

2024 Session Details

May 15, 2024
 NASCC: The Steel Conference 2024

| Session Code | Title | Description | Date | Start Time | Track List | Speaker(s) |
|--------------|--|--|------------|------------|----------------------------------|--|
| Workshop 1 | Basics of Curved Steel Bridge Girder Design | This workshop will walk through design, fabrication, and construction considerations for the use of horizontally curved steel I-girder bridges. This workshop will include discussions regarding the development of framing plans and cross-frame layouts, preliminary analysis and design decisions, methods of analysis recommendations, and final design example computations in accordance with the AASHTO LRFD Bridge Design Specifications. Fabrication techniques for economical curved steel girders will also be discussed, explaining why certain decisions may result in more efficient fabrication of curved steel girders. Furthermore, erection techniques and considerations for horizontally curved steel I-girder bridges will also be discussed, highlighting some of the analyses and checks that are performed by erection engineers. All bridge engineers who design horizontally curved steel I-girder bridges will find the material discussed in this workshop to be valuable. | 03/19/2024 | 1:00 pm | Bridges | Jeff Carlson PE, Brandon Chavel PE,PhD, Sean Peterson, Domenic Coletti PE, Brian Witte PE,P.Eng. |
| SS1 | SS1 - Welcome | SSRC Chair Dan Linzell welcomes all to the 2024 Annual Stability Conference, and overviews the week of events and sessions. | 03/19/2024 | 1:00 pm | SSRC Annual Stability Conference | Daniel Linzell PE,PhD, Craig Quadrato PE,PhD |
| SS2 | SS2 - Special Topics in Structural Stability I | Paper 1: Abdullah Alghossoon, "Developing a Concentrated Plasticity Model for High-Strength Steel Beams with Local Buckling and Member Slenderness Considerations." Paper 2: Liya Li, "Analyzing the Buckling Behavior of Steel Angle Sections in Transmission Towers" Paper 3: Alex Moore, "Stability of Open Web Steel Joists with Flush Frame Connections During Erection" Paper 4: Sandor Adany, "Constrained Finite Strip Method: kinematic- and force-based approaches" | 03/19/2024 | 1:10 pm | SSRC Annual Stability Conference | Nicolas Boissonnade, Abdullah Alghossoon, Liya Li, Alex Moore, Sandor Adany |
| SS3 | SS3 - TG Meetings | Meetings of SSRC Task Groups will be held on 3/19 from 2:30 - 3:30pm TG02 Members: Stability of Steel Members TG05 Thin-Walled Structures TG06 Extreme Loads: Stability under Extreme Loads | 03/19/2024 | 2:30 pm | SSRC Annual Stability Conference | Craig Quadrato PE,PhD |
| SS4 | SS4 TG Meetings | Meetings will be held on March 19 from 3:45 - 4:45pm for SSRC Task Groups TG03 Systems: Stability of Steel Systems, Especially Frames TG04 Stability of Metal Bridges and Bridge Components | 03/19/2024 | 3:45 pm | SSRC Annual Stability Conference | Craig Quadrato PE,PhD |
| SS5 | SS5 - SSRC Annual Business Meeting | SSRC Chair Dan Linzell will lead the Annual Business Meeting. | 03/19/2024 | 5:00 pm | SSRC Annual Stability Conference | Daniel Linzell PE,PhD, Craig Quadrato PE,PhD |
| SS6 | SS6 - TG Overview | SSRC Chair Dan Linzell will recap the conversations held at the Task Group meetings, and offer an invitation for all to join their ongoing technical activities. | 03/19/2024 | 6:00 pm | SSRC Annual Stability Conference | Daniel Linzell PE,PhD, Craig Quadrato PE,PhD |
| SS7 | SS7 - MAJR Award Presentation | Ali Imanpour, recipient of the 2024 SSRC MAJR Medal, will give a presentation titled "Design Guidelines for Enhanced Stability of Steel Systems" | 03/19/2024 | 6:30 pm | SSRC Annual Stability Conference | Ali Imanpour |
| SS8 | SS8 - SSRC Social Hour | All are welcome to join the SSRC Social Hour, and network with SSRC leadership and 2024 speakers. | 03/19/2024 | 7:00 pm | SSRC Annual Stability Conference | Craig Quadrato PE,PhD |

| | | | | | | |
|-----|--|--|------------|----------|----------------------------------|--|
| K1 | How A Split Second Decision Can Change Your Life | In 2001, at the age of 27, Chad Hymas' life changed in an instant when a 2,000-pound bale of hay shattered his neck, leaving him a quadriplegic. But Chad's dreams were not paralyzed that day—he became an example of what is possible. Chad is a best-selling author, president of his own communications company, and recognized world-class wheelchair athlete. In 2003, Chad set a world record by wheeling his chair from Salt Lake City to Las Vegas (513 miles). His keynote at this year's conference focuses on safety—both at work and at home. Do you wonder how to build an environment where everyone has safety on their minds, where safety is a natural part of the day-to-day thought process? You'll begin to view safety in a different way after hearing Chad and better understanding your personal accountability. This program challenges everyone to develop and maintain a safety mindset, the mindset of a safety professional, whether in the workplace or at home. At work or at home, it is hard to stop and take the time to do an activity safely unless we consider the possible outcome. If we are: Not wearing your seatbelt can have devastating results Leaving your safety mind at work can paralyze you Leaving something wet can cause a co-worker to slip and fall Tripping and falling down the stairs can put you in a wheel chair the rest of your life You'll gain a new respect for safety procedures and an understanding of developing a 24/7 Safety Attitude. | 03/20/2024 | 8:00 am | Keynote | Chad Hymas |
| SA1 | Developing and Executing Detailed Erection Plans for Safe and Effective Erection | In this session, we will present the keys to success in engineering, planning, documenting and executing successful detailed structural steel erection plans. Topics include, crane scaling, erection drawings, sequencing and procedures, special provisions for Material deliveries, staging, storage and movement, hoisting, erection and tolerance. The session will also include a video presentation of what happens when a detailed erection plan is executed successfully. CEU's will be awarded for this session. | 03/20/2024 | 10:15 am | SafetyCon | John Schuepbach, Matt Skinner |
| S1 | Stability of Thin Walled Structural Members I | Paper 1: Dinar Camotim, "Buckling Analysis of Cold-Formed Steel Built-Up Columns Using Generalized Beam Theory" Paper 2: Ahmad Fayed Ghowsi, "Web crippling stability behavior of CFS built-up beams under end two-flange loading" Paper 3: Maged Hanna, "Laboratory testing and numerical modelling of frame apex connections fabricated from steel cold-formed sections" Paper 4: Cheng Yu, "Pilot Research on Long-Span Cold-Formed Steel Trusses" | 03/20/2024 | 10:15 am | SSRC Annual Stability Conference | Benjamin Schafer, Dinar Camotim PhD, Ahmad Fayed Ghowsi, Maged Hanna, Cheng Yu |
| T1 | Additively Manufacturing a Future for Structural Steel | Metallic additive manufacturing (AM), commonly known as 3D printing, is a rapidly developing technology that offers amazing potential for the steel industry, including design optimization, efficient fabrication of complex geometries, faster erection, rehabilitation of existing structures, a solution to the skilled workforce shortage, and more. The AISC AM Exploratory Task Force seeks to advance metallic AM toward in-service implementation for structural steel applications. Through an AM pedestrian bridge demonstration project, the group aims to highlight the opportunities that AM provides the structural steel industry, show how AM can integrate into traditional structural steel design and fabrication, create acceptance and approval processes for AM components, and generate excitement within the steel industry for AM. This session will discuss the benefits of AM and describe the upcoming demonstration project. | 03/20/2024 | 10:15 am | Technology | Ryan Sherman |
| QC1 | Certification Forum | Join us to kick off QualityCon and learn about all the new developments in AISC Certification, including revisions to the updated Standard for Certification Programs (AISC 207-23), updates to our Governing Requirements, and more. Attendees will have the opportunity to get answers to their certification and audit-related questions. | 03/20/2024 | 10:15 am | QualityCon, NASCC Online | Todd Alwood, Larry Martof, Lisa Patel |

