

SSRC Expertise Database



MISSION

- To maintain a forum where the structural stability aspects of metal and composite metal-and-concrete structures and their components can be presented for evaluation and pertinent structural research problems proposed for investigation.
- To review the world literature on structural stability of metal and composite metal-and-concrete structures and study the properties of materials available for their construction, and to make the results widely available to the engineering profession.
- To organize, administer and guide cooperative research projects in the field of structural stability, and to solicit financial support for such projects.
- To promote publication and dissemination of research information in the field of structural stability.
- To study the application of the results of research to stability design of metal and composite metal-and-concrete structures and to develop comprehensive and consistent strength and performance criteria and encourage consideration thereof by specification, code and standard-writing bodies.

Managing Engineer, *Exponent, Inc.*

Bishop, Cliff D.



Exponent®



Specialties:

- Stability of steel structures
- Structural concrete performance for safety and serviceability
- Masonry/wood framed construction
- Building envelope

Qualifications & Certifications:

- Ph.D., 2013, CEE, Georgia Tech
- Professional Engineer – GA, CA (civil), NC, SC, FL, AL, TX, and MS
- Structural Engineer – GA, IL, and NV

Professional Experience:

- 8+ years in forensic investigations of structures
- Lecturer at Georgia Tech

Committees & Memberships:

- ASCE Member
 - Structural Engineering Institute
 - Construction Institute
- SSRC Executive Committee
- AISC Member

Summary: As a licensed professional and structural engineer, Dr. Cliff D. Bishop specializes in the holistic evaluation of building and bridge structures. While at Exponent, he has led investigations of concrete, steel, wood, and masonry structures and their interior finishes and building envelope components that were damaged as a result of design/construction defects, construction procedures, and natural hazards, such as wind, floods, hurricanes, and earthquakes. These investigations typically include on-site testing and documentation, analysis of structural and non-structural component response, interpreting and applying building codes and standards, and identification of the most appropriate repair. Dr. Bishop often employs sophisticated engineering analysis and state-of-the-art research in support of these investigations. His sound engineering advice provides the basis necessary for building owners, insurers, and other stakeholders to make informed decisions.



Assistant Professor, University of Wisconsin-Madison

Blum, Hannah B.



Specialties:

- Machine Learning Applications in Structural Design
- Virtual and Augmented Reality in Structural Eng.
- Analysis, Computational Modeling, and Experiments of Steel, Cold-Formed Steel, and Stainless-Steel Members and Structural Systems
- Structural Stability & Structural Reliability

Qualifications & Certifications:

- Ph.D., 2017; Civil Engineering; University of Sydney; Sydney, NSW, Australia
- M.S.E., 2012; Civil Engineering; Johns Hopkins University; Baltimore, MD, USA
- B.S., 2010; Civil Engineering; Johns Hopkins University; Baltimore, MD, USA

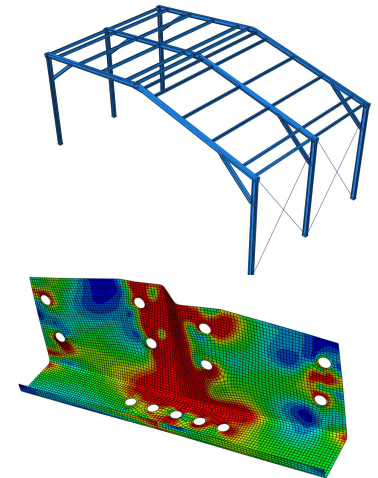
Professional Experience:

- 4+ years as Professor and Researcher

Committees & Memberships:

- Alain H. Peyrot Fellow in Structural Engineering
- American Iron and Steel Institute (AISI), Cold-Formed Steel Committee on Specifications Main Committee member
- Structural Stability Research Council (SSRC) – TG03 vice-chair
- American Institute of Steel Construction (AISC) Committee on Structural Stainless Steel Main Committee member
- ASCE/SEI Stainless Steel Cold-Formed Sections Standards Main Committee member
- Cold-Formed Steel Research Consortium (CFSRC) Affiliated Investigator

