

SUMMARY

Over 20 years of experience combining consulting, teaching, and research and development in civil engineering (specialty area – structures).

Professional Background includes (4 years full-time; 18 years part-time):

- Evaluation of existing structures including historic preservation, failure investigation, and structural performance assessment,
- Field investigation with a focus on cause and extent of damage related to property investigation (residential, commercial, and industrial),
- Client management including initial interactions, development of proposed scope of work, and execution of contracts,
- Structural models that appropriately capture large deformation, bucking and/or other non-linear behavior in the post-event domain.
- Expert witness testimony and support of litigation and subrogation.

Educational Accomplishments include (18 years full-time):

- Award winning teaching,
- Sustainability Scholar,
- Developed and delivered the course “Teaching Engineering,”
- Developed and facilitated more than 20 community-based capstone design project experiences,
- Developed and delivered a first-semester introductory engineering course that integrates sustainable infrastructure focused on interactions between society and engineering, and
- Developed and delivered online courses.

Educational Research Accomplishments include (18 years full-time):

- Award winning collaborative work in the development and assessment of learning teams,
- Publications on teaching pedagogy, community-based projects, sustainability, cultural intelligence and global competency skills.

Educational Administrative Accomplishments include (dispersed across 18 years):

- Leadership and service positions in ASEE Divisions (ERM, CE)
- Team member of developing a new undergraduate civil engineering practice-based program,
- Mentor in teacher development programs,
- Developer of a new practice-based structures master’s program,
- Developer of outcomes-based accreditation processes,
- Developer of competency-based grading systems, and
- Advising of student professional organizations and academic advising of students.

EDUCATION

- Ph.D. Stanford University 1996
Thesis Title: *Near Failure Behavior of Jacket-type Offshore Platforms in the Extreme Ocean Environment*
(Advisor: C. Allin Cornell)
Summary: Structural models based upon static pushover collapse analyses capture the essence of full, three-dimensional, dynamic, buckling, non-linear, near collapse behavior. Models and procedures use probabilistic perspective to find influential factors for reliability and risk analyses.
Areas of Study: Collapse Analysis, Non-linear Structural Mechanics and Dynamics, Risk and Reliability, Offshore Engineering, Seismic Hazard Analysis, Stochastic Models, Structural Assessment, Forensic Analysis, Earthquake Engineering
- M.S. Stanford University 1991
Areas of Study: Structural Engineering, Earthquake Engineering
- B.S. Valparaiso University 1990
Graduated with High Distinction and as Christ College Associate
Areas of Study: Civil Engineering and Humanities Honors College

PROFESSIONAL EMPLOYMENT

- University of Utah, Salt Lake City, UT 2013 – present
Associate Professor – Lecturer, Department of Civil & Environmental Engr.
 - Developed and deliver an industry-driven professional practice and design course,
 - Developed and delivered the course “Teaching Engineering,”
 - Developed and delivered a new, first-semester introductory engineering course that integrates a sustainable infrastructure perspective focused on interactions between society and engineering,
 - Participated in, contributed towards, and led research related to cultural intelligence and global competency skills,
 - Participated in, contributed towards, and led ABET accreditation efforts, and
 - Advised student groups.
- Northeastern University, Boston, MA 2012 – present
Part-time Lecturer in the College of Engineering, Graduate Programs
 - Developed and continue to deliver the on-line course IE6200 Engineering Probability & Statistics for the Engineering Management Graduate Program
- Private Structural Consultant 2000 – present
 - Expert witness testimony
 - Structural condition assessments and structural design