| | | | | | | |
|-------|---|--|------------|----------|-----------------------|---|
| EW1 | Whoa, Autodesk Does That?! (The Structural Steel Edition) | Discover how you can enhance your workflows with Autodesk's portfolio of structural solutions. We will show you how to enable greater outcomes and optimize your projects with connected workflows, enhanced product capabilities, and emerging opportunities in AI. You'll see how Autodesk pushes the industry forward and our commitment to making you and structural steel safer, more resilient, and more sustainable. Presented by: Autodesk Exhibitor Workshops are not eligible for PDH credits | 03/20/2024 | 10:15 am | | |
| SEI25 | Development of Design Criteria for Functional Recovery: 2026 NEHRP and ASCE 7-28 | The concept of functional recovery has been advanced in recent years to mobilize building design and mitigation decisions that reduce the long-term effects of earthquake-induced building damage, enhancing community resilience. There are significant ongoing efforts to explore design criteria and related provisions for improving functional recovery in new building design for potential incorporation in the National Earthquake Hazards Reduction Program (NEHRP) Recommended Seismic Provisions for New Buildings and Other Structures. FEMA contracts with the Building Seismic Safety Council (BSSC) of the National Institute of Building Sciences (NIBS) to develop the NEHRP Recommended Seismic Provisions. This document is a primary technical resource for the seismic design provisions of the professional design standard for new buildings: ASCE/SEI 7 Minimum Design Loads and Associated Criteria for Buildings and Other Structures. This presentation will provide the latest updates on the work of the BSSC Functional Recovery Task Committee to create proposals for the 2026 NEHRP Provisions that define key terms, create functional recovery categories, assign target recovery times for building occupancies and services, develop prescriptive provisions for each category, and identify the hazard level(s) applicable to these objectives. The presentation will discuss how the functional recovery proposals expected to be considered for 2026 NEHRP Provisions and will be considered during the development cycle for ASCE 7-28. The presentation will also provide important background information to highlight the origins of functional recovery, how the FEMA-NIST report to Congress advanced critical concepts, and how the enhancements to the FEMA P-58 performance-based seismic design procedures through the ATC-138 project have enabled the development of simplified, prescriptive design provisions. | 03/20/2024 | 10:15 am | SEIcon | Ryan Kersting SE, Abbie Liel PE,PhD, John Hooper SE,PE, Emily Guglielmo SE |
| CAPS1 | Introduction to Career Accelerator Program for Steel (CAPS) - Not open to all attendees/only members of the CAPS Cohort | This session will serve as an Introduction to AISC's Career Accelerator Program for Steel (CAPS). Participants in the CAPS program will be exposed to various topics critical to a career in the structural steel industry ranging from basic management principles to a crucial understanding of AISC technical documents. This session will offer an overview of these topics and feature reflections on a career in the steel industry from an award-winning speaker at NASCC. Attendance at this session is by invite only and is only open to accepted members of the CAPS program. | 03/20/2024 | 10:15 am | CAPS | Mark Holland |
| A1 | 2024 Forge Prize Winner's Presentation: Mile Zero | The Forge Prize is a design competition that was established by The American Institute of Steel Construction in 2018. It recognizes visionary emerging architects for designs that embrace steel as a primary structural component and capitalize on steel's ability to increase a project's speed. Winners of the 2024 competitions will present their innovative concepts. | 03/20/2024 | 10:15 am | Architecture | Emily Baker |
| Q1 | Steel Seismic Design Fundamentals (for those who normally don't design for seismic) | This session targets those who do not perform seismic design on a regular basis by introducing key design standards (e.g., ASCE 7 and AISC 341) and their essential content. It presents the fundamental information an engineer must have and the initial decisions that must be made before developing a seismic design. The session compares and contrasts wind and seismic design. | 03/20/2024 | 10:15 am | Seismic, NASCC Online | Thomas A. Sabol SE,PhD |