Summary: Dr. Blum is an Assistant Professor in the Department of Civil and Environmental Engineering at the University of Wisconsin – Madison. Her research group focuses on the computational modeling and experimental testing of steel, cold-formed steel, and stainless-steel structural members, connections, and systems (including portal frames and steel joists), in addition to the application of new technology in structural engineering, including machine learning and virtual and augmented reality. She has experience collaborating with industry including the Metal Building Manufacturers Association, (MBMA), the Steel Joist Institute (SJI), the Steel Deck Institute (SDI), New Millennium Building Systems (NMBS), AISC and AISI. Dr. Blum’s research group has authored multiple peer-reviewed journal articles and international conference proceedings. Prof. Blum has mentored numerous PhD, Masters, and Undergraduate students, and is the faculty advisor for the AISC Student Steel Bridge Club. She has experience teaching Steel Structures, Structural Reliability, and Structural Mechanics, and has implemented Virtual and Augmented Reality educational modules into her classes. Dr. Blum has access to a large, fully equipped structural testing laboratory with a strong floor and strong walls, and modern computational resources and software.



Professor, Laval University (Canada)

Boissonnade, Nicolas



Specialties:

- Analysis, Design & Computational Modeling of Steel and Steel-Concrete Structures
- Structural Stability (members, plates, bridges, etc.)
- Structural Mechanics

Qualifications & Certifications:

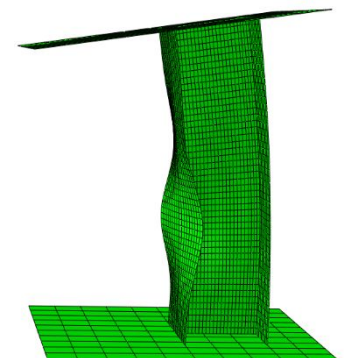
- Ph.D., 2002, CEE, Blaise Pascal University (France)
- M.S., 1999, CEE, Blaise Pascal University (France)

Professional Experience:

- 20+ years as Professor and Researcher (across Europe and Canada)
- 2 years as Structural Engineer (Germany and Switzerland)

Committees & Memberships:

- European Committee TC8 Stability
- SSRC Committee, executive member
- Standards Committees (Europe and Canada)
- CEISCE & REGAL research centers
- CIDECT expert (HSS design)



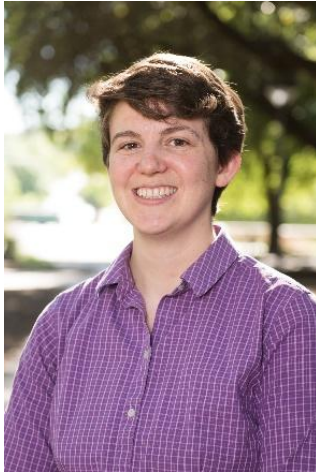
Summary: I have been an active researcher for more than 25 years in the field of Stability & Design of Steel and Composite Structures. I have participated in many large scale international research projects and remain involved in many Standards Committees. At Laval University, I lead a large research group with investigations comprising experimental, numerical, design and code aspects. In particular, our Structural Engineering lab offers world-class large scale testing facilities, including several climatic chambers for low/high temperature testing. Current projects involve various materials (steel, aluminum, composite), scales (fiber, section, members, system, bridge) and the development of the O.I.C., which stands as the next generation of advanced computer-assisted design approach.

Assistant Professor, University of Texas at Austin

Clayton, Patricia



The University of Texas at Austin
Civil, Architectural and
Environmental Engineering
Cockrell School of Engineering



Specialties:

- Analysis & Computational Modeling of Steel Structures
- Earthquake Engineering
- Stability under Earthquake Loading

Qualifications & Certifications:

- Ph.D., 2013, CEE, University of Washington
- M.S., 2010, CEE, University of Washington

Professional Experience:

- 7+ years as Professor and Researcher

Committees & Memberships:

- SSRC TG06 Extreme Loads Committee
- ASCE Methods of Design Committee
- ASCE Committee on Faculty Development

Summary: Dr. Patricia Clayton got her B.S. in civil engineering from North Carolina State University. She attended University of Washington for her Masters and PhD in civil engineering. She has been an Assistant Professor at University of Texas at Austin since 2014, where she teaches courses in structural design of wood and steel structures and earthquake engineering. Her research interests include design and behavior of steel structures, performance-based engineering, and seismic risk assessment. In terms of stability and behavior of steel components and structures, she has conducted research specifically on the design, behavior, and computational modeling of steel plate shear walls for high- and low-seismic applications, self-centering seismic systems, steel moment frame systems with replaceable fuse connections, and the collapse performance of steel gravity framing systems subjected to seismic loading.



