ANDREA E. SUROVEK PhD, P.E.

Curriculum Vitae
November 2013

Associate Professor and William V. Coyle Professor of Civil and Environmental Engineering
South Dakota School of Mines and Technology
501 East Saint Joseph Street
Rapid City, SD 57701
605-390-0581
surovek@sdsmt.edu

BIOGRAPHICAL DATA

Education

2001	PhD	Structural Engineering	Georgia Institute of Technology, Atlanta, GA
	Dissertation: Second-Order Inelastic and Modified Elastic Analysis and Design Evaluation of Planar Steel Frames		
	Dissertation Advisor: Dr. Donald White		
1997	BA	Visual and Performing Arts	Purdue University, West Lafayette, IN
1994	MSCE	Structural Engineering	Purdue University, West Lafayette, IN
1987	BSCE	Civil Engineering	Purdue University, West Lafayette, IN

Employment History

7/13 -	*Associate Professor / William V. Coyle Professor* Department of Civil end Environmental Engineering South Dakota School of Mines and Technology, Rapid City, SD
7/08 – 6/13	*Associate Professor* Department of Civil end Environmental Engineering South Dakota School of Mines and Technology, Rapid City, SD
8/11 – 12/11	*Visiting Senior Fellow* Centre for Infrastructure Engineering and Safety The University of New South Wales, Sydney NSW, Australia
8/03 – 6/08	*Assistant Professor* Department of Civil end Environmental Engineering South Dakota School of Mines and Technology, Rapid City, SD
9/01 – 8/03	*Senior Engineer* Building Diagnostics, Inc. Austin, TX
6/91 - 8/92	*Staff Engineer* Orbital Engineering, Whiting, IN
8/90 – 4/91	*Structural Designer* John C. Haas and Associates

Professional Licensure and Accrediation

Professional Engineer License 8859, South Dakota
LEED Green Associate
NCEES professional record

Awards and Honors

2010 SDSM&T Bernard A. Ennenga Faculty Award
The Bernard A. Ennenga Faculty Award was established by Ennenga to recognize any Mines teaching assistant or associate, instructor, or assistant, associate or full professor who has demonstrated excellence in teaching and motivating students.

2008 Beer and Johnston Outstanding New Mechanics Educator Award, ASEE
Established in 1992, this award is given annually to up to three individuals who have shown a strong commitment to mechanics education. The winners are selected on the basis of their exceptional contributions to mechanics education. Individuals who have no more than five years of academic experience past their first regular academic appointment are eligible.

2007 South Dakota EPSCoR Young Investigator
One young investigator from each of South Dakota's three scientific research institutions is selected to travel to Washington D.C. to speak to legislators about their research and the importance of research funding on innovation.

2006 Gerald R. Seeley Fellowship (Best Paper Award), ASEE Civil Engineering Division
This award was established in memory of Gerald R. Seeley, a champion of civil engineering education and a past chair of the ASEE Civil Engineering Division. The award encourages new civil engineering faculty members to become active in the Civil Engineering Division of ASEE.

2001 Vinnakota Award (Best Paper Award), Structural Stability Research Council
Best student authored paper presented at the SSRC Annual Stability Conference

2001 Outstanding Teaching Assistant in Civil Engineering, Georgia Institute of Technology

1995 Inaugural Awardee: Jane Zimmer Daniels Graduate Award for Women, Purdue University

Membership in Professional Societies

American Institute of Steel Construction (AISC)
American Society of Civil Engineers (ASCE)
American Society for Engineering Education (ASEE)
Structural Stability Research Council (SSRC)
Society for the Psychology of Aesthetics, Creativity, and the Arts (American Psychological Association, Division 10)

Membership in Engineering Honor Societies

Tau Beta Pi
Chi Epsilon

RESEARCH AND SCHOLARLY CONTRIBUTIONS

Books authored or Co-authored

- Galambos, T.V. and Surovek, A.E*., Structural Stability of Steel: Concepts and Applications for Structural Engineers*, John Wiley & Son, New York, April 2008, 384 pp.

Books/Reports Edited or Co-edited

- Surovek, Andrea E. (ed.), *Advanced Analysis in Steel Frame Design: Guidelines for the use of Direct Second-Order Inelastic Analysis*, Report of the Special Project Committee on

Advanced Analysis, Technical Committee on Structural Members of the Structural Engineering Institute of ASCE, Jan 2012.