| | | | | | | |
|-------|---|---|------------|----------|---|--|
| Z1 | Building a Culture That Builds PEOPLE | The only way to take your business to the next level is to build your PEOPLE. The only way to build your PEOPLE is to establish, maintain, and enforce a culture that builds people. This session will explore options and methods to take your business to the next level by investing in your people and building a culture for success. | 03/20/2024 | 10:15 am | Business | Ryan Godfrey Godfrey |
| SEI1 | Designing Facades for Damage - Delegated Design for Hurricane & Blast Resistance | Structural engineers usually focus on designing building structures to protect life-safety and prevent collapse in a catastrophic event. However, the building envelope is just as critical in protecting occupants from extreme loading conditions due to explosive events as well as hurricanes and tornadoes. Hardening to achieve high levels of deformation while controlling the nature and extent of failure requires the attention of specialized structural engineers, those with experience in advanced analytical technics. However, they are only one of many key players who must participate in the fine-tuning of a complex system that serves multiple functions (i.e., structural, thermal and moisture control, aesthetics, etc.). The design and construction process has numerous challenges in the successful delivery of a high-performing façade, especially in achieving the goals and objectives of key players. A panel discussion of this topic will include an architect, blast/structural engineer consultant, general contractor, and panel and glazing installer/manufacturer providing their perspective and experience through a facilitated discussion with audience participation. | 03/20/2024 | 10:15 am | SEIcon | Sharon Gallant SE,PE, Danielle Bettenhausen, PE, Derek Hoffine, Yugene Cha, AIA |
| SEI13 | The New Disproportionate Collapse Mitigation Standard | For the past several years, SEI has been developing the first standard for disproportionate collapse mitigation for the private sector. The effort has involved contributions from individuals in academia, private practice, and government. Upon the writing of this session proposal in May 2023, the document has finished committee balloting, and is in publication. Likely, the document will be finished prior to the 2024 Structures Congress. Chapter headings in the standard are: General Requirements, Definitions, Risk Assessment, Performance Criteria, Design and Analysis Approaches, Acceptance Criteria, Structural Detailing, Existing Buildings, and Performance Qualifications. The standard strives to be performance based. For this session, a panel of leaders in the preparation of this standard will present the background for the document, summarize key features and provisions in the standard, and present the rationale for creating the standard and its likely impact on the building construction industry. | 03/20/2024 | 10:15 am | SEIcon | Donald Dusenberry, Michael Mudlock PE, Mark Waggoner SE,PE, David Stevens PE,PhD, Joseph Main PE |
| N14 | Adding Resilient Structural Systems to the Engineer's Toolbox – Current Views from Past Higgins Winners | In recent years, the topic of resilience has become of nationwide interest and has caught the attention of the structural engineering community. Structural steel systems can be most effectively designed to provide resilience, and examples will be provided of how this advantage can be achieved. | 03/20/2024 | 10:15 am | Design & Analysis/Engineering, NASCC Online | Michel Bruneau P.Eng.,PhD |
| N28 | Stability Matters Too: What Can Happen When Analysis, Design, Detailing, and Fabrication Differ | Industrial building structures are typically large in plan, and have heavy equipment and moving loads such that the structures must be vertically braced. This paper will examine the modeling assumptions used in the structural analysis of vertical bracing and the often encountered inconsistency with assumptions made during the design, detailing, fabrication, and structural steel erection of the facility. Decisions made early on in the design process with regards to the vertical bracing can have a profound effect on the overall stability of the structure. The main questions that should arise are: 1) what happens when "minor" fabrication or erection decisions are not considered when applying the loads and load combinations to the individual compression members when stability is being checked, and 2) how do these same decisions affect the overall stability of the frame? Several studies will be presented that examine the | 03/20/2024 | 10:15 am | Design & Analysis/Engineering | Hunter Brown, PE |

| | | | | | | |
|-----|---|--|------------|----------|-------------------------------|--|
| | | results of decisions made in the design, fabrication, and erection of vertical bracing systems that, when neglected or ignored, could lead to potential stability problems. | | | | |
| N41 | Wind Uplift Design For Steel Joist and Steel Deck Roofs | Earth, Wind, and Fire isn't just a massively cool musical group. We design our structures to resist the forces of earthquakes (earth), wind, and fire. The NASCC has had many sessions on earthquake and fire design, so now here is one on designing wind resistant joist and deck roof systems. | 03/20/2024 | 10:15 am | Design & Analysis/Engineering | Thomas Sputo SE,PE,PhD, Angelo Nieves PE, Keith Juedemann PE |
| D1 | Detailing Steel Joists - 14 things we all need to know! | Open web steel joists and joist girders provide a practical and economical structural support for roofing and flooring systems in many types of buildings. Detailing and designing the joist components is a very specialized process and typically only steel joist manufactures are intimately familiar with the requirements. During this presentation we will highlight the main design / detailing requirements, governing codes, and regulations. We will touch on defining professional responsibilities and we'll summarize some critical coordination requirements for joists and bridging. | 03/20/2024 | 10:15 am | Detailing | Maribel Fernandez, Brian Cameron |
| W1 | Do's and Don't's of Hiring in the Trades | Discover actionable insights for optimizing hiring processes in a competitive labor market from the CEO of BlueRecruit, a direct-hire marketplace for skilled-trade workers. With expertise spanning 8 years, the speaker emphasizes tailoring recruitment strategies to industry demands. Attendees will learn the power of targeted platforms, the impact of text messaging in communication, the significance of flexible schedules, and the role of speed in securing top talent. This session equips business owners with practical tools to streamline skilled-trade hiring for better outcomes. | 03/20/2024 | 10:15 am | Workforce Development | Rich Camacho, Carly Hurd |
| C1 | Brace Yourself - HSS Brace Design and Detailing | HSS members are an excellent choice in braced frames. After discussing best practices for choosing the optimal HSS brace section, a library of details will be covered for HSS bracing connections. We will also navigate recent code updates and fabrication insights into these essential connections. This session will cover: Design Essentials: Learn design considerations for common HSS brace connection details, including slotted, end tee, and seismically reinforced connections. Step through limit state checks for gusset plate-to-HSS column connections, with a focus on shear lag and offer guidance for combined shear, axial, and moment loading. Real-World Examples: Dive into practical application with design examples, including a slotted HSS brace connection and a gusset plate-to-HSS column connection example. | 03/20/2024 | 10:15 am | Connections, NASCC Online | Cathleen Jacinto SE,PE, Beth Suminski SE,PE |
| T8 | Leveraging Technologies in Structural Engineering | Get ready to embark on an electrifying journey through the cutting-edge world of structural engineering! Join us for an extraordinary session featuring four brilliant minds from Walter P. Moore as they unveil a treasure trove of innovation and technology that's revolutionizing the field. In this exhilarating session, you'll discover how these engineering visionaries are rewriting the rulebook, infusing every project with the power of digital workflows. Their passion for progress is palpable, and their mission is crystal clear – to create a seismic shift in the industry by leveraging the power of technology! | 03/20/2024 | 10:15 am | Technology | Clint Woods PE, Nicholas Danney PE, Shruti Sharma PE, Andrew Zucker PE |
| B1 | 2024 Bridge of the Year Award | Graham Bettis (TxDOT Bridge Division Director) will kick off the 2024 World Steel Bridge Symposium. Then the three Prize Bridge finalists will present their project. Each project team will have 15 mins to showcase what made their project unique and then the audience will have the opportunity for live voting to determine the 2024 Bridge of the Year! The finalists are: SeaTac IAF Pedestrian Walkway, I-94 2nd Avenue Bridge Network Tied Arch, and The New Frederick Douglass Memorial Bridge. | 03/20/2024 | 10:15 am | Bridges, NASCC Online | Jeff Carlson PE, Graham Bettis, AJ Cardini, PE, Jacob McCann, Brad McDermott, Matt Longfield, John Belcher |