Assistant Professor, Oregon State University

Fischer, Erica



Specialties:

- Analysis, Design & Computational Modeling of Steel and Steel-Concrete Structures
- Structural Stability
- Large-scale testing of structures under cyclic loads
- Large-scale testing of structures under fire exposures
- Post-fire and post-wildfire assessment of metal structures

Qualifications & Certifications:

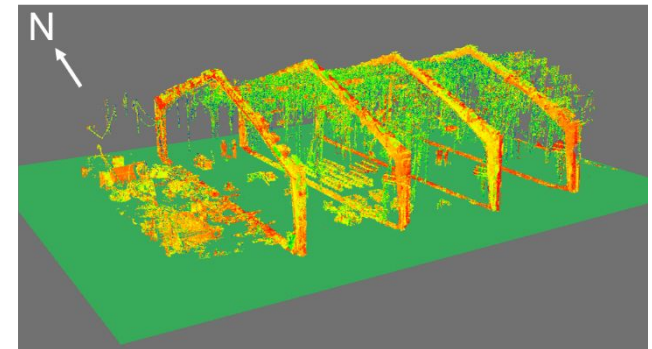
- Ph.D., 2015, Civil Engineering, Purdue University
- B.S., 2007, Civil Engineering, Cornell University
- Professional Engineer (WA, OR, CA)

Professional Experience:

- 4 years as a Professor and Research
- 5+ years as Structural Engineer

Committees & Memberships:

- AISC Task Committee 8, member
- AISC Committee on Manuals, member
- SSRC Executive Committee
- SSRC Task Group 6 (Extreme Loads), member
- EERI Board of Directors
- EERI Virtual Earthquake Reconnaissance Team, Co-Chair
- ASCE Fire Protection Committee, Vice-Chair



Summary:

Erica Fischer, PhD, PE is an Assistant Professor of Civil and Construction Engineering at Oregon State University. Dr. Fischer's research interests revolve around innovative approaches to improve the resilience and robustness of structural systems affected by natural and man-made hazards. Specifically she has focused on the fire behavior of steel structures including extensive research on the fire performance and design of simple (shear) connections and the seismic behavior of composite special moment frames, including connections. Dr. Fischer has participated in post-earthquake reconnaissance team missions in diverse regions including Haiti, Napa, California, Italy, and Mexico City; and post-wildfire reconnaissance in Paradise, CA. Dr. Fischer has experience as a practicing structural engineer and holds a Professional Engineering license in the states of Washington, California, and Oregon. She is a member of the Executive Committee of the Structural Stability Research Council.

Bridge Engineer, HDR

Frankl, Bernard A.



Specialties:

- Analysis, Design & Computational Modeling of Complex Steel and Steel-Concrete Bridge Structures
- Analysis and Rating of Steel and Steel-Concrete Bridge Structures
- Analysis and Rating of Steel and Steel-Concrete Tunnels
- Structural Stability of Steel Structures

Qualifications & Certifications:

- Ph.D., 2017, CE, University of Nebraska Lincoln
- M.S., 2008, CCEE, North Carolina State University
- B.S., 2006, CEE, South Dakota School of Mines and Technology
- Professional Engineer, SD, ND, WY, NE

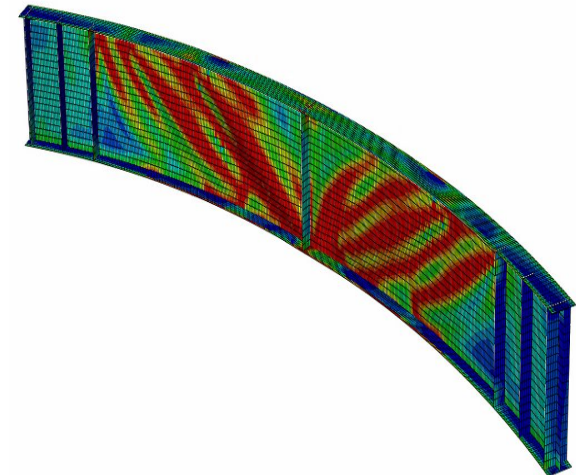
Professional Experience:

