

Curriculum Vitae
Steven M. Wilkerson, Ph.D., P.E.
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Education

Rice University, Houston, Texas. Dept. of Civil & Environmental Engineering. Ph.D., May 2005.

Thesis: An Optimization Algorithm for Minimum Weight Design of Steel Frames with Nonsmooth Stress Constraints.

Advisors: Prof. Satish Nagarajaiah (Dept. of Civil & Environmental Engineering) and Prof. Matthias Heinkenschloss (Dept. of Computational & Applied Mathematics).

Rice University, Houston, Texas. Master of Civil Engineering, December 1986.

Rice University, Houston, Texas. Bachelor of Science, May 1984.

Major: Structural Engineering.

Advisor: Prof. Walter J. Austin, Dept. of Civil Engineering.

Academic Experience

Prairie View A&M University, Prairie View, Texas. Adjunct Instructor. September 2018 to present. Full-time instructor in School of Architecture.

Rice University, Houston, Texas. Lecturer. January 2009 to present. Part-time lecturer in Dept. of Civil and Environmental Engineering.

University of Houston, Houston, Texas. Lecturer. August 2012 to May 2017. Part-time lecturer in Gerald D. Hines College of Architecture and Dept. of Civil and Environmental Engineering.

Professional Experience

Zia Engineering, Houston, Texas. President. May 2014 to present. Marketing and business development. Structural engineering design and consulting.

Cardno Haynes Whaley Associates, Houston, Texas. Associate Vice President. February 2008 to May 2014. Responsibilities in development and management of technology, with emphasis on integrating technology into production.

Technip USA, Houston, Texas. Principal Research Associate. July 2006 to February 2008. Conceptual design and preliminary study of offshore transport, drilling and production units.

Zentech, Houston, Texas. Senior Design Engineer and Software Engineer, August 1994 to September 1999. Analysis and design of offshore structures. Software design for the analysis of fixed and floating offshore structures.

CBM Engineers, Houston, Texas. Design Engineer, March 1987 to February 1994. Analysis and design of building structures.

Brown & Root International, Houston, Texas. Design Engineer, May 1984 to July 1985.

Publications

1. Slocum, S. and Wilkerson, S. M. (2014), "SEI Survey: Current Business Practices and Future Expectations," *STRUCTURE*, vol. 21, no. 6, pp. 52-55.
2. Wilkerson, S. M. (2013), "Mixed Variable Plate Girder Cost Optimization Using Mesh Adaptive Direct Search," in *Proceedings of the 2013 Structures Congress*, pp. 2520-2533, Structural Engineering Institute of the American Society of Civil Engineers, May 2013, Pittsburgh, PA.
3. McCormick, P. R. et al (2012), "Adopting New Technologies Into Your Business," *STRUCTURE*, vol. 19, no. 5, pp. 38-40.
4. Wilkerson, S. M. (2010), "Discussion on Critical Evaluation of Equivalent Moment Factor Procedures for Laterally Unsupported Beams," *Engineering Journal*, AISC, vol. 47, no. 4, pp. 279-280.
5. Wilkerson, S. M. and Nagarajaih, S. N., (2009), "Optimal Offloading Configuration of Spread-Moored FPSOs," *Journal of Offshore Mechanics and Arctic Engineering*, vol. 131, no. 2, pp. 021603-1:9.
6. Wilkerson, S. M., (2005) "Improved Coefficients for Elastic Lateral-Torsional Buckling," *Proceedings 46th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics, and Materials Conference*, April 2005.
7. Wilkerson, S. M., (2005) "A Smooth Shear Strength Function for Steel Flexural Members," *Engineering Structures*, vol. 27, no. 8, pp. 1268-1277.
8. Wilkerson, S. M., (2003) "A Robust Algorithm for the Design of Steel Structures," *Proceedings 44th AIAA/ASME/ASCE/AHS Structures, Structural Dynamics, and Materials Conference*, April 2003. Awarded best in session.
9. Walden, N. L. and Wilkerson, S. M., (1996) "Automation of Concrete Design," *Concrete International*, vol. 18, no. 12, pp. 30-34.
10. Banavalkar, P. V. and Wilkerson, S. M., (1993) "Creep and Shrinkage of Composite Columns in Tall Buildings," *ASCE Structures Congress*, April 1993.