- Olivet University, Dover Plains, NY 2016 – 2017
- Developed and delivered the on-line course EN140 Introduction to Engineering.
 - Consulted in the development of an on-line baccalaureate civil engineering program.
- Zahl-Ford, Inc., Oklahoma City, Oklahoma 2009 – 2011
Senior Engineer (Structural) & Project Manager
- Developed, led, and executed structural engineering projects with a focus on assessing the condition of existing facilities, design of renovation and repairs, and seismic evaluation and certification. Project teams were multidisciplinary in nature; projects were typically within the design-build context.
 - Developed and delivered presentations to the professional design community (AIA, ACI, and ASME) and chaired outreach activities.
- Trine University (formerly Tri-State University), Angola, Indiana 2006 – 2009
Associate Professor
- Developed and delivered a new practice-oriented structures masters program.
 - Developed and delivered an inquiry-based and ASCE BOK2-compliant senior project sequence.
 - Developed proposal for a multi-year experiential design and practice-oriented curriculum that integrated sustainability, technical, financial, historical, environmental, and societal aspects into engineering design solutions, along with mastery of basic engineering problem solving and analysis skills.
 - Served as departmental coordinator for graduate studies, instructional technology, and the entrepreneurship program.
 - Developed and administered an architectural engineering minor.
 - Developed sponsorship for and/or delivered campus and community-wide colloquia and webinars to discuss engineering and social issues, e.g., sustainability, terrorism, teaching and learning pedagogy.
 - Developed accreditation materials for both departmental and university levels.
 - Taught broadly across the engineering curricula
- Western Kentucky University, Bowling Green, Kentucky 2003 – 2006
Assistant Professor
- Developed and delivered new project-based structures undergraduate program.
 - Developed full-scale structural testing laboratory.
 - Developed accreditation materials and processes related to a new program.
 - Taught broadly across the undergraduate engineering curriculum from first year experience to senior capstone experience.
 - Integrated private structural consulting practice into curriculum.
 - Integrated practice and projects into curriculum.
 - Academically advised students, advised student groups and student projects
 - Served as engineering advisor to university traffic and transportation services.
 - Served on departmental, college, university, and professional committees.

Valparaiso University, Valparaiso, Indiana 1998 – 2003
Assistant Professor

- Developed integrated structures teaching and learning classroom.
- Taught broadly across undergraduate engineering curricula from first year experience to senior capstone experience.
- Developed private structural consulting practice.
- Participated in and developed accreditation materials and process.
- Integrated practice and projects into curriculum.
- Academically advised students, advised student groups and student projects
- Served on numerous university and professional committees.
- Integrated ExCEED and NETI models into scholarly teaching techniques.

The Pennsylvania State University, University Park, Pennsylvania 1995 – 1998
Assistant Professor

- Taught undergraduate and graduate structures courses.
- Supervised graduate work.
- Integrated T⁴E model into scholarly teaching techniques.

KNOWLEDGE AREAS – Engineering Practice

Structural Condition Assessment	Structural/Nonlinear Analysis
Buckling of Thin-walled Structures	Collapse Modeling
Thin-Shell Hyperbolic Paraboloid Structures	Structural Investigation
Seismic Evaluation of Existing Buildings	Structural Dynamics
Design of Renovations and/or Repairs	Earthquake Engineering
Structural Materials and Sustainable Approaches	Structural Design
Structural Reliability and Risk Analysis	Stochastic Modeling
Offshore Engineering (Steel Jacket Platforms)	Decision Analysis
Historic Preservation (Bridges and Buildings)	Monte Carlo Simulation
Design of Steel, Concrete, Wood, and Masonry Structures	
Advanced Transit Systems (Personal Rapid Transit)	

KNOWLEDGE AREAS – Educational Practice

Learning Teams and Team-Based Learning Models	Online Education
Curricular and Program Development	Outcomes-based Assessment
Practice/Problem/Project-Oriented Instruction	Teacher Development
Sustainability in Design	Cultural Intelligence
Global Learning	

PROFESSIONAL REGISTRATION and AFFILIATIONS

Professional Engineer (Active: Indiana, Utah; Inactive: Kentucky, Oklahoma)
NCEES Record
American Institute for Steel Construction (AISC)
American Concrete Institute (ACI)
American Society of Civil Engineers (ASCE)
American Society for Engineering Education (ASEE)

COURSES TAUGHT and/or DEVELOPED

Undergraduate Level

First-year Engineering Experience & Laboratory (All engineering disciplines)
(Civil Engineering) Surveying & Laboratory (included an introduction to CAD)
Mechanics – Statics (All engineering disciplines)
Mechanics – Mechanics of Materials (All engineering disciplines)
Mechanics – Solid Mechanics & Laboratory (All engineering disciplines)
Probability and Statistics in Civil Engineering
Engineering Materials & Laboratory (Mechanical and Civil engineering)
Soil Mechanics & Laboratory
Hydrology
Introduction to Transportation Engineering
Structural Analysis (Introductory and Upper Levels)
Structural Steel Design (Introductory and Upper Levels)
Structural Connection Design
Reinforced Concrete Design (Introductory and Upper Levels)
Timber Design
Mechanical Vibrations
Structural Dynamics
Capstone (Senior Project) Design
Professional Practice