- 14+ years as Bridge Designer
- 5 years as Structural Researcher
- 2 years as Professor

Summary: Bernard A. Frankl, PhD, PE is a bridge engineer, HDR's innovative research coordinator, HDR's load rating technical committee chair. Bernard has over 14 years experience designing steel and concrete bridges ranging from simplistic reinforced concrete box culvert to complex steel arch bridges. He has extensive experience in both design and rating. Bernard has also been actively involved in HDR research activities and involvements. Bernard was also a key member in developing a tunnel rating guide for the Federal Highway Administration. Bernard has also been involved in steel girder stability research, outdoor bridge load testing, cable impact research, structural wall panel research, and friction stir welding research throughout his career.

Committees & Memberships:

- TRB Committee
- SSRC Committee
- AISC
- ASCE



Associate Professor, NOVA University

Gonçalves, Rodrigo



Specialties:

- Analysis, Design & Computational Modelling of Steel and Steel-Concrete Structures
- Structural Stability
- Thin-Walled Members
- Generalized Beam Theory

Qualifications & Certifications:

- Ph.D., 2007, Civil Eng., Lisbon University, Portugal
- M.Sc., 2000, Structural Engineering, Lisbon University, Portugal
- Lic., 1996, Civil Eng., Lisbon University, Portugal
- Professional Engineer No. 38289

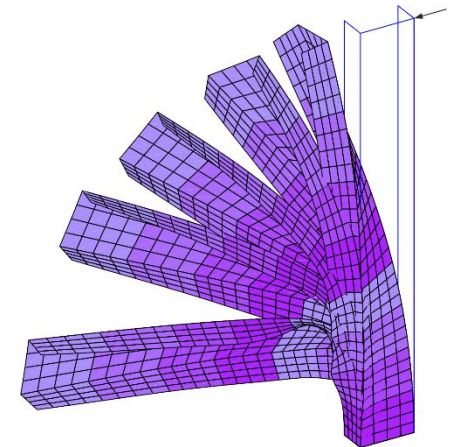
Professional Experience:

- 20+ years as Professor and Researcher
- 2 years as Structural Engineer

Committees & Memberships:

- European Committee for Standardization TC 250/SC 3 Working Group 22 “EN 1993-1-14 - Design assisted by FEM”
- Portuguese Technical Commission CT 115 (Structural Eurocodes), sub-commissions 3 (Eurocode 3 – steel structures) and 4 (Eurocode 4 – steel-concrete composite structures).
- Structural Stability Research Council, vice-chair of Task Group 02
- Portuguese Association of Structural Engineering

Summary: Rodrigo Gonçalves is an Associate Professor at NOVA School of Sciences & Technology, NOVA University Lisbon, Portugal, where he is the coordinator of the Ph.D. program in Civil Engineering. He teaches also at Coimbra University, namely a course on cold-formed steel member design. He has authored 60+ papers in international scientific journals and 90+ conference papers. He received several awards, such as the 2013 Ferry Borges award, from the Portuguese Association of Structural Engineering, and the 2016 MAJR medal for junior researchers, from the Structural Stability Research Council. As a supervisor, his students have received several awards, such as two “Sarada M. and Raju A. Vinnakota” awards (SSRC) and one “Outstanding Student Scholar” award (Wei-Wen Yu Center for Cold-Formed Steel Structures). He is a member of the Generalized Beam Theory research group led by Dinar Camotim (<http://www.civil.ist.utl.pt/gbt/>) and is involved in national and international committees concerning steel and steel-concrete composite structures. As a Structural Engineer, he has participated in the design of complex steel and steel-concrete structures.



Lateral-torsional buckling of a cantilever using geometrically exact beam finite elements allowing for cross-section distortion

Nuclear Security & Engineering

Technical Specialist, Bechtel Corporation

Green, Perry, S.