Presentations

1. "SWN Corporate Headquarters," with Chris Hill, **Texas A&M University SEAoT Chapter Meeting**, October 2013, College Station, TX.
2. "BIM Quantity Estimation for Budget Reconciliation during Pre-Construction: A Case Study of the NBAF," with Perkins+Will **Houston BIM Peer Group monthly meeting**, May, 2013, Houston, TX.

3. "Mixed Variable Plate Girder Cost Optimization Using Mesh Adaptive Direct Search," at ASCE/SEI Optimal Structural Design Committee Session: Structural Optimization in Framed Buildings-Spanning from Theory to Practice, **ASCE Structures Congress**, May 2013, Pittsburgh, PA.
4. "Clash of the ReviTitans," with BDMI, **HARUG monthly meeting**, April 2013, Houston, TX.
5. "BIM: Reality Check and Future Agenda," panelist, **BIM Texas Conference**, November 2012, San Antonio, TX.
6. "Lessons Learned From the Recession / Where Do We Go From Here?" with SEI/ASCE Business Practices Committee, **ASCE Structures Congress**, March 2012, Chicago, IL.
7. "BIM Benefits (and Challenges): A Panel Discussion with Architect, Engineer & Contractor," with WHR and Satterfield & Pontikes, **SMPS Houston Chapter monthly meeting**, March 2012, Houston, TX.
8. "Many Offices and One Project in Autodesk® Revit®: BIM Collaboration Lessons Learned," with Perkins+Will, **Autodesk University 2011**, December 2011, Las Vegas, NV.
9. "Design Options in Production Modeling," with WHR, **HRUG monthly meeting**, August 2011, Houston, TX.
10. "Adopting New Technologies Into Your Business," with SEI/ASCE Business Practices Committee, **ASCE Structures Congress**, April 2011, Las Vegas, NV.
11. "Project Phase Overview," **Texas A&M University ASCE Chapter Meeting**, November 2010, College Station, TX.
12. "The Houston Pavilions: Design and Construction Challenges," with Harvey, Myrex, and Lucky's Steel, **AISC Steel Camp**, June 2010, Houston, TX.
13. "Driving data in your Revit Model via an Excel Spreadsheet through Revit DB Link and a Live Access Link," **HRUG monthly meeting**, May 2010, Houston, TX.
14. "BIM - Project Delivery in the 21st Century," with Kirksey, **CEFPI**, February 2010, Houston, TX.
15. Panelist, **BIM Forum Houston**, Sponsored by AGC/TAMU, September 2009, Houston, TX.
16. "Improving the Construction Process through Technology - the Benefits of Virtual Design and Construction," with Satterfield & Pontikes, **BIM Fundamentals: Taking it to the Next Level**, at ZweigWhite 2008 SE Conference & Expo, October 2008, Atlanta, GA.

Teaching Interests

- Steel/Concrete Building Design
- Integrated Building Design
- Structural Stability
- Numerical Methods and Computing for Engineers

Research Interests

- Integration of FEM and CAD models for use in large scale production processes
- Nonlinear analysis of concrete structures
- Optimization of structures towards automated design

Registrations

- Licensed Professional Engineer in the State of Texas.

Professional Memberships

- American Concrete Institute (ACI). Member.
- American Institute of Architects (AIA). Associate Member.
- American Society of Civil Engineers (ASCE). Member.
- American Institute of Steel Construction (AISC). Professional Member.
- Engineers Without Borders (EWB). Past Rice University Chapter Advisor.
- Rice Design Alliance (RDA). Member.
- Structural Engineers Association of Texas (SEAoT). Past President, Houston Chapter.