Graduate Level

Advanced Structural Analysis
Advanced Structural Steel Design
Advanced Reinforced Concrete Design
Advanced Structural Dynamics
Earthquake Engineering
Teaching Engineering
Graduate Project

SUPERVISION of STUDENT PROJECTS

Representative examples of projects where led, directed, and/or supported student teams and individuals in executing projects:

Personal Rapid Transit System Feasibility Study for Big Cottonwood Canyon, UT	2017
Transportation Enhancement for Lagoon Amusement Park, Farmington, UT	2017
Sustainable Storm Water Management for Magna Township, Salt Lake County, UT	2017
Advanced Transit Concepts for the University of Utah, Salt Lake City, UT	2016
Personal Rapid Transit System for Park City, UT	2016
Rose Creek Outfall Design, Herriman City, UT	2015
Neighborhood Connection Project, Herriman City, UT	2015
Roundabout Design for Herriman City, UT	2015
Bamberger Estates Land Development Plan, Farmington, UT	2015
Parking Structure Design using Infrastructure Perspective at the Engineering Complex, University of Utah, Salt Lake City, UT	2014
Mobility-based Design of Vehicle and Pedestrian Traffic at the Engineering Complex, University of Utah, Salt Lake City, UT	2014
Reliability-based Design Format for Paper-fiber Structures (Masters)	2009

Harcourt/Williams Roundabout Feasibility Study, Angola, IN	2009
N. Wayne Corridor Evaluation, Angola, IN	2009
Waterslide Design for Lake James Christian Assembly, Angola, IN	2009
AASHTO Load Rating of Bridge #90, Miami County, IN	2009
Structural Condition Evaluation of Pokagon Toboggan Run Tower (IN DNR)	2008
AASHTO Bridge Load Rating of Hamilton Road Bridge (Masters)	2007
ASCE/AISC National Student Steel Bridge and Concrete Canoe Projects	2003 – 2008
Shear test on Pre-stress Slab/CMU Bond Beam Seismic Connection Detail	2006
Parking Study (Phases I, II, and III) at WKU	2004 – 2005
Design of Golf Clubhouse and Highway Bridge Overpass	2003
Design and construction of a full-scale column buckling apparatus	2002
Venture of Faith: Design of VU's New Engineering Classroom Building	2001
Design of a water supply reservoir in eastern Colorado	1999
Multiple Wave Effects on Offshore Platforms Near Collapse (Masters)	1998
System Identification of a Truss Bridge in Milesburg, PA (Honors)	1997

SERVICE ACTIVITIES

Led and participated in variety of roles in professional, community, and university organizations; roles included chair of standing and ad-hoc committees, conference session chair, etc.

ASCE, YMF, PE Exam Preparation Course, Structures Review	2016 – present
ASCE, WFB, Monthly Meetings	2014 - present
ASCE, Journal of Professional Issues in Engineering Education and Practice, Reviewer	2015 - present
Center for Infrastructure Transformation and Education, Bridge Group (Member)	2015 – present
ASEE, CE Division, Annual Conference Paper Reviewer	1999 – present
NCEES Fundamentals of Engineering Exam Committee (Member)	2007 – 2013
Engineering Ministries International Collaborative Project with TSCGlobal: "Roofs First: Efficient Structures for the Poverty, War-torn, Post-disaster, and Refugee Stricken areas of the World."	2011 – 2013
ASEE, ERM Division (Director)	2009 – 2012
American Concrete Institute-Oklahoma (ACI-OK), Chapter President	2011 – 2012
Zahl-Ford, Seismic Evaluation of Existing Buildings (developed training workshop)	2011
ACI-OK, April Meeting (Presenter)	2011
ACI-OK, February Meeting (Presenter)	2011
ASME, Central Oklahoma Section, March Meeting (Presenter)	2010
AIA Oklahoma, Annual Legislative Conference (Presenter)	2010
AIA Oklahoma, ARE Structures Review (Presenter)	2009
ASEE Campus Representative	2003 – 2008
ASEE, 2007 FIE Annual Conference (Vice-Chair)	2005 – 2007
ASEE, ERM Division (Brochure Chair, appointed)	2002 – 2005
ASEE, CE Division, Ad Hoc Sub-Committee of Teaching Methodology (Co-chair)	2004
ASEE Annual Conference, ERM Division (Session Moderator)	2004
ASCE Body of Knowledge - Curricula Comm. (Corresponding Member)	2002 – 2004
NEES Education Group (Member)	2003
ASEE, CE Division, Committee on Computer Applications (Co-chair)	2001 – 2002
ASEE, CE Division, Ad Hoc Committee on Instructional Technology (Co-Chair)	