Specialties:

- Structural Stability
- Inelastic Behavior of Steel Structures
- Modular, Longspan and Connection Design – Steel
- Cold-Formed Steel Structures
- Temporary Structures

Qualifications & Certifications:

- Ph.D., 2001, CEE, Lehigh University
- M.S., 1979, CEE, Lehigh University
- B.S., 1977, SEAS, Columbia University
- Professional Engineer, South Carolina No. 30012

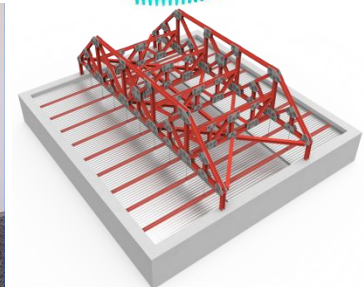
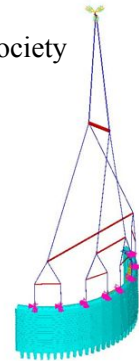
Professional Experience:

- 18+ years as Academic Researcher & Professor
- 22+ years Technical Director & Structural Engineer

Summary: Dr. Green has over 40 years experience in the analysis, design, and construction of steel and concrete structures. His nuclear experience encompasses a wide array of projects from initial nuclear power plant design and construction to startup, outage, and configuration management of existing plants. From 1998 to 2004 Dr. Green was an Assistant Professor in the Civil and Coastal Engineering Department at the University of Florida, Gainesville, FL where he taught undergraduate and graduate classes in steel design, connections, and the inelastic behavior and stability of structures; From 2004 to 2010 he was the Technical Director of the Steel Joist Institute, SJI, where he was responsible for their Education, Engineering Practice, and Research Committees. Dr. Green joined Bechtel in 2011 and was part of the civil/structural core team for the small modular reactor project Generation mPower; From 2015 to 2018 he was seconded to Southern Nuclear Company at the Vogtle Electric Generating Plant 3&4, Waynesboro, GA in the Construction Engineering Compliance Group overseeing the construction of two AP1000 plants; and from 2018 to present he has been assigned to the civil construction field engineering group at the Uranium Processing Facility in Oak Ridge, TN. Dr. Green has authored or co-authored over 50 journal articles, conference proceedings papers, research reports, and technical digests on the behavior of steel members, connections, and longspan structures and has participated in the

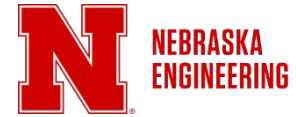
Committees & Memberships:

- AISC Committees: TC-6 Connections, TC-11 Design of Nuclear Facilities
- AISI Committees: COS Main, Sub-03 Chair, Connections and Joints, Sub-06, -22, -33, -34, Education; COFS Lateral
- SSRC: Treasurer, Past ExCom Member
- ASCE and ASCE-SEI Fellow, TAC Metals Chair, Past Chair Cold-Formed Members Committee
- Fritz Engineering Research Society



Associate Dean for Graduate and International Programs
Professor, Civil and Environmental Engineering
The University of Nebraska-Lincoln

Linzell, Daniel



Specialties:

- Curved and skewed steel bridges
- Response of buildings and bridges to blast and impact
- Advanced structural analysis
- Structural health monitoring

Qualifications & Certifications:

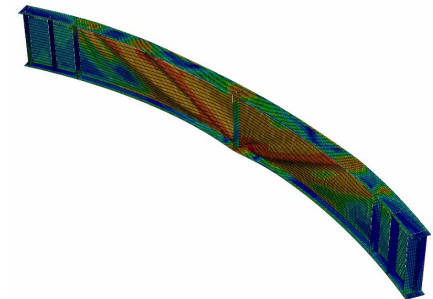
- Ph.D., 1999, The Georgia Institute of Technology
- M.S., 1995, The Georgia Institute of Technology
- BSCE, 1990, The Ohio State University
- Licensed Professional Engineer – NE, PA, GA

Professional Experience:

- 10/18 – present: Associate Dean for Graduate and International Programs
- 7/13 – 9/18, Voelte-Keegan Professor and Chair, Department of Civil Engineering, The University of Nebraska-Lincoln
- 8/99 – 7/13: Assistant, Associate and Shaw Professor of Civil Engineering, Penn State University
- 4 years as practicing Structural Engineer

Committees & Memberships:

- AASHTO/NSBA Steel Bridge Collaboration: Task Group 13 - Analysis of Steel Bridges
- ASCE SEI: Committee on Reform of Structural Engineering Education (CROSEE2)
- SSRC: Vice-Chair, Executive Committee, Task Group 4 - Steel Bridges
- Transportation Research Board - Committee AFF20: Steel Bridges
- Fellow – ASCE, SEI



Summary: Dr. Linzell has published over 100 peer-reviewed, archival journal articles and refereed conference papers and abstracts that focus on research related to: monitoring and predicting the behavior of curved and skewed steel bridges during construction and under service loads and optimizing their design; improving tools that predict the response of building and bridge systems and components to blast and impact loads and developing techniques to improve their resiliency; structural health monitoring; and steel ship structural component stability and strength under static and dynamic loads. Prior to receiving his Ph.D., Dr. Linzell was employed by Burgess and Niple, Ltd. in Columbus Ohio where he performed condition and forensic structural inspections and rehabilitation designs of bridges, buildings and other infrastructure systems.