- Surovek, Andrea E and Shea, David K. (eds), *Building Design, Construction and Operation in the Twenty-First Century, Proceedings of the Consortium for the Advancement of Building Sciences*, University Park, PA, October 1988.

Book Chapters or Contributions

- Deierlein, G.G., White, D.W., Surovek, A.E., Foley, C. M, and MacPhedran, I. J., "Frame Stability", Chapter 16 in Ziemian (ed), *Guide to Stability Design Criteria for Metal Structures,* Structural Stability Research Council, 6th ed., John Wiley & Son, New York, March 2010.
- Nicastro, David H. and Surovek-Maleck, Andrea E., "Defects, Deterioration, and Durability", Chapter 1 in Ratay (ed.), *Structural Condition Assessment*, John Wiley & Son, New York, January 2005

Refereed Journal Papers

- Knodel, P.A., Surovek, A.E., and Pote, J.J. "A Simplified Approach for Joist Girder Moment Frame Design Using Equivalent Beam Theory," Engineering Journal – American Institute of Steel Construction, Vol. 50, No. 3, July 2013.
- Surovek, Andrea and Liu, Judy, "Forum: Innovation in Steel Design: Rethinking the Research Paradigm," *Journal of Structural Engineering*, 139(6), 865–868 July, 2013.
- Walz, J., Surovek, A., Agarwal, A. and Varma, A., "Closed-Form Section Characterization of Steel Beam-Columns Subjected to Elevated Temperatures," *Journal of Structural Engineering, in review*
- Groen, C., Karlin, J. and Surovek, A., "Formal and Informal Mentoring: Redefining the Linearity of the Terms," *Journal of STEM Education: Innovations and Research*, *inreview.*
- Choe, L., Varma, A., Agarwal, A. and Surovek, A., "Fundamental Behavior of Steel Beam-Columns and Columns under Fire Loading: Experimental Investigation," *Journal of Structural Engineering: Special Issue Commemorating 9/11*, V. 137, No. 9, p 954-966.
- Garlock, Maria and Surovek, Andrea, "Special Issue: Commemorating 10 Years of Research Since 9/11", *Journal of Structural Engineering: Special Issue Commemorating 9/11*, ASCE, September 2011, p. 869.
- Surovek, Andrea and Johnson, Justin, "Effects of Nonverticality on Steel Framing Systems - Implications for Design," *Engineering Journal*, v 45, n 1, First Quarter, 2008, p 73-85.
- White, Donald W., Surovek, Andrea E. and Kin, Sang-Cheol, "Direct Analysis and Design Using Amplified First-Order Analysis: Part 1 – Combined Braced and Gravity Framing Systems," *Engineering Journal*, v 44, n 4, Fourth Quarter, 2007, p 305-322.
- White, Donald W., Surovek, Andrea E. and Chang, Ching-Jen, "Direct Analysis and Design Using Amplified First-Order Analysis. Part 2 – Moment Frames and General Framing Systems," *Engineering Journal*, v 44, n 4, Fourth Quarter, 2007, p 323-340.

- White, D. W., Surovek, A. E., Alemdar, B. N., Chang, C. J., Kim, Y. D., and Kuchenbecker, G. H., "Stability Design of Steel Building Frames: The AISC (2005) Specification and Beyond," *International Journal of Steel Structures*, KSE, May 2006.
- Surovek, A.E., White D.W. and Leon, R.T., "Direct Analysis for Design Evaluation and Design of Partially-Restrained Steel Framing Systems," *Journal of Structural Engineering*, v 131, n 9, September, 2005, p 1376-1389.
- Surovek-Maleck, A.E. and White, D.W., "Alternative Approaches for Elastic Analysis and Design of Steel Frames. I: Overview," *Journal of Structural Engineering*, v 130, n 8, August, 2004, p 1186-1196.
- Surovek-Maleck, A.E. and White, D.W., "Alternative Approaches for Elastic Analysis and Design of Steel Frames. II: Verification Studies," *Journal of Structural Engineering*, v130, n 8, August, 2004, p 1197-1205.