	2001-2002
ASEE, CE Division, Ad Hoc Committee on Toys in the Classroom (Co-chair)	2001-2002
ASEE, CE Division, Committee on Teaching Methodology, (Member)	2000 – 2001
ASEE, CE Division, Committee on Computer Applications, (Member)	1999 – 2000
University of Utah, Department Committees (e.g., Undergraduate Curriculum, Accreditation)	2013 – present
TSU/Trine, University, College, and Department Committees (e.g., Educational Resources, ASCE Student Chapter Faculty Advisor, Tau Bet Pi Faculty Advisor, Graduate Coordinator, Instructional Technology Liaison)	2006 – 2009
WKU, University, College, and Department Committees (e.g., Curriculum, Outreach, Accreditation, Parking and Transportation)	2003 – 2005
VU, University, College, and Department Committees (e.g., Honor Council, ASCE Student Chapter Faculty Co-Advisor, Tau Beta Pi Faculty Co-Advisor)	1999 – 2003

AWARDS and HONORS

Professional

University of Utah, College of Engineering, Top 15% Teaching Effectiveness	3 times
	2013 – present
Premier Award for Excellence in Engineering Education Courseware Winner, CATME/Team-maker (member of multi-university collaborative team)	2009
Tri-State University’s McKetta-Smith Excellence in Teaching Award	2008

Student

National Science Foundation Graduate Student Fellow	1990 – 1992
Tau Beta Pi Fellow	1990
Valparaiso University	
Christ College Associate	1990
Scholarship recipient (multiple)	1985 – 1990
ACEC Scholar	
National Scholar of the Year	1988
State (IN) Scholar of the Year	three times

COMMUNITY ACTIVITIES and PRESENTATIONS

ASEE Rocky Mountain Section Annual Conference (Presenter multiple times)	2016
USPE Annual Continuing Education Conference (Presenter)	2016
ASCE Wasatch Front Branch (Presenter multiple times)	2016 - 2017
AIA-OK, Archi-Treasure Hunt (Chair)	2011
AIA-OK Architecture Tour, Oklahoma City (Volunteer)	2011
Tapestry Project, Oklahoma City (Volunteer)	2010
Friends of the Norman Library, Fall Book Sale (Volunteer)	2009
Angola Historic Preservation Commission (Founding Chair)	2006 – 2009
ASCE Webinar “Avoiding Unintended Economic Consequences of Poorly Planned Water and Sewer Service – Mitigating Strategies and Alternatives” (Local Host; Secured External Sponsorship)	2009
Reflections on the Collapse of the Twin Towers (Director, Presenter)	2008
Angola High School Baseball (Advance Scout)	2007
KSPE High School Open Discussion Forum and WKU Open House (Presenter)	2005
Merit Badge University, Boy Scout Troop 79, Bowling Green, KY (Presenter)	2005
Bluegrass High School Robotics Competition (Co-designer)	2004 – 2005

Bi-Annual Bowling Green Middle School Career Exploration Day (Presenter)	2004
Porter County, IN FutureFest for 7 th Graders (Presenter)	2001
Verizon Outreach to Minority and Under-represented Students (Asst. Director)	2001
Verizon Teacher Enhancement Institute, Valparaiso, IN (Asst. Director)	1999 – 2002

TEACHER DEVELOPMENT

Wasatch Experience, Development of Sustainability Scholars	2016
5 Essentials for Building an Online Engineering Course, Learning House	2015
Center for Infrastructure Transformation and Education, Workshop Participant	2015
Delphi Process Webinar - Model Introductory Infrastructure Course Outcomes	2015
ASCE Annual Convention (Presenter, Attendee, Division Officer)	1998 – 2005, 2007 – 08, 2011, 2014 – 2017
ASCE's Project ExCEED Teaching Workshop (Mentor), USMA	1999 – 2002
NSF Sharing the Future (Participant), Clemson	2001
Best Assessment Processes III Symposium, Rose-Hulman (Workshop Leader)	2000
ASCE National Effective Teaching Institute, Seattle, WA (Participant)	1998
NSF Teaching Teachers to Teach Engineering Workshop (Mentor), USMA	1997 – 1998
NSF Teaching Teachers to Teach Engineering Workshop (Participant), USMA	1996