| | | | | | | |
|-----|--|---|------------|----------|---|---|
| L4 | The Art of Contract Negotiation (Or Horse Trading Until you get to Yes) | Every new project presents unique challenges. From design to scope of work, to product delivery, there are differences from one project to the next that must be addressed in your contract to account for variables that will impact your cost of fabrication. In this program our presenters will role play the fabricator and general contractor in a contract negotiation setting. The steel fabricator will identify the key terms in a form contract that are troublesome and negotiate more favorable terms. The general contractor will explain why those terms are necessary for its protection. Together, the presenters will share with attendees why each side takes the position that it d | 03/20/2024 | 10:15 am | Legal | George Pallas, Jason Copley, Ed Seglias |
| G1 | Sustainable Steel Projects: Case Studies and Lessons Learned | Join us for an engaging session where a group of engineers from AISC's Sustainability Committee will share their insights, achievements, and obstacles encountered in the realm of sustainable steel design and procurement. | 03/20/2024 | 10:15 am | Sustainability | Michael Gryniuk, Max Puchtel SE,PE, Brian McSweeney SE,PE, Julia Hogroian, Arathi Gowda |
| N2 | Case Studies on Structural Stability Failures – You Make the Call | This session features a panel of engineers and academics presenting their views on the root cause of five structural collapse case studies. The panel views the results of an audience vote on which cause was most likely. Finally, the moderator reveals and explains the true nature of the collapse. | 03/20/2024 | 11:30 am | Design & Analysis/Engineering | John Hooper SE,PE, Rafael Sabelli SE, Ronald Ziemian PhD, Craig Quadrato PE,PhD, Cliff Bishop SE,PE,PhD, Tricia Clayton PhD, PE |
| N42 | Worst Mistakes I've Made with Software (and the Solution) | Instead of learning from your own mistakes, learn from mine! It's easy to assume that all structural engineering software solves engineering problems correctly. As an engineer, understanding where things can go wrong is crucial for reliable results. Here is your invitation to explore various instances in my professional experience when things went awry with modeling, analysis, and design when using software. We will step through mini case studies with concrete, hands-on examples illustrating errors and their potential consequences. Solutions and best practices will be discussed. | 03/20/2024 | 11:30 am | Design & Analysis/Engineering, NASCC Online | Sam Rubenzer SE,PE |
| A2 | 3D Printed Metal Structures Using Robots | Additive Manufacturing or 3D printing has been around for a decade or two. Great advancements have been made in terms of precision and materials. First mainly used for prototyping by now small components have found their way into rockets, cars and airplanes. What is relatively new however is using additive techniques to print full scale metal components and/or structures. MX3D has developed a robotic metal 3D printing technique based on arc welding called WAAM (Wire Arc Additive Manufacturing). The company generated awareness for the technology Together with partners like Arup, Ty-Lin, ESA, SOM the company aims to introduce the technology and its many advantages in the construction industry. This presentation explores the potential, the state of the art and the barriers for this technology. | 03/20/2024 | 11:30 am | Architecture | Filippo Gilardi |
| F3 | Project Manager Accounting--Understanding Percent Complete Accounting (for fabricators and erectors) | Understanding Cost Accounting and how Percent Complete Accounting impacts the income statement. Learn how your role in communicating changes in the cost at completion compared to the estimate has significant impact on the company's financial statement. Fabricators are a hybrid between manufacturing and construction and the method of accounting requires accurate assessment of project cost outcome during the course of project execution. | 03/20/2024 | 11:30 am | Fabrication & Erection | David Zalesne |

| | | | | | | |
|-------|--|---|------------|----------|-------------------------------|--|
| G2 | Innovative Design: A Toolkit for Reducing Embodied Carbon in Steel Structures | Learn about useful rules of thumb which help set up your projects for a successful reduction in embodied carbon emissions. Explore readily available tools that can be used in real scenarios to help you keep track of the project embodied carbon during all design phases. | 03/20/2024 | 11:30 am | Sustainability | Amir Aghajani |
| D2 | Deck Detailing Made Easy or At Least Easier! | Detailing steel deck is a very specialized process and typically only steel deck manufacturing professionals are intimately familiar with its requirements. During this presentation, we will highlight the best practices when detailing deck and coordinating with other trades throughout each phase of a typical project. We will provide practical insight regarding deck installation and attachment from the Steel Deck Institute (SDI), and coordination techniques that will support minimizing project delays. This session will emphasize that communication between industry partners throughout each phase is a key factor in achieving a successful project | 03/20/2024 | 11:30 am | Detailing | Kyle Van Duzer, Joseph Craigen |
| SEI2 | Fastening Forward: Recent changes, current gaps, and ongoing challenges in concrete connections. | This session introduces challenges in anchorage to concrete. Topic 1: Updates to Chapter 17 in ACI 318-19 ACI 318-19 Chapter 17 saw one major change from the 2014 version: the inclusion of shear lug design. Topic 2: Design of stand-off connections with and without the code Moving from fully codified to partially codified design, the topic of stand-off connections will be discussed. Topic 3: Fire design of anchorages Finally, we move to an anchoring topic that is mostly unexplored by the codes: fire design. | 03/20/2024 | 11:30 am | SEIcon | Nicole Baer PE, Trey Hamilton PE, PhD, Kenton McBride, PhD, PE, Nicolas Pinoteau, PhD |
| SEI14 | Understanding How Your Cost Accounting and Financial Systems Change Your Organizations Behavior | Many sources address how to help your organization succeed by instilling the appropriate personnel attitudes and behavior. Two extremes are to form teams or set goals and controls. Within these recommendations, you seldom find information about how the business system influences the firm's culture. Yet, the business system may correlate more to the firm's culture than any other factor. Following a brief lesson on financial and cost accounting, presented for engineers without the accounting dialogue, the presentation will discuss the powerful influence of business systems on your organization's culture. The attendee will better understand how employees and owners change their attitudes and behavior as a result of interacting with their firm's business systems. For example, how does the revenue recognition algorithm change the quality of a firm's contract documents? The attendee will see the effect on organizational culture of changing the balance of power between business practice controls and quality of professional practice. | 03/20/2024 | 11:30 am | SEIcon | John G. Tawresey SE, Paul Burmeister |
| SEI26 | Reconnaissance Observations from the Kahramanmaras Turkey Earthquake Sequence | Southeastern Turkey and northern Syria were struck by two significant magnitude earthquakes on February 6th, 2023 that led to widespread severe building damage and collapse and an earthquake-affected area of 14 million people. With approximately 60,000 confirmed casualties, it represents the deadliest earthquake since the 2010 Haiti earthquake. This session will include speakers from the American Concrete Institute (ACI) Disaster Reconnaissance Committee and the American Society of Civil Engineers (ASCE) Structural Engineering Institute (SEI), and the National Institute of Standards and Technology (NIST) teams which traveled to the earthquake-affected region approximately seven weeks after the earthquake | 03/20/2024 | 11:30 am | SEIcon | Matthew Speicher PhD, Rebecca Collins, PE, SE, Reid Zimmerman SE, PE, Santiago Pujol Llano |
| Z2 | Building Relationships of Trust | Trust is critical in business relationships. Learn how to establish and build trust in the workplace to get the maximum commitment from your team and in the industry to make your business magnetic to keep existing clients and to pull new clients in your direction. | 03/20/2024 | 11:30 am | Business | Aaron Rose |
| N29 | Is Your Structure Fatigued? | Fatigue in steel structures can be a almost inpreceptable until it is to late. Learn how to test for fatigue and options to remediate a bad situation to get the best results. | 03/20/2024 | 11:30 am | Design & Analysis/Engineering | Paul McMullin SE, PhD |

