of Prestress Loss 2011 – 2015
- Behavior of Inverted-T Bent Caps 2009 – 2013

TEACHING EXPERIENCE

- **FIU:** Advanced Reinforced Concrete Graduate F14,15,16
- **FIU:** Prestressed Concrete Design Undergrad/Grad Sp16,17
- **FIU:** Reinforced Concrete Design Undergrad Sp15,16, F16
- **FIU:** Dynamics Review Course Undergrad F/Sp14,15,16,17
- **FIU:** Intro to Structural Engineering Undergrad F15

SELECTED HONORS AND AWARDS

- **George E. Moden Award of Excellence** in appreciation of outstanding research contribution and commitment at Ferguson Structural Engineering Laboratory at The University of Texas at Austin – Fall 2012
- **Thrust 2000 – Lawrence and Helen Caldwell Endowed Graduate Fellowship in Engineering** for outstanding undergraduate academic record and continued excellence in graduate school towards a PhD degree – Fall 2009 to Spring 2013
- **The Gerard H. Schlimm Award** for exceptional accomplishment by a student in civil engineering at the G.W.C. Whiting School of Engineering at The Johns Hopkins University

PROFESSIONAL MEMBERSHIP

- **ACI** (associate member of committees: ACI 342, 423, 445)
- **PCI** (voting member of *Student Education Committee*; consulting member of *Committee on Bridges and Concrete Materials Technology Committee*)

SELECTED PEER-REVIEWED PUBLICATIONS

1. Salazar J, Abyaneh R, Katz A, Kim H, Yousefpour H, Garber D, Hrynyk T, Bayrak O, "Benefits of Using 0.7-inch Strands in Precast, Pretensioned Girders: A Parametric Investigation," accepted by *PCI Journal*.
2. Garber D, Varney N, Fernandez L, Bayrak O, "Performance of Ledges in Inverted T Concrete Beams," *ACI Structural Journal*, March-April 2017.
3. Garber D, Gallardo J, Deschenes D, Bayrak O, "Strength and Serviceability Performance of Self-Consolidating Concrete Bridge Girders," *ACI Structural Journal*, September-October 2016.
4. Garber D, Gallardo J, Deschenes D, Bayrak O, "Prestress Loss Calculations: Another Perspective," *PCI Journal*, May-June 2016.
5. Garber D, Gallardo J, Deschenes D, Bayrak O, "Non-Traditional Shear Failures in Bulb-T Prestressed Concrete Bridge Girders," *ASCE Journal of Bridge Engineering*, DOI: 10.1061, February 2016.
6. Garber D, Gallardo J, Deschenes D, Bayrak O, "Database Assembly and Analysis for the Evaluation of Prestress Loss Estimation Methods," *ACI Structural Journal*, Vol. 112 No. 02, January-February 2016.
7. Garber D, Gallardo J, Deschenes D, Bayrak O, "Experimental Investigation of Prestress Losses in Full-Scale Bridge Girders," *ACI Structural Journal*, Vol. 112 No. 5, September-October 2015.
8. Larson N, Fernandez E, Garber D, Bayrak O, Ghannoum W, "Inverted-T Beams: Experiments and Strut-and-Tie Modeling," *ACI Structural Journal*, Vol. 112 No. 2, March-April 2015.
9. Garber D, Gallardo J, Huaco G, Samaras V, Breen J, "Experimental Evaluation of Strut-and-Tie Modeling Applied to Indeterminate Deep Beams," *ACI Structural Journal*, Vol. 111 No. 4, July-August 2014.

OTHER SELECTED PUBLICATIONS AND PRESENTATIONS

1. Gallardo J, Garber D, Deschenes D, Bayrak O, "Simplified element-based model to estimate strain-related prestress loss in pretensioned simply supported bridge girders," *CONCREEP-10*, Austria, 2015.
2. Garber D, Gallardo J, Deschenes D, Bayrak O, "Conservatism of Existing Prestress Loss Estimation Methods," *PCI/NBC 2013*.
3. Garber D, "Prestress Loss: Another Perspective," *PCI Committee Days* (Fall 2015), Committee on Bridges meeting (invited presenter).
4. Garber D, "Overview of the ABC Project and Research Databases," *TRB 96th Annual Meeting (2017)*, Latest Accelerated Bridge Construction Innovations from Research.
5. Lee SJ and Garber D, "The rise of 3D printing in ABC," <http://go-explore-trans.org/post.cfm?&ID=18958>, April 2016.