CONTINUED TECHNICAL DEVELOPMENT

NCEES FE Exam Committee Meetings	2007 – 2013
NCSEA Annual Conference	2011
OSEA Fall Conference	2009, 2010
ACI-OK Chapter, Monthly Meetings, Oklahoma City, OK	2010 – 2011
OSEA, Monthly Meetings, Oklahoma City, OK	2010 – 2011
ASCE Indiana Section Annual Conference, Carmel, IN	2008
23 rd Annual CE Professional Development Seminar, Purdue University, IN	2008
ASCE Indiana Section Annual Conference, Carmel, IN	2007
ACBM-PCA Faculty Enhancement Program (Concrete Materials), Skokie, IL	2007
22 rd Annual CE Professional Development Seminar, Purdue University, IN	2008
PCI Design with Precast/Prestressed Concrete Seminar	2006
ASCE Structural Condition Assessment Workshop, Minneapolis, MN	2005
Society for College and University Planning, Sustainability in the Curriculum: Theory to Practice	2005
North American Steel Construction Conference, AISC, Montreal, CA	2005
University Professor's Masonry Workshop, National Masonry Society, Minneapolis, MN	2005
ASCE Web Seminar, Hands-On Capacity Building in the Developing World	2005
Pre-stressed Concrete, deAm-Ron Building Systems, LLC, Owensboro, KY	2005
PCA Building and Bridge Seminars, Skokie, IL	2004
Valparaiso University Alumni Association's Distinguished Student Award - COE	1990
Valparaiso University High Distinction and Christ College Associate designation	1990
American Consulting Engineers' Council National Scholar of the Year	1988
Consulting Engineers of Indiana State Scholar	1987, 1988, 1989

INTERNATIONAL EXPERIENCES

As part of a passion to engage communities in need, advised and/or participated in international construction and engineering design experiences in developing communities. Project teams typically included professional architects, engineers, surveyors, and students.

U.S.-Pakistan Centers for Advanced Studies in Water, Teaching Engineering, A course developed to improve and develop the teaching skills and pedagogy of Pakistan STEM instruction	2015
TSC Global (Hypar Roofs Structural Feasibility Study; EMI)	2011 – 2013
Kijabe, Kenya (Structural identification and condition assessment of hospital complex and residential facilities)	2010
Dondo, Mozambique (Structural design of a two-story educational building, EMI)	2004
Soroti, Uganda (Faculty advisor of co-op experience; EMI)	2002
Guatemala City, Guatemala (Faculty advisor of co-op experience; EMI)	2002
Engineers Without Borders (Faculty co-advisor for development of student chapter, Valparaiso University)	2002
Santo Domingo, Dominican Republic (Two-story masonry building)	1998

CONSULTING PROJECTS

The projects listed below were predominantly executed while engaged as a full-time, practicing structural engineer. Each required a combination of the preparation of engineering reports, design and collection of onsite data, associated engineering calculations, and supervising engineering support. Many, not all, also included business development, i.e., project proposals. Where I was the project and/or technical leader, the symbol PI (Principal Investigator) is listed.

Online Engineering Education

IE6200 Engineering Probability & Statistics, COE, Northeastern University	2012
Development	
Delivered each term (spring, summer, and fall)	2013 - present
EN 140 Introduction to Engineering, COE, Olivet University	2016 - 2017

Structural Condition Assessment and Investigation

Westlake Retail Center, Oklahoma City, OK, PI, Client: CNA Pro
 ALDI Distribution Warehouse, Denton, TX, PI, Client: Bovis Lend Lease, LLC
 Warehouse, 311 NW 122nd, Oklahoma City, OK, PI, Client: Sperry Van Ness
 Archbald residence, Arcadia, OK, PI, Client: A. Archbald
 Boy Scouts of America, Oklahoma City, OK, PI, Client: BSA
 Randall's Department Store, Altus, OK, PI, Client: GSR-Andrade
 Fly Ash Storage Building, Red Rock, OK, Client: Evans & Associates
 Storefront, O'Reilly Store #184, Oklahoma City, OK, PI, Client: O'Reilly Auto Parts
 Water Storage Tank, Medicine Park, OK, PI, Client: City of Lawton
 Atrium Towers, 3501/3 NW 63rd St, Oklahoma City, OK, PI, Client: Price Edwards
 Office Building, 20 N. Broadway, Oklahoma City, OK, PI, Client: Price Edwards
 Office Building, 328 E. Sheridan, Oklahoma City, OK, PI, Client: Pittman Resources
 Mercy Hospital Cancer Center, Ardmore, OK, PI, Client: Rees
 Norman Public Schools Administration Services Center, Norman, OK, PI, Client: NPS
 Residential retaining wall, 2513 SW 113th St., Oklahoma City, OK, PI, Client: Kennedy