| | | | | | | |
|-----|--|--|------------|----------|---|---|
| C2 | Connection Design Responsibility - Whose Is It? | The AISC Code of Standard Practice provides the EOR with three options for dealing with connections on their projects. They may fully design and document the connections, they may elect to have an experienced detailer select and complete the connections, or they may delegate design of the connections to a licensed engineer working for the fabricator. This seminar discusses the details of these three options. | 03/20/2024 | 11:30 am | Connections, NASCC Online | Clifford Schwinger PE |
| N16 | Composite Beams - Understanding Minimum Design Limits | Design of composite beams for floor framing systems is one of the most common approaches in the structural steel industry. Composite beams utilize both steel and concrete materials, taking advantage of the strengths of each material type to optimize the member design. In order to ensure composite behavior, we need to provide a mechanism to allow the disparate materials to work together. The AISC Specification provides guidance required to achieve this joint material interaction and the interaction performance is referred to as "percent composite." This presentation will delve into the minimum requirements for "percent composite" and review some of the confusion found surrounding this topic with the intent to dispel certain myths. | 03/20/2024 | 11:30 am | Design & Analysis/Engineering, NASCC Online | Susan Burmeister PE |
| Q3 | Steel Construction Trends in New Zealand in the Wake of the Christchurch Earthquakes | A session to discuss how the use of steel is playing a critical role in the rebuilding of Christchurch, NZ after the earthquakes of 2010-2011. | 03/20/2024 | 11:30 am | Seismic | Laura Whitehurst |
| QC2 | Lessons Learned from United States Army Corps of Engineers | This session will focus on the U.S. Army Corps of Engineers' structural steel inspection findings and quality assurance lessons learned from the fabrication of Hydraulic Steel Structures. | 03/20/2024 | 11:30 am | QualityCon, NASCC Online | Todd Alwood, Travis Adams PE |
| ED1 | Educator Session | Join the AISC university programs team and fellow educators for a complimentary lunch and a look at our latest programs and resources for you to teach steel design. Wednesday, March 20 11:30 a.m. - 1:30 p.m. Lunch included AISC University Programs Update Join the AISC university programs team and fellow educators for a complimentary lunch and a look at our latest programs and resources for you to teach steel design. Collaborating with the steel industry to enhance research and teaching Amit Kanvinde will present on working with AISC to develop a successful and impactful research program. While the talk will be directed at early to mid-career researchers interested in developing a research program focused on structural steel, seasoned researchers will walk away with tips for mentoring junior faculty. The session will discuss experiences and strategies for writing successful research proposals to AISC and developing a long-term research vision that aligns with the mission of the Institute while impacting the professional practice. Specific topics will include: (1) the mission of the Institute, (2) the process of standards/guidelines development, tasks committees, and its relation to scientific research, (3) the importance of professional and research collaborations, (4) the mechanics of the funding process, including securing fabricator support, and (5) ultimately translating the research into professional impact. After the presentation, Dr. Kanvinde will join a panel discussion with fellow educator, Will Collins, as well as design engineer, Mara Brasleton, and fabricator, Casey Brown. They will share their perspectives on how educators can best collaborate with the steel industry to produce impactful research, enhance their methods for teaching steel design, and graduate well-prepared students. | 03/20/2024 | 11:30 am | | Amit Kanvinde PhD, Mara Brasleton PE, Christina Harber SE,PE, Casey Brown, Will Collins |

| | | | | | | |
|-------|--|---|------------|----------|---------------------------------------|---|
| M11 | An Inside Look at Design Guide 24 HSS Connections, 2nd Edition | Join the author of the new edition to learn more about the scope of and updates to the updated Design Guide 24. We'll review everything you need to know about compliance with AISC 360-22 Chapters J and K and the 16th ed. Steel Construction Manual. | 03/20/2024 | 11:30 am | Manuals, Standards, and Design Guides | Jeff Packer P.Eng. |
| EW3 | Bluebeam Revu: Steel Takeoffs Tips & Tricks | This workshop is designed to showcase best practices when performing a quantity takeoff for steel in Bluebeam Revu 21. We will walk through calibrating your sheets, creating measurements, adding custom formulas, and building accurate reports. We will also introduce some brand-new features recently added to Revu 21, like multiply! Presented by: Bluebeam Exhibitor Workshops are not eligible for PDH credits | 03/20/2024 | 11:30 am | | |
| B14 | Simple Solutions for Short Span Bridges | This session will summarize the tools available to quickly evaluate the feasibility of short span bridges for a given project. It will also include a DOTs experience with standard short span bridge designs. | 03/20/2024 | 11:30 am | Bridges | Sean Peterson, Karl Barth, Robert Tennant |
| N49 | Mass Timber and Steel Hybrid Construction – The Way of the Future or Is It? | With the increased focus on the importance of embodied carbon, generally expressed as Global Warming Potential (GWP), in the built environment mass timber and steel hybrid systems are perceived to be advantageous in reducing embodied carbon. This presentation will present results of a study of mass timber and steel hybrid systems that quantified the benefits and limitations of mass timber and steel hybrid systems as compared to conventional steel systems in regard to embodied carbon, system depth, and cost. In addition, lessons learned from built mass timber and steel hybrid projects will be presented. | 03/20/2024 | 11:30 am | Design & Analysis/Engineering | Bruce Brothersen PE,P.Eng., Jake Hohmann PE |
| CAPS2 | What AISC can do for You - Not open to all attendees/only members of the CAPS Cohort | As part of the CAPS curriculum, this session will explore and highlight AISC initiatives including Workforce Development, Fabricator Education, and Technology (among others) as well as AISC member benefits. Attendance at this session is by invite only and is only open to accepted members of the CAPS program. | 03/20/2024 | 11:30 am | CAPS | Jennie Traut-Todaro SE,LEED A.P., Joel Landsverk, Yasmin Chaudhry PE, Luke Faulkner |
| S2 | Stability of Thin Walled Structural Members II | Paper 1: Sivaganesh Selvaraj, "Investigation on Structural Behaviour of Cold-formed Steel Built-up Columns - Modified Direct Strength Method" Paper 2: Chu Ding, "Analytical Equations for Critical Local Buckling Stress of Cold-Formed Steel Lipped Channel Sections with Centered Web Holes" Paper 3: Nuno Peres, "On the buckling and post-buckling behavior of thin-walled pre-twisted columns." | 03/20/2024 | 11:30 am | SSRC Annual Stability Conference | Michael Seek, Sivaganesh Selvaraj PhD, Chu Ding, Nuno Peres |
| SA2 | Effective use of Technology in the Field to Manage Safety, Quality, Non-conformance and Schedule | In this session, we will present the keys to success in utilizing technology in the field to manage multiple functions of a project including safety, quality, non-conformance, daily reports and schedule. As our industry continues to leverage the use of technology, IPADS and tablets are being utilized frequently to manage the key functions of the project. We will show you how this technology is successfully used safety and quality report and documentation, generating and tracking non-conformance, RFI's, reviewing drawings in blue beam and tracking schedule. | 03/20/2024 | 11:30 am | SafetyCon | Tim duke, John Schuepbach |
| QC14 | Corrective Action Request VS Nonconforming Work | When do you write a Corrective Action Request versus just a Nonconformance? This session aims to demystify corrective actions in a quality management system for inspectors. The focus will be on continuous improvement and managing improvement within your business, geared for structural steel fabrication and erection weld inspectors but may appeal to all companies with or considering a quality management system. | 03/20/2024 | 11:30 am | QualityCon | Lee Pielae |
| B2 | In Case of Emergency, Call The Steel Industry | On emergency bridge projects, the delivery time for fabricated steel can be reduced from many months to a matter of weeks, quickly restoring roads and highway to full capacity. This can be done readily with an excellent team, good cooperation, and just a few key steps. In this session, two emergency steel bridge projects from summer / fall 2023 will be discussed, including the practices that were used to achieve rapid delivery of | 03/20/2024 | 11:30 am | Bridges, NASCC Online | Jeff Carlson PE, Ronnie Medlock PE, Julianne Fuda PE, Archie Filshill, Shane |