Refereed Papers in Conference Proceedings

- Oihus, Preston, Surovek, Andrea and Jensen, Dean, "Design Wars: Developing Student Creativity Through Competition," *Proceedings of the Frontiers in Education Conference*, Oklahoma City, Oct. 2013
- Kilber, S.J., and Surovek, A.E., "The use of equivalent beam theory in design of three-dimensional buildings using steel joists", *Proceedings of SEMC 2013: The Fifth International Conference on Structural Engineering, Mechanics and Computation,* Cape Town, South Africa September 2013
- Groen, C., Karlin, J. and Surovek, A., "Intentions and expectations are not enough: The reality of organizational improvement and mentoring programs," *Proceedings of the 2011 American Society for Engineering Education Annual Conference and Exposition*, Vancouver, BC, June 2011.
- Walz, J , Choe, L., Varma, A., Surovek, A, , "Experimental and analytical investigations of moment-curvature-temperature behaviour of steel and composite beam- columns at elevated temperature," *Proceedings of the 4th International Conference on Steel and Composite Structures*, Sydney, AU, July 2010.
- Palaniswamy, V., Surovek, A., MacPhedran, I. and Bradford, M. "A Comparison of International Design Standards for Lateral Stability of Steel Beams," *Proceedings of the 4th International Conference on Steel and Composite Structures,* Sydney, AU, July 2010.
- Groen, C., Surovek, A. and Karlin, J., "Effective Faculty Mentoring: A Preliminary Assessment of Mentoring Paradigms," *Proceedings of the 2010 American Society for Engineering Education Annual Conference and Exposition*, Louisville, KY, June 2010
- Karlin, J., and Surovek, A., Come on Down: Multiple Pedagogical Options Using Game Show Formats," *Proceedings of the Frontiers in Education Conference*, San Antonio, TX, Oct. 2009

- Brandner, E., Roberts, L. and Surovek, A., "Investigation of Solid Recycled Plastic Piles for Support of Structures in Expansive Shale Environments*," Proceedings of the Deep Foundations Institute Annual Conference*, Oct. 2009.
- Karlin, Jennifer and Surovek, Andrea, "When Critical Mass is Not an Option: Diversifying Smaller Faculties," Research in Engineering Education Symposium, Queensland, AU, July 2009.
- Surovek, Andrea, "Adding Context to a Mechanics of Materials Course," *Proceedings of the 2007 American Society for Engineering Education Annual Conference and Exposition*, Honolulu, HI, June 2007.
- Surovek, A.E. and Karlin, J.N., "Beyond the Classroom: Using a Lecture Series Format to Give Engineering Students a Societal and Global Context," *Proceedings of the 2006 American Society for Engineering Education Annual Conference and Exposition*, Chicago, IL, June 2006 ***(winner: ASEE CE Division Seeley Fellowship)***
- Surovek, A.E. and Karlin, J. N., "Global and Societal Impact of Civil Engineering: Connecting Rural Students with the World," International Symposium on Engineering Education, Fribourg, Switzerland, Sept 2004.

Papers in Conference Proceedings

- Kilber, S. and Surovek, A., "Three-Dimensional Joist Member Studies using Equivalent Beam Theory," *Proceedings of the Annual Stability Conference*, Structural Stability Research Council, St. Louis, April 2013.
- Surovek, A.E., Jasthi, B. K. and Widener, C. A., "Friction Stir Welding of Steel Connections," Proceedings of the 7th International Conference on Connections in Steel Structures, Timisoara, Romania May 2012.
- Knodel, P.A. and Surovek, A.E., "Improved Joist Girder Moment Frame Design Using Equivalent Beam Theory," *Proceedings of the Annual Stability Conference*, Structural Stability Research Council, Pittsburgh, May 2011
- Walz, J., Surovek, A., Choe, L. and Varma, A., "Closed-Form Characterization of Fundamental Section Response of Steel Columns Subjected to Realistic Fire Loading," *Proceedings of the Annual Stability Conference*, Structural Stability Research Council, Pittsburgh, May 2011
- Choe, L, Varma, A., Agarwal, A. and Surovek, A., "Behavior of Steel Columns Under Fire Loading," *Proceedings of the 2011 ASCE Structures Congress*, Las Vegas, NV, April 2011.
- Varma, Amit H., Choe, Lisa and Surovek, Andrea E., "Structural Mechanics of Steel Columns and Beam-Columns under Fire Loading," Proceedings of the 2011 NSF Engineering Research and Innovation Conference, Atlanta, GA, Jan 2011.
- Choe, L., Varma, A., Agarwal, A. and Surovek, A., "Experimental Investigation of Steel Columns Under Fire Loading," *Proceedings of the 2010 ASCE Structures Congress*, Orlando, FL May 2010.