Floor evaluation, OSU PS1, Oklahoma State University, Stillwater, OK, PI, Client: Rees
Tilt-up Walls, Reno/Portland Retail Center, Oklahoma City, OK, PI, Client: Mathis
Brothers
Concrete pavement, Victoria, TX, Client: Greenburg Traurig
Tilt-up Walls, Oklahoma City, OK, PI, Client: DFW Construction and Management
Roof framing system, Aircraft Hangar, ARINC, Oklahoma City, OK, Client: Gardner
Tanenbaum Group
Highland Pointe Apartments, Yukon, OK, Client: Maxus Properties
Condition assessment of existing bridge for 300-ton crane, WKE Coleman Power Plant,
Hawesville, KY, PI, Client: DDS Engineering
Structural qualification of Rappel Tower, Bowling Green, KY, PI, Client: WKU Army
ROTC

Seismic Evaluation and Structural Condition Assessment

Mayport Naval Station Fitness Center Renovation, Jacksonville, FL, Client: Guernsey
Building 213 (3 structures), Altus AFB, OK, PI, Client: Guernsey
Building 331 (3 structures), Altus AFB, OK, PI, Client: Guernsey
Building 333 (3 structures), Altus AFB, OK, PI, Client: Guernsey
India Shrine Temple, 107 Kerr Ave., Oklahoma City, OK, PI, Client: Sandridge Energy
Building 6050 (14 structures), Ft. Sill, OK, PI, Client: Guernsey

Investigation of Structural Damage related to Natural Hazards and/or Explosion

Assessment of tornado damage, residence, Piedmont, OK, PI, Client: Sentinel
Assessment of wind damage and wind damage survey, Stockyards, Oklahoma City, OK,
PI, Client: Traveler's Insurance
Assessment of seismic damage, Joyce Residence, Choctaw, OK, PI, Client: USAA
Assessment of explosion damage, Altus, OK, PI, Client: Hartford
Assessment of roof damage, Cooper Middle Schools, Putnam City, OK, PI, Client: NAIC
Assessment of roof damage, Elks Lodge, Elk City, OK, PI, Client: Traveler's Insurance
Assessment of roof damage, Building 179, Vance AFB, OK, Client: Guernsey
Snow load investigation, Great White Energy Services, Catoosa, OK, PI, Client:
Traveler's Insurance
Wind load investigation, Panhandle State University, Ft. Supply, OK, PI, Client: Norton
Roofing
Investigation of roof system, First UMC, Newkirk, OK, Client: Gordon Architects
Assessment of roof damage, Maintenance Shop, Wichita Steel, Oklahoma City, OK, PI,
Client: Traveler's Insurance
Assessment of roof damage, Maintenance Shop, County District 3, OK, PI, Client:
Traveler's Insurance
Assessment of roof damage, Maintenance Shop, Waggoner's Trucking, Oklahoma City,
OK, PI, Client: Traveler's Insurance
Assessment of roof damage, Warehouse, Waggoner's Trucking, Oklahoma City, OK, PI,
Client: Traveler's Insurance

Structural Design

Snow drift roof repairs and renovation, Oklahoma City, OK, PI, Client: Sperry Van Ness
Crane Lift Beam, Oklahoma City, OK, PI, Client: NW Crane Logistics, LLC
Storefront repairs, Oklahoma City, OK, PI, Client: O'Reilly Auto Parts
Foundation of draw press, Tinker AFB, OK, PI, Client: AIM Relocators

Elevated oil storage platform, Oklahoma City, OK, PI, Client: TRES Management
Rail conveyor system in bologna slicing room, Altus, OK, PI, Client: Bar-S
Roof anchors at State Fair Arena, Oklahoma City, OK, PI
Load frame for full-scale structural tests, Bowling Green, KY, PI, Client: Western
Kentucky Univ
Steel-framed office expansion, Harbor Steel, Burns Harbor, IN, PI, Client: Chester
Construction
Residential foundation, Oklahoma City, OK, Client: E. Huddleston
Elevated deck, Natcher residence, Bowling Green, KY, PI