| | | | | | | |
|----|---|---|------------|----------|----------------------------------|---|
| | | fabricated steel. Bridge owners from NYS DOT and PennDOT will describe their activities, and High Steel will discuss fabrication of the steel. | | | | Ryan, PE |
| Y9 | Overarching Solutions at 10 World Trade | 10 World Trade is a new iconic 17-story lab/research development in Boston's Seaport district. Construction started in 2022 with steel topping out late 2023. The building's distinctive arch base and curved upper architecture suit the unique site conditions, and give an airy open feeling while integrating the structure into the surrounding landscape. This complex open geometry gave rise to several technical, fabrication, and erection challenges for steel design, leading to creative solutions for connection design and constructability that will be presented. | 03/20/2024 | 11:30 am | Case Study | Carol Drucker, Albert Marskamp P.Eng., Logan Bertling |
| W2 | Effective Shop Staff Recruitment and Development: Key Collaborations and Training Program Elements that Gets Them Working on the Floor and Making Money | How can we effectively recruit and then train the key crafts of layout and fitting? This session will discuss how to grow a healthy staff pipeline and develop a complete layout and fitting training system to complement the skills commonly taught in career and technical education. | 03/20/2024 | 11:30 am | Workforce Development | Jennie Traut-Todaro SE, LEED A.P., Adam MacDonald |
| T2 | AI Basics and Capital Project Business Applications | If you are entirely confused about Artificial Intelligence and how it's going to impact your business, you're not alone. This session will take attendees through the basics of AI and explain its applications including; What is AI, example projects, its rise in business, and its impact on financing, scheduling, and risk. | 03/20/2024 | 11:30 am | Technology | Peter Dumont PE |
| S3 | Stability of Bridge Members | Paper 1: David Fish, "A Refined In-Plane Girder Stiffness Expression for Straight I-Shaped Girder Systems Utilizing Torsional Beam Bracing" Paper 2: Aiden Bjelland, "Impact of Lean-on Bracing Layouts on System Stability" Paper 3: Claire Gasser, "Identification of Critical Bracing Lines in Lean-On Bracing Systems and the Corresponding Stiffness and Strength Expressions" | 03/20/2024 | 1:45 pm | SSRC Annual Stability Conference | David Fish, PE, Aidan Bjelland, Claire Gasser, PhD, Lakshmi Subramanian |
| T3 | Applying AI and Advance Technology to Reduce Welding Inspection Time | This session will explore the feasibility of welding electrical signals to discriminate the locations most likely to be problematic in welding during structural construction. New tests and technologies indicate that welding electrical signals can be a predictor of the presence of discontinuities or defects in the welding of structural steel. This is part of an AISC Need for Speed Initiative, the ultimate goal of which is to use available modern technologies such as AI and ML to reduce welding inspection time, resulting in overall faster construction times. | 03/20/2024 | 1:45 pm | Technology | Patricio Mendez PhD |
| D3 | When your Client becomes your Enemy - Effective Detailing Project Management skills to help Prevent Difficulties | Steel Detailing Project Management is one of the toughest positions in the industry. Often we are working with people or on projects which create difficult situations. This session will walk you through how to identify, avoid, learn, and grow with working in a bad client or bad project situation. | 03/20/2024 | 1:45 pm | Detailing | Ryan Wunderle |
| A3 | Doubly Curved Steel Works in Infrastructure and Architecture | This presentation by CIG Architecture will explore the forming and fabrication process of doubly curved steel structures using methods with roots in boat hull construction. The session will give insight into the parametric design tools and workflows paramount to forming complex surfaces and will culminate with two case studies that highlight the complex geometry that can be realized in steel sheet and plate. The first case study will highlight the Port Lands Bridge designed by SPB & Grimshaw Architects in Toronto, CA and the second will focus on a residence in Aspen, CO designed by Frank Gehry. | 03/20/2024 | 1:45 pm | Architecture | Allard Bokma P.Eng. |