- Hartwell, A., Surovek, A.E., and Alemdar, B.A., "Considerations for Three-dimensional Application of the Direct Analysis Approach," *Proceedings of the 2009 ASCE Structures Congress*, Austin, TX, May 2009.
- Surovek, A., Camotim, D., Hajjar, J., Teh, L., White, D., Ziemian, R., "Recommendations for the Use of Direct Second-Order Analysis for the Design of Steel Structures," *Proceedings of the 2007 SSRC Annual Technical Sessions and Meeting*, New Orleans, April 2007.
- Surovek, A., Camotim, D., Hajjar, J., Teh, L., White, D., Ziemian, R., "Direct Second-Order Analysis for the Design of Steel Structures," *Proceedings of the ASCE Structures Congress*, St Louis, Mo., May 2006.
- Surovek, Andrea and Nicastro, David, "Durability and Service Life – An Overview," *Proceedings of the ASCE Structures Congress*, St Louis, Mo., May 2006.
- Surovek, Andrea E. and Ziemian, Ronald D., "The Direct Analysis Method: Bridging the Gap from Linear Elastic Analysis to Advanced Analysis in Steel Frame Design," *Proceedings of the ASCE Structures Congress*, New York, April 2005.
- Kuchenbecker, G. H., White, D.W. and Surovek-Maleck, A.E., "Simplified Design of Building Frames using First-Order Analysis and K = 1.0," *Proceedings of the 2004 SSRC Annual Technical Sessions and Meeting*, Long Beach, March 2004.
- Surovek, Andrea E. and White, Donald. W., "Direct Analysis Approach for the Assessment of Frame Stability: Verification Studies," *Proceedings of the 2003 SSRC Annual Technical Sessions and Meeting*, Baltimore, April 2003.
- Maleck, A. E. and White, D. W., "A Modified Elastic Approach for Design of Steel Frames," *Proceedings of the 2000 SSRC Annual Technical Sessions and Meeting,* Ft. Lauderdale, May 2001**. (*Winner: SSRC Vinnakota Award*)**
- Maleck, A.E. and White, D.W., "Analysis and Design Methods for Partially-restrained Steel Framing Systems", *Proceedings of the 2000 SSRC Annual Technical Sessions and Meeting,* Memphis, July 2000.
- Maleck, A.E. and White, D.W. , "Behavior and design of partially-restrained composite framing systems", NATO Advanced Research Workshop, *The Paramount Role of Joints into the Reliable Response of Structures: From Rigid and Pinned Joints to the Notion of Semi-Rigidity*, C.C. Baniotopoulos (ed.) Ouranoupolis, Greece, 21-23 May 2000.
- Maleck, Andrea E. and White, Donald W., "Effects of Imperfections on Steel Framing Systems," *Proceedings, Annual Technical Session, Structural Stability Research Council*, Atlanta, September 1998.
- Maleck, A. E., White, D.W. and Chen, W. F. , "Practical Application of Advanced Analysis in Steel Design," Structural Steel, *Proceedings 4th Pacific Structural Steel Conference*., Vol. 1, Steel Structures, pp. 119-126, 1995.

Technical Reports and Trade Publications

- Surovek, Andrea and Jashti, Bharat, "Friction Stir Welding: An Emerging Alternative to Fusion Welding for Steel," Modern Steel Construction, AISC, April 2013.

- Liu, Judy and Surovek, Andrea, "Looking Towards the Future: Areas for Innovation in Steel Design and Construction," Modern Steel Construction, AISC, Sept. 2012.
- Surovek, Andrea and Liu, Judy, "Innovation in Design of Steel Structures: Research Needs for Global Competitiveness," Modern Steel Construction, AISC, April 2012.
- Arbegast, W., Hrabe, R., Jensen, D., Surovek, A., and Karlin, J., "Aging Aircraft Repair Feasibility Study – Volume I – Technical Report," Alion Industries Contract #1919KR, Aug 2007
- Surovek, A., White, D.W. and Ziemian, R.D., "Validation of the Direct Analysis Method," Structural Engineering, Mechanics and Materials Report No. 35, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA, 2003.
- Maleck, A., Alemdar, B.N. and White, D.W. (2000). "Advanced Analysis Based Design Methods for Steel Frames", North American Steel Construction Conference, AISC, Las Vegas, NV, February 2000.