Assistant Professor, UMass Amherst

Peterman, Kara



UMass
Amherst



Specialties:

- Analysis, Design & Computational Modeling of Steel and Cold-Formed Steel Structures
- Structural Stability
- Experimental Testing and Methods
- Sustainable Construction
- Connection Performance
- Translating Research to Practice

Qualifications & Certifications:

- Ph.D., 2014, Johns Hopkins University
- M.S., 2011, Johns Hopkins University
- BS, 2009, Swarthmore College

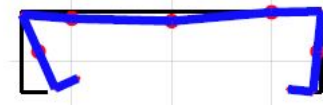
Professional Experience:

- 10+ years as Professor and Researcher

Committees & Memberships:

- AISI Committee on Specifications (Chair, Subcommittee 6: Test-Based Design)
- AISI Committee on Framing Standards
- SSRC Executive Committee
- CFSEI Executive Committee (Chair, Education Subcommittee)
- ASCE 8 Stainless Steel Specification Committee

Summary: Dr. Kara Peterman is an Assistant Professor at the University of Massachusetts Amherst, in the Department of Civil and Environmental Engineering. At UMass, Dr. Peterman investigates cold-formed and hot-rolled steel system behavior, seismic response of those systems, and the stability of thin-walled steel members. Dedicated to professional service, she is a member of the American Iron and Steel Institute Committee on Specifications (where she chairs the Test-Based Design subcommittee) and Committee on Framing Standards. Recently, Dr. Peterman was elected to the Executive Committee of the Cold-Formed Steel Engineers Institute. She also chairs the Thin-Walled Structures Task Group of the Structural Stability Research Council (SSRC). She received the 2021 Terry Peshia Early Career Faculty Award from the American Iron and Steel Institute, the 2021 McGuire Award for Junior Researchers from SSRC, and the 2018 Norman Medal from the American Society of Civil Engineers, the highest honor for a technical paper..



Assistant Professor, IIT Madras, India

Subramanian, Lakshmi Priya



Specialties:

- Structural Stability
- Structural Fire Engineering

Qualifications & Certifications:

- Ph.D., 2015, CEE, Georgia Institute of Technology
- M.S., 2008, CEE, The University of Texas at Austin
- Professional Engineer, Texas

Professional Experience:

- 4 years as a Structural Design Engineer
- 3 years as an Assistant Professor

Committees & Memberships:

- American Institute of Steel Construction
- Structural Stability Research Council

Summary: Dr. P. S. Lakshmi Priya is an assistant professor in the Dept. of Civil Engg. at IIT Madras. She earned her Bachelors degree in civil engineering. from Visvesvaraya National Institute of Technology, Nagpur, India. She obtained her MS in Civil (structural) engg. from the University of Texas at Austin, USA. She worked for four years as a structural design engineer at Walter P. Moore and Associates in Houston, Texas and acquired the license of Professional Engineer from the Texas Board of Professional Engineers. Following that, she earned her PhD in Structural engg. from Georgia Institute of Technology, USA, and continued as a post-doctoral fellow for a year. She was professionally associated with ASCE, ACI, SEAoT, AISC and SSRC. Her research focusses on stability of steel structures and structural fire engineering. She joined IIT Madras, India as an Assistant Professor in March 2017. At IIT Madras, her team of graduate students work in both experimental and finite element modelling covering a broad range of areas encompassing both stability of steel structures and structural fire engineering.