Historic Preservation (in addition to those listed above)

Hamilton Road Bridge AASHTO Load Rating, Allen County, IN, Graduate Supervisor
AASHTO Load Rating of Bridge #90, Miami County, IN, Project Supervisor
College St. Bridge: HAER analysis, Bowling Green, KY, Project Supervisor
Old Richardsville Rd. Bridge: HAER analysis, Bowling Green, KY, Project Supervisor
Snell Hall Condition Assessment, Bowling Green, KY, PI, Client: WKU
PA 144 Bridge at Spring Creek: System Identification, Milesburg, PA, Honors Super.
Angola Historic Preservation Commission (Founding Chair)

Offshore Engineering and Risk Analysis

Collapse Analysis of Steel Jacket-type Platforms in Wave and Seismic Environments
Reliability-based Offshore Design Format
Re-Assessment of Steel Gulf of Mexico Jacket-type Platform (Chevron Platform B)

PUBLICATIONS

Schmucker, D.G., Lenart, J., and Burian, S.J., “A Civil Infrastructure System Perspective – Not just the Built Environment” *Proceedings of the 2016 ASEE Annual Conference and Exposition*, New Orleans, LA, June 26-29, 2016.

Burian, S.J, Schmucker, D.G., and Lenart, J., “Developing Global Learning Outcomes in a Civil Engineering Program,” *Proceedings of the 2016 ASEE Annual Conference and Exposition*, New Orleans, LA, June 26-29, 2016.

Schmucker, D.G., and Burian, S.J., “History and Heritage as a Vehicle for Contemporary Issues,” *Proceedings of the 2005 ASEE Annual Conference and Exposition*, Seattle, WA, June 14-17, 2015.

Ohland, M.W., M.L. Loughry, D.J. Woehr, C.J. Finelli, L.G. Bullard, R.M. Felder, R.A. Layton, H.R. Pomeranz, and D.G. Schmucker, “The Comprehensive Assessment of Team Member Effectiveness: Development of a Behaviorally Anchored Rating Scale for Self and Peer Evaluation.” Revision submitted for *Academy of Management: Learning & Education*, March 26, 2010, Manuscript ID: AMLE-RR-2010-0056.

Ohland, Matthew W., Lisa G. Bullard, Richard M. Felder, Cynthia J. Finelli, Richard A. Layton, Misty L. Loughry, Hal R. Pomeranz, Douglas G. Schmucker, David J. Woehr, “The Comprehensive Assessment of Team Member Effectiveness: Development of a Behaviorally Anchored Rating Scale for Self and Peer Evaluation,” *Academy of Management 2010 Annual Meeting*, paper #13912, Cross Divisional Paper Session,

“Research Methods: Construct and Scale Development in Organizational Behavior and Networks,” August 9, 2010, 1:15-2:45 pm.

Bullard, L.F., R.L. Carter, R.M. Felder, C.J. Finelli, R.A. Layton, M.L. Loughry, M.W. Ohland, and D.G. Schmucker “The Comprehensive Assessment of Team Member Effectiveness: A New Peer Evaluation Instrument,” *Proc. Amer. Soc. Eng. Ed.*, Chicago, IL, June 2006.

Ohland, M.W., M.L. Loughry, R.L. Carter, L.F. Bullard, R.M. Felder, C.J. Finelli, R.A. Layton, and D.G. Schmucker, “Developing a Peer Evaluation Instrument that is Simple, Reliable, and Valid,” *Proc. Amer. Soc. Eng. Ed.*, Portland, Oregon, June 2005.

Ohland, M.W., M.L. Loughry, R.L. Carter, L.F. Bullard, R.M. Felder, C.J. Finelli, R.A. Layton, and D.G. Schmucker, “Developing a Peer Evaluation Instrument that is Simple, Reliable, and Valid,” *ASEE/AaeE 4th Global Colloquium*, Sydney, Australia, September 26-29, 2005.

Schmucker, D., “Authentic Engineering Design in a Freshman “Transition to College” Course,” *Proceedings of the 2005 ASEE Annual Conference and Exposition*, Portland, OR, June 12-15, 2005.

Schmucker, D. and Palmquist, S., “Real Engineering Practice in the Classroom: Can ASCE’s BOK be done in 4-years?,” *Proceedings of the 2005 ASEE Annual Conference and Exposition*, Portland, OR, June 12-15, 2005.