| | | | | | | |
|------|---|--|------------|---------|-------------------------------|--|
| QC3 | Things I Wish Everyone Would Know about Chapter N (AISC 360) and Chapter J (AISC 341) | Larry Kruth has been involved with these documents since they were created. Join him as he takes you on a tour of the most significant parts that you may have overlooked! He will help you better understand the requirements outlined in each document and how to apply them in your facility. Not a session to be missed! | 03/20/2024 | 1:45 pm | QualityCon, NASCC Online | Larry Kruth PE |
| EW4 | The Inspector's Perspective: What's Required During Structural Steel Construction? | A broad overview of the steel inspection process from the inspectors' point of view. Presented by: Terracon Consultants, Inc. Exhibitor Workshops are not eligible for PDH credits | 03/20/2024 | 1:45 pm | | |
| SEI3 | Engaging the Next Generation of Engineers | This panel discussion will focus on determining best practices for engaging the next generation of structural engineers. The panelists will include professional leaders in outreach efforts, as well as students supported by the SEI Futures Fund. Leaders in outreach will describe the programs in which they are leading that target K-12 students, including under-represented populations in the engineering field. Students will detail their experiences with these programs and give insight on best practices going forward. We will explore some of the current challenges facing outreach programs and how leaders can question assumptions on what works and create a compelling case for change for increased engagement. We will also look at how to engage the next-generation workforce through the lens of current students and recent graduates. The audience will have the opportunity to dig deeper during the question and answer session. We will walk away with a sense of current best practices to employ, challenges to overcome, and opportunities to meet to ensure to attract an enthusiastic and diverse pipeline of future engineers. | 03/20/2024 | 1:45 pm | SEIcon | Jazalyn Dukes PE, PhD, M.ASCE, Elaina Sutley PE, PhD, LEED A.P., Jon Magnusson SE, PE, AIA, Rawan Al Naabi, Luis Duque, PE, M.ASCE |
| EW5 | Design of Steel Structures with ENERCALC | ENERCALC is a proven, powerful, widely used design program consisting of 40+ structural calculation modules, including simple component designs (steel beam, concrete column, etc.), analysis (i.e., rigid diaphragm torsion), earth retention, and full 3D FEM analysis. This session will focus on a variety of ENERCALC capabilities that empower structural engineers in the design of steel structures, ranging from single-beam design, to complex frame analysis, to immersive BIM-driven design inside the Autodesk Revit environment, and beyond. Presented by: ENERCALC, LLC Exhibitor Workshops are not eligible for PDH credits | 03/20/2024 | 1:45 pm | | |
| B3 | Cross Frames - An Often Misunderstood Part of Steel Bridges | Cross frame layout and arrangement are often misunderstood when it comes to steel bridge design. This session aims to fill the gaps in understanding the proper cross frame arrangements for skewed straight I-girder bridges. Additionally, best practices for analysis, design and detailing for efficient fabrication and construction will be presented. | 03/20/2024 | 1:45 pm | Bridges, NASCC Online | Brandon Chavel PE, PhD, Geoff Swett PE, SE, Ajit Kamath PhD |
| N30 | Navigating The Joist and Deck Codes of Standard Practice | Designing and Constructing with Steel Joists, Joist girders and Steel Deck from perspective of the Codes of the Codes of Standard Practice. This presentation consists of two parts. The first part will address the SJI Code of Standard for Steel Joists and Joist Girders. This part will be presented by Michael A. West. The second part will address the SDI Code of Standard Practice for Steel Deck. This part will be presented by Thomas Sputo. | 03/20/2024 | 1:45 pm | Design & Analysis/Engineering | Michael West, Thomas Sputo SE, PE, PhD, Joe Pote PE |
| Q4 | Quality Requirements for Steel Buildings in High-Seismic Areas | This session presents an overview of requirements for welded and bolted joints in high seismic areas for quality control (fabricator and erector), quality assurance (second- or third-party), and Engineer of Record (EOR) review. Topics include differentiating between demand critical (DC) and non-DC requirements, protected zones, AISC 341-2022 Chapter J inspection and NDT including AISC 360-2022, AWS D1.8-2021 Seismic Supplement provisions including AWS D1.1-2020, and considerations for | 03/20/2024 | 1:45 pm | Seismic | Robert Shaw PE, Kevin Wilson SE, PE |

| | | | | | | |
|-------|--|--|------------|---------|---|---|
| | | pretensioned bolts using RCSC-2020. The focus will be on added requirements for fabrication, erection, inspection, NDT, and documentation. | | | | |
| Z4 | Dynamic Leadership and Professional Development: A Guide to Success in the Architecture, Engineering and Construction Industry | This illuminating session is tailored to all career stages and company sizes – from dynamic teams of 5 to thriving entities of 500. Whether you boast five years of experience or a seasoned track record of 35 years, this session is your gateway to unlocking personalized avenues for career growth and progression. Delve into mentorship, leadership insights, and specialized professional development tools finely tuned for individuals within the A/E/C industry. Immerse yourself in a lively discourse that interweaves real-world experiences and actionable "best practices," promising an invigorating session of learning and exploration. | 03/20/2024 | 1:45 pm | Business, NASCC Online | Ryan Curtis PE, LEED A.P., Erin Conaway PE |
| M7 | Inside the NEW AISC Seismic Provisions and the 4th Ed Seismic Design Manual | Stay on the cutting edge of structural steel design for seismic zones with a review of the most important changes in the 2022 AISC Seismic Provisions--and an intro to the 4th Edition of the Seismic Design Manual, too. We'll cover what you need to know about adjustments to width-to-thickness ratio limits; new provisions for ordinary truss moment frames; improved cantilevered column guidance; provisions for the new coupled composite plate shear walls system (SpeedCore); a new appendix on nonlinear response analysis; and more! | 03/20/2024 | 1:45 pm | Manuals, Standards, and Design Guides | Rafael Sabelli SE, Thomas A. Sabol SE, PhD |
| N4 | Delegated Connection Design – Properly Specifying Connection Design Criteria | Many structural steel projects follow the practice of having the fabricator design the structural steel connections as part of their work. Establishing the connection design criteria that needs to be communicated to the fabricator in this process is of utmost importance. This session will cover best practices that help ensure a successful project. The issues to be covered include the Code of Standard Practice requirements, examples of how to best relay the connection design criteria to the fabricator, and approval practices. | 03/20/2024 | 1:45 pm | Design & Analysis/Engineering | Michael Kempfert PE, PhD, Adam Friedman SE, PE |
| W3 | AISC Fabricator Education Training Program - Accelerated Onboarding | Join us in this conference session as we introduce AISC's all-new online training curriculum tailored specifically for steel fabricators. As the demands on the industry evolve, embracing innovative learning approaches becomes essential. In this session, we will showcase a curriculum designed to introduce new employees to the world of steel fabrication, and upskill current employees as they progress in their career. | 03/20/2024 | 1:45 pm | Workforce Development | Jennie Traut-Todaro SE, LEED A.P., Joel Landsverk, Mark Trimble PE, Amy Morrissey |
| SEI15 | ASCE 7 Development, IBC Adoption and Changes in the 2022 Standard | Overview of ASCE 7-22 and how the standard works including its history, the committee that produces it and the process. Technical content will include the hazards contained in the document and what is new in the 7-22 document and how it relates to the IBC. | 03/20/2024 | 1:45 pm | SEIcon | Alex Griffin SE, PE, Cherylyn Henry PE |
| SEI27 | Energy Transition Storage Challenges | As the global economy begins to transition away from fossil fuels, existing energy infrastructure will continue to require significant upgrades to meet the needs of tomorrow's energy landscape. This presentation covers the technical challenges associated with designing structures for storing energy transition media such as liquid hydrogen, liquid carbon dioxide, molten salt, and ammonia to meet the global energy demand. Practical and technical issues associated with scaling structures to meet future storage requirements will also be discussed. | 03/20/2024 | 1:45 pm | SEIcon | James Soules SE, PE, P.Eng., PhD, John Jacobson SE, PE, Steve Cihlar PE |
| M4 | The AISC Code of Standard Practice: Top Ten Overlooked Provisions for the EOR | The session will center around the Top 10 Things the CoSP requires the EOR to do that are often overlooked. Thus includes connection design requirements, member reinforcement, adjustable connections, coating requirements and other similar requirements. | 03/20/2024 | 1:45 pm | Manuals, Standards, and Design Guides, NASCC Online | Tim Bradshaw PE |

| | | | | | | |
|-----|---|---|------------|---------|---|--|
| M1 | Most Useful Design Aids from the 16th Edition Steel Construction Manual | For almost 100 years, the Steel Construction Manual has provided aids for efficient design of structural steel buildings. The Manual is as important to your design of steel structures as your mouse, your keyboard, or your computer. This session will provide a quick overview of the Manual and then concentrate on some of the most useful tables. It will also highlight tables that may not be as well-known but that can become your go to Tables. Come and learn what's inside the Manual and how you can use it to be more productive, profitable, and comfortable with the accuracy and effectiveness of your designs. | 03/20/2024 | 1:45 pm | Manuals, Standards, and Design Guides | Lou Geschwindner PE |
| N17 | Concentrated and Nonuniform Loading On Steel Deck | Steel floor and roof deck manufacturers publish load tables for uniform loads, but what if the loads on your project are not uniform? Designers frequently face concentrated loads caused by rack systems, forklifts, scissor lifts, mechanical equipment, RTUs and other dead, live or construction loads. This session will provide designers with the rationale needed to better analyze these loading conditions to ensure a proper design. | 03/20/2024 | 1:45 pm | Design & Analysis/Engineering | Kim Lammert PE, Douglas Eicher PE, Lauren Maes |
| N3 | What's hot in fire engineering – research to practice | New code advancements have provided opportunities for the application of structural fire engineering in building design. The partner session to this session will cover the advancements in these codes. This session will consist of speakers from industry who are utilizing state-of-the-art knowledge on structural fire engineering to apply these new code developments, as well as recent research results, to design buildings. Each speaker will talk to their interactions with AHJs, the project team, and the motivations behind utilizing this design methodology for fire protection – either sustainability or cost. In addition, speakers will discuss resources available to design professionals to implement this design methodology on a project. | 03/20/2024 | 1:45 pm | Design & Analysis/Engineering | Erica Fischer PE, PhD, Parisa Nassiri PE, Jenny Sideri PE, PhD |
| N43 | Your Code of Standard Practice - Changes for the Design Community | As in any industry, trade practices have developed among those that are involved in the design, purchase, fabrication, and erection of structural steel. The COSP provides a useful framework for a common understanding of the acceptable standards when contracting for structural steel. As such, it is useful for owners, architects, engineers, general contractors, construction managers, fabricators, steel detailers, erectors and others associated with structural steel construction. This session will provide an in-depth review of the recent updates to the Code for the design community. | 03/20/2024 | 1:45 pm | Design & Analysis/Engineering, NASCC Online | Kirk Harman SE, PE |
| C3 | Connection Design-Substantiating connection information | For projects where the design of the connections has been delegated, The Code of Standard Practice requires Substantiating connection information to be submitted and approved by the Engineer of Record. Outside of a definition, the code does not outline what this information is supposed to look like, and in practice it can vary in content. This presentation would first walk the audience through the code of standard practice to understand what delegated design is and then outline them on how we go about preplanning a job from a connection design standpoint. We would like to highlight what a typical deliverable might look like. We plan to hit on a few things: 1. The use of tables and charts accompanying a detail. 2. Specific details for complex joints and load paths. 3. How these deliverables are submitted to the EOR as well as the detailer, and what type of information is important to which party. 4. The use of maps as an engine for communication to the detailer. | 03/20/2024 | 1:45 pm | Connections | Chris Marvin PE |

| | | | | | | |
|-------|--|--|------------|---------|---------------------------|--|
| B15 | Best Practices for Galvanized Steel Bridges | All bridge durability solutions require unique details and proper planning to ensure maximum corrosion protection is achieved and expectations are met. For hot-dip galvanizing, a total immersion process in molten zinc, engineers and fabricators will want to ensure all pieces are designed and fabricated suitably for the process. This panel session will give an overview of design and fabrication best practices when considering a hot-dip galvanized bridge project. An update on the development of AASHTO/NSBA G8.4 Design and Detailing Recommendations for Corrosion Protection will be provided along with a preview of the information contained regarding hot-dip galvanizing. | 03/20/2024 | 1:45 pm | Bridges | Jeff Carlson PE, Ronnie Medlock PE, Alana Fossa, Gary Wisch PE |
| QC15 | Pitfalls to Implementing a New Quality Management System | Fabricators and Erectors would view documenting the way they do business as a challenge. Training the team to perform per company direction is a concurrent step. Consulting Fabricators and Erectors on installing or revising a quality management system is a unique perspective on the second half of the training and documentation equation – implementation. Implementation can be an ongoing philosophy and behavior management task. Some important keys are top management engagement, having a plan, effective internal audits, and more effective training. Seems simple! This session will review some stories about the potholes on the road to implementation success so that you can avoid them. | 03/20/2024 | 1:45 pm | QualityCon | Todd Alwood, Anna Petroski, Tom Anderson |
| SA3 | Top Ten Considerations for Crane Safety | What issues affect safety in crane operations on Steel erection projects, what standards impact those operations and how lift planning is being used to plan and mitigate hazards from the ground up. | 03/20/2024 | 1:45 pm | SafetyCon | John Schuepbach, Chip Pocock |
| G3 | Optimizing Steel Design: An Integrated Approach for Lowering Embodied Carbon | During the early stages of design, parametric modeling and optimization processes become extremely helpful tools to quickly analyze structural solutions that are optimized based on project specific needs. This presentation will showcase how embodied carbon reduction can become part of the optimization process for steel structures. Project case studies will include vibration sensitive floor design and long span structures. | 03/20/2024 | 1:45 pm | Sustainability | Francesca Meola, Claire Moore SE,PE,LEED A.P. |
| B16 | New Major Steel Bridges in North America | This Session includes two presentations, both of which are on new steel bridges crossing over major navigable/international rivers. The presentations cover the design, construction, international cooperation, and considerations on traffic control, environment, uncoated weathering steel, open-ended galvanized steel pipe piles, scour, vessel collision, etc. | 03/20/2024 | 3:00 pm | Bridges | Greg Hasbrouck, Vincent Gastoni PE, Dayi Wang PE,PhD |
| C4 | Connection Economy - Thoughts from a Steel Fabricator | Connections: should we bolt or should we weld? It seems that there is always a discussion on bolting versus welding and ideas abound from all parties. This session will discuss the differences between bolting and welding by looking at several different cost examples. | 03/20/2024 | 3:00 pm | Connections, NASCC Online | Christian Crosby PE