Invited Presentations / Lectures

- Joint meeting of the Rocky Mountain Steel Construction Association (RMSCA) and the Structural Engineers Association of Colorado (SEAC), "Friction Stir Welding of Steel," September 2013.
- NASCC, American Institute of Steel Construction, "Friction Stir Welding: An Emerging Alternative to Fusion Welding for Steel," St. Louis, April 2013.
- NASCC, American Institute of Steel Construction, "Steel Design and Construction Innovations," Grapevine, TX April 2012.
- University of Wollongong, AU, "US Steel Design for Frame Stability: Current and Developing Approaches," December 2011
- University of New South Wales, AU, " U.S. Steel Design Provision for Stabillity Assessment of Frames," December 2011
- NASCC, American Institute of Steel Construction, "Designing for Frame Stability – Non-Seismic and Seismic Loading," Pittsburgh, May 2011.
- University of Minnesota Structural Engineering Seminar Series, "Direct Design of Steel Framing Systems," Minneapolis, MN, February 2010.
- Educator's Session, NASCC, American Institute of Steel Construction, "Are We Teaching the Right Stuff?", Phoenix, April 2009.
- Purdue University Civil Engineering Department, Graduate Lecture Series, "Alternative Approaches for Steel Frame Design," West Lafayette, IN, April 2002.
- Purdue University Women in Engineering Program, Mentors and Mentees Program, "Things I Wish I Knew in Graduate School," West Lafayette, IN April 2002.

Sponsored Projects

National Science Foundation

Principal Investigator: A.E. Surovek (PI)
Project: Collaborative Research: Structural Mechanics of Steel Columns and Beam-Columns Under Fire Loading
Sponsor: National Science Foundation, CMMI
Collaboration: Purdue University Civil Engineering (Varma, PI)

Principal Investigator: A.E. Surovek (PI)
Project: Workshop: Innovation in Steel Design – Research Needs for Global Competitiveness
Sponsor: National Science Foundation, CMMI

Principal Investigator: A.E. Surovek (PI) and J.N. Karlin (Co-PI)
Project: Advance IT-Catalyst: South Dakota WISE Faculty, A Future of Excellence
Sponsor: National Science Foundation, ADVANCE (NSF-Wide)
Collaboration: Industrial Engineering and Engineering Management (Karlin)

Principal Investigator: K. Vierling (as PI on primary grant to which supplemental was added)
Proposal Co-authors and Project Leads: A.E. Surovek and J.N. Karlin
Project: Supplemental grant: Implementation of a Women's Mentoring Program to Increase Retention of Female Science and Engineering Students at The South Dakota School of Mines and Technology
Sponsor: National Science Foundation, GSE
Collaboration: Industrial Engineering and Engineering Management (Karlin) and Office of the Vice President for Academic Affairs

Steel Joist Institute

Principal Investigator: A. E. Surovek
Project: Verification of Virtual Joist Tables for Design
Sponsor: Steel Joist Institute
Collaboration: Valley Joist, New Millennium Joist and Deck, Vulcraft

Principal Investigator: A. E. Surovek
Project: Development of an Improved Design Method for Joist Girder Moment Frames (JGMF)
Sponsor: Steel Joist Institute

State of South Dakota

Principal Investigators: Andrea Surovek
Project: The Apollo 13 Project (Mobile Computing and Distance Teaming for Creative Design)
Sponsor: South Dakota Board of Regents Mobile Computing Grant
Collaboration: Industrial Engineering and Engineering Management (Jensen, Co-PI)

Principal Investigator: L. Roberts (PI), A.E. Surovek (Co-PI)
Project: Sustainable Lightly Loaded Deep Foundation Systems for Use in Expansive Shale
Sponsor: State of South Dakota Competitive Research Seed Grant
Collaboration: Geotechnical (Roberts)

Principal Investigator: A.E. Surovek
Project: Response of Composite Partially-Restrained Connections Subjected to Blast Loads
Sponsor: State of South Dakota Competitive Research Seed Grant

Principal Investigator: A.E. Surovek
Project: Rushmore Regents CAREER Award (Competitive Start-up Grant)
Sponsor: State of South Dakota

Additional Funding

Principal Investigator: Gautam Pillay, V.P. for Research
Senior Personnel: W. Arbegast, A.E. Surovek, D. H. Jensen, J.N. Karlin, R. Hrabe
Project: Aging Aircraft Repair Feasibility Study
Sponsor: Alion Industries
Collaboration: Advanced Materials Processing (AMP) Center (Arbegast), IEEM (Jensen, Karlin), US Air Force (R. Hrabe)

Principal Investigator: A.E. Surovek
Project: Development of Guidelines and a Committee Report for Use of Direct Second-Order Inelastic Analysis in Structural Design of Steel Frames
Sponsor: ASCE/ Structural Engineering Institute

Principal Investigator: A.E. Surovek
Project: Initial Imperfections in Steel Framing Systems: Design Implications
Sponsor: SDSM&T EPSCoR Graduate Research Assistant Funding

Graduate Student Supervision

Stephen Kilber	Verification and Implementation of Virtual Joist Tables for Steel Building Design (MSCE 13)
Jennifer Davis	Closed –Form Characterization of Steel Beam-Columns Subjected to Realistic Fire Loads (MSCE11)
Phillip Knodel	Improved Design and Analysis Approaches for Steel Joist Girder Moment Frames (MSCE11)
Cassandra Groen	Meta-Analysis of the Efficacy of Mentoring Paradigms on Diversifying STEM Faculty (MSCE 11)
Matthew Heringer	Application of Short Beam Shear Test Method for Process Development Friction Stir Lap Welded Titanium (MSCE Sp09)
Varunaraaja Palaniswamy	A Comparison of International Steel Design Specifications for Assessment of Lateral Beam Stability (MS Su10)

Aaron Hartwell	Three-dimensional Application of the Direct Analysis Method (MSCE Sp09)
Justin Johnson	Effects of initial out-of-plumbness on strength of framing systems and implications for design provisions (MSCE Sp06)
Garret Kuchenbecker	Design of steel framing systems using first-order analysis and K=1 (MSCE Sp05)

Member of Student Committees

External PhD Committees
Sebastien Wolff (PhD Georgia Tech 2006)

Approximately 20 additional Masters Committees (thesis and project)

Undergraduate Student Supervision

Supervision of 11 undergraduate research students

TEACHING AND ADVISING

Courses Taught
CEE 284 – Applied Numerical Methods*
EM 321 – Mechanics of Materials*
CEE 357 – Design of Metal Structures*
CEE 357L – Lab: Design of Metal Structures
CEE 451/551 – Design of Wood Structures&
CEE 451L/551L – Lab: Design of Wood Structures&
CEE 453 – Design of Metal Structures II*
CEE 456 – Theory and Design of Reinforced Concrete
CEE 463 – Engineering Professions
CEE 651 – Advanced Steel Design&
CEE 692 – Special Topics: Advanced Topics in Steel Design&
CEE 692 – Design of Low Rise Metal Buildings&
CEE 753 – Structural Stability&
CEE 785 – Applications of Finite Element Analysis in Civil Engineering*
& New Course development
* Extensively revised course

Student Organization Advising

2004-2008 Advisor, ASCE Student Chapter

- Hosted 14 school and over 300 students at the Rocky Mountain Regional Conference in 2005.
- Received commendations for chapter annual reports each year, placing the chapter in the top 10 – 15% of all chapters nationally.

- Finished in first place (2005), second place (2006, 2007) and third place (2008) out of fourteen chapters at the Rocky Mountain Regional Conference
- Produced two SDSM&T Leadership Hall of Fame (LHOF) inductees and two LHOF finalists

2003 – Advisor, Steel Bridge Team

- Created by Dr. Surovek as a team in 2003
- Chosen as the Outstanding Organization on Campus in 2006 by Student Activities and Leadership Center.
- Qualified for and competed at the National Steel Bridge competition in last six consecutive years as advisor
- Received second, fifth and fifth in Display at the 2008, 2011 and 2013 national competitions, respectively.
- Two-thirds of team captains have gone on to graduate school

DISCIPLINE RELATED SERVICE ACTIVITIES

Professional Activities and Leadership

Structural Stability Research Council (SSRC)

- 2009 - Executive Committee
- 2009, 2010 Vinnakota Award Jury
- 2008 Nominating Committee Chair
- 2006-07 Nominating Committee
- 2004 –09 Chair, Task Group 4, Frame Stability
- 2003 – Member, Task group 20, Composite Structures
- 2001-03 Member, TG-29, Second-Order Inelastic Analysis Methods for Design

American Society of Civil Engineers (ASCE)

- 2010 - 2013 Chair, ASCE/SEI Technical Administrative Committee on Metals
- 2011 - 2012 Organizer and Moderator Pre-conference workshop, "Innovations in Design of Steel Buildings," 2012 SEI Structures Congress
- 2007 – 2010 Chair, Structural Members Committee, SEI Division on Metals (Formerly the Committee on Compression and Flexural Members)
- 2005 – 2007 Control Group Member, Committee on Compression and Flexural Members
- Organized multiple sessions for ASCE/SEI Structures Congresses
- Moderator for 6 ASCE/SEI Structures Congress Sessions

American Institute for Steel Construction

- 2010 - Member, Task Committee 3, Loads Analysis and Systems

American Society for Engineering Education (ASEE)

- 2004 – 2007, Co-Chairman, ASEE Civil Engineering Division (CED) Instructional Technology Committee
- 2004 – 2006, Director-at-Large, Women in Engineering Division (WIED)

Editorial and Peer Review Duties

Editorial Duties

2010 - 2011 Guest Editor, *Journal of Structural Engineering Special Issue on Extreme Loads after 9/11,* American Society of Civil Engineers, Reston, VA

2008 - Associate Editor, *Journal of Structural Engineering*, American Society of Civil Engineers, Reston, VA

Research Proposal Review Duties

2012 National Science Foundation, Division of Emerging Frontiers in Research and Innovation, proposal review panel

2011 National Science Foundation, Directorate for Education and Human Resources, Division of Undergraduate Education, proposal review panel

2009 National Science Foundation, Directorate, Division of Civil, Mechanical and Manufacturing Innovation, 2 proposal review panels

2008 National Science Foundation, Directorate for Education and Human Resources, Division of Undergraduate Education, proposal review panel

2005 National Science Foundation, Engineering Directorate, Division of Civil, Mechanical and Manufacturing Innovation, 2 proposal review panels

Journal Manuscripts

Reviewer of manuscripts for the following refereed journals:

- American Institute of Steel Construction, Engineering Journal
- American National Standards Institute, Journal of ASTM International
- American Society of Civil Engineers, Journal of Structural Engineering
- American Society of Civil Engineers, Journal of Engineering Mechanics
- American Society of Civil Engineers, Professional Issues in Engineering Education and Practice
- Elsevier Science, Computer-Aided Civil and Infrastructure Engineering
- Elsevier Science, Journal of Constructional Steel Research
- Techno Press, Steel and Composite Structures: An International Journal
- Techno Press, Structural Engineering and Mechanics

Peer Reviewed Conference Abstracts and Papers

Reviewed over 60 papers and abstracts for the Civil, Mechanical and Women in Engineering Divisions of the American Society of Engineering Education for their annual conferences

Campus Service

Women in Engineering and Science Initiatives

2004	Creation, funding and institutionalization of the Women in Science and Engineering Program – represented the first centralized effort on campus for outreach and mentoring of women students. (w/ J. Karlin)
2004	Implemented the Mentors and Mentees (M&M) Program through WISE Program (w/ J. Karlin)
2005	Co-chair, E-week G.I.R.L.S. (Girls involved in Real Learning Succeed) program – brings 150+ middle school and high school girls to campus
2004 - 10	Presenter, G.I.R.L.S. Program
2004 - 08	Asst. Advisor, Society of Women Engineers

Campus Committees

2010 -	STEM Education Research Thrust Committee
2009-11	University Research Task Force
2009	University Provost Search Committee
2006-07	College of engineering faculty workload committee
2004-06	College of engineering representative to the faculty development committee
2005	Committee on campus library resources for research

Department Service Activities

2013	Chair, faculty search committee
2011 -	Editor, Alumni and student newsletters
2004 -	Undergraduate Curriculum Committee
2004 -	Department Writing Committee
2005 -	4 additional Faculty Search Committees
2003 -	Prospective student meetings and tours
2003 -	Tour Tech presentations

Additional Campus Service

2010	Organizer and presenter: all campus search committee training
2007	Served as Campus Representative to National EPSCoR Conference as one of South Dakota's Young Investigators. Spoke to Legislators on Capitol Hill to promote funding for science and engineering research
2004-05	Seminar Development: Applying for NSF Fellowships
2004	Seminar Development: Applying to Graduate School
2003	Facilitator, Campus Planning Session
2003	Guest speaker – Women's Networking Lunch
2003	Campus Campaign Volunteer