Ohland, M.W., Loughry, M.L., Carter, R.L., Bullard, L.G., Felder, R. M., Finellis, C.J., Layton, R.A., and Schmucker, D.G., “Developing a Peer Evaluation Instrument that is Simple, Reliable, and Valid,” *Proceedings of the 2005 ASEE Annual Conference and Exposition*, Portland, OR, June 12-15, 2005.

Schmucker, D.G., “Webcast on Sustainability – and Beyond,” Teaching Spirit (newsletter), FACET, Western Kentucky University, Volume 15, Number 10, June 2005.

Schmucker, D.G., “Leadership Through the Back-door: Exercises for Individuals and Teams,” *Proceedings of the 2004 ASEE Annual Conference and Exposition*, 2004 ASEE Annual Conference, Salt Lake City, June 20-23, 2004.

Schmucker, D.G., “Not As Bad As It Seems: Teaching Probability and Statistics in Civil Engineering,” *Proceedings of the 2004 ASEE Annual Conference and Exposition*, 2004 ASEE Annual Conference, Salt Lake City, June 20-23, 2004.

Ohland, M.W., M.L. Loughry, B.L. Sill, R.M. Felder, R.A.Layton, C.J. Finelli, D.G. Schmucker, L.G. Bullard, R.L. Carter, “Designing A Peer Evaluation Instrument that is Simple, Reliable, and Valid,” Engineering & Computing Education Grantee Meeting, Washington, DC, (September 21-23, 2003).

Phillips, A.P., Palazolo, P.J., Magun-Jackson, S., Camp, C.V., and Schmucker, D.G., “Powerful Play: Using Toys as Tools in Engineering Education,” *Proceedings of the*

2002 ASEE Annual Conference and Exposition, 2002 ASEE Annual Conference, Montreal, CA, June 16-19, 2002.

Schmucker, D.G., "Cognitive Learning Objectives and New Educators: Techniques for navigating the early years and EC2000," *Proceedings of the 2000 ASEE Annual Conference and Exposition*, St. Louis, MO, June 18-21, 2000.

Schmucker, D.G., "Learning Styles and Physical Models: A Match Made in All Dimensions," presented at the 2000 ASEE Annual Conference, St. Louis, MO, June 18-21, 2000.

Schmucker, D.G., "Learning Objectives: A Backbone for Assessment," a 3-hour workshop presented at the Best Assessment Processes III Symposium, Rose-Hulman Inst. of Tech., Terre Haute, IN, April 2-4, 2000.

Manuel, L., Schmucker, D.G., Cornell, C.A., and Carballo, J.E., "A Reliability-Based Design Format for Jacket Platforms Under Wave Loads," *Journal of Marine Structures*, 11 (1998) 413-428.

Schmucker, D.G., "Innovative Teaching Methods in the Civil Engineering Curricula at the Pennsylvania State University," *Proceedings of the 1998 ASEE Annual Conference and Exposition*, Seattle, WA, June 28 - July 1, 1998.

Schmucker, D.G., "Models, Models, Models: The Use of Physical Models to Enhance the Structural Engineering Experience," *Proceedings of the 1998 ASEE Annual Conference and Exposition*, Seattle, WA, June 28 - July 1, 1998.

Schmucker, D.G., and Cornell, C.A., "Reliability of Jackets: Beyond-Static-Capacity," *Proceedings of 7th ASCE EMD/STD Specialty Conference on Probabilistic Mechanics and Structural Reliability*, WPI, Worcester, MA, August 7-9, 1996.

ADDITIONAL TECHNICAL EMPLOYMENT

ADS Environmental Services, Inc., Huntsville, Alabama Field Service Representative (Summer term, Nashville office)	1990
University of Notre Dame, Notre Dame, Indiana Co-op Research Engineer (Spring and Summer terms)	1989
Marathon Pipeline, Inc., Martinsville, Illinois Co-op Pipeline Engineer (Summer term)	1988
Barton Aschman, Inc., Evanston, Illinois Co-op Transportation Engineer (Fall term)	1987
ADS Environmental Services, Inc., Huntsville, Alabama Field Service Representative (Summer term, Houston office)	1987
ADS Environmental Services, Inc., Huntsville, Alabama Assistant Project Engineer (Summer term, Indianapolis office)	1986