Associate Principal; Wiss, Janney, Elstner Associates Quadrato, Craig



Specialties:

- Structural Stability
- Existing Structure Assessment
- Structural Failure Analysis
- Structural Repair Design
- Engineering Education
- Litigation Support

Qualifications & Certifications:

- Ph.D., 2010, Structural Engineering, UT Austin
- M.S., 2001, Structural Engineering, Stanford University
- M.S., 2001, Construction Engineering Management, Stanford University
- M.S., 1995, Engineering Management, Missouri S&T
- B.S., 1991, Civil Engineering, United States Military Academy at West Point
- Registered Professional Engineer, TX, LA, MO

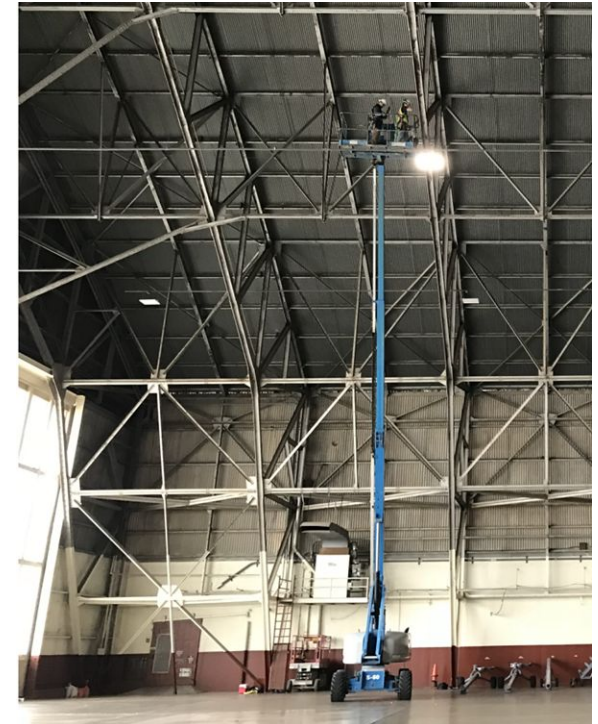
Professional Experience:

- 28+ years as Structural Engineer, Professor, Researcher, and US Army Engineer Officer

Summary: Dr. Quadrato has extensive experience as a civil/structural engineer in the areas of concrete, steel, wood, and masonry structure assessment, analysis, and repair design; heavy civil and roadway design and construction; and engineering education. Prior to joining WJE, he served for more than 25 years as a United States Army Engineer Officer, serving his last 6 years as an Academy professor in the U.S. Military Academy's Department of Civil and Mechanical Engineering. He was deployed worldwide, supporting U.S. and coalition forces by designing and managing the construction of roads, forward operating bases, and support facilities.

Committees & Memberships:

- SSRC Executive Committee
- AISC NSSBC Rules Committee
- ASCE UTSA Student Chapter Practitioner Advisor



Professor, Florida Atlantic University

Rosson, Barry



Specialties:

- Model Nonlinear Behavior of Steel Systems
- Create Inelastic Material Models for Steel W-Shapes
- Develop Practical Methods for Stability Analysis
- Generate Innovative Methods for Teaching and Learning Advanced Analysis and Design Topics

Qualifications & Certifications:

- Ph.D., 1991, Civil Engineering, Auburn University
- M.S., 1985, Civil Engineering, Texas A&M University
- B.S., 1983, *Magna Cum Laude*, Civil Engineering, Texas A&M University
- Professional Engineer, Nebraska E-7866

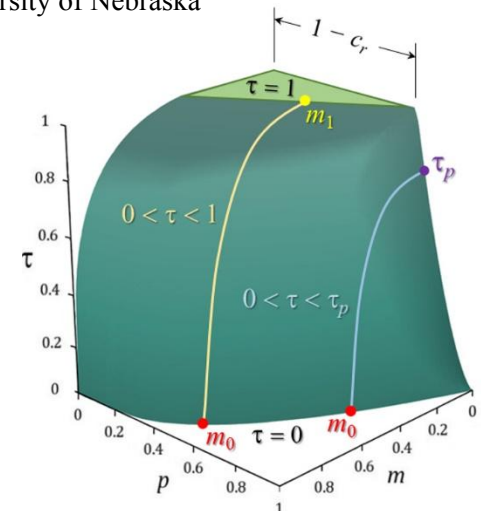
Professional Experience:

- 30 years as Professor and Researcher
- 3 years as Consulting Engineer, Dallas, Texas

Committees & Memberships:

- SSRC – Chair, TG03 Systems
- ASCE, SEI – Chair, Committee on Structural Members
- ASCE – Past-Chair, Committee on Professional Practice, Council of Institute Presidents
- ASCE – Past-Member, Stability Technical Committee, Dynamic Effects Committee, Shock and Vibratory Effects, Past-Associate Editor *Journal of Structural Engineering*
- ASCE, AEI – Past-President
- Fellow – ASCE and AEI
- Chapter Honor Member – Chi Epsilon, University of Nebraska

Summary: Dr. Rosson has over 30 years of experience in the analysis and design of steel and reinforced concrete structures. His work experience encompasses a wide range of subjects; earlier in his career he designed commercial high-rise buildings, and tested bridge rails and guardrails under full-scale impact conditions, but now he focuses his research and teaching efforts on analysis and design aspects of steel systems that involve geometric and material nonlinearities. From 1991 to 2007, he was a Professor at the University of Nebraska-Lincoln where he taught courses primarily in Steel Design, and Structural Design & Planning. Since 2007, he has been a Professor at Florida Atlantic University where he also served as Dean of the Graduate College and Vice President for Research. At FAU, he has taught courses in Steel Design, Advanced Building Design, Nonlinear Behavior of Structures, and Advanced Structural Analysis. He has authored or co-authored numerous journal articles, technical reports, and conference papers on his research findings. Most recently, he was the Instructor for the Short Course “Nonlinear Structural Analysis Methods Used in Modern Steel Design” at the 2019 North American Steel Construction Conference.



Guest Research Structural Engineer, NIST

Seif, Mina



NIST
National Institute of
Standards and Technology
U.S. Department of Commerce



Specialties:

- Structural Performance under Fire
- Stability of Structures under Fire Loading
- Structural Stability
- Computational Modeling and Finite Element Analysis

Qualifications & Certifications:

- P.E., 2015, North Carolina
- Ph.D., 2010, CEE, Johns Hopkins University
- M.S., 2010, CEE, Johns Hopkins University
- M.S., 2005, CE, Cairo University
- B.Sc., 2002, CE, Cairo University

Professional Experience:

- 18+ years as Structural Researcher and an Adjunct Faculty

Committees & Memberships:

- AISC Member
- SSRC Member
- SSRC TG06 Committee Chair (2015-2021)
- ASCE Member
- ASCE/SEI Fire Protection Committee

Summary: As a Structural Researcher at the National Fire Research Laboratory (NFRL), at the National Institute of Standards and Technology (NIST), my primary research interests relate to the experimental and computational assessment of structural performance under extreme loads, including modeling the response of structural systems beyond local failure to global collapse, particularly under fire-induced heating. The main goal behind this current research is the development of simplified tools and guides for performance-based design of steel structures at elevated temperatures.



Research Structural Engineer National Institute of Standards and Technology **Weigand, Jonathan**



Specialties:

- Large-Scale Structural Testing, Steel Connection Design and Analysis, Steel Gravity Framing Systems, Structural Steel Design
- Disproportionate Collapse, Performance-based Design for Fire, Low-Cycle Fatigue
- Computational Analysis, High-Fidelity Finite Element Modeling, Component-Based Modeling
- Data Processing, Data-Driven Modeling and Analysis

Qualifications & Certifications:

- Ph.D., 2014, CEE, University of Washington
- M.S., 2008, CEE, University of Washington
- B.S., 2006, CEE, Colorado School of Mines

Professional Experience:

- 8+ years as Research Structural Engineer, 4+ years as Adjunct Professor

Committees & Memberships:

- Structural Stability Research Council (SSRC) TG06 – Stability under Extreme Loads
- American Institute of Steel Construction (AISC)
- ASCE Disproportionate Collapse Technical Committee
- ASCE Disproportionate Collapse Standards Committee
- Society of Fire Protection Engineers (SFPE)

Summary: Jonathan Weigand is a Research Structural Engineer within the Engineering Laboratory (EL) of the National Institute of Standards and Technology (NIST). He is currently leading two research projects: one developing more robust steel and precast concrete structural systems for mitigation of disproportionate collapse, and the other aimed at establishing a new testbed for aging physical infrastructure. Jonathan also leads the EL's Performance-based Engineering Research for Multi-hazards (PERFORM) Laboratory – a modular large-scale structural testing laboratory – and an affiliated project dedicated to the facility's startup, commissioning, safety, operations, and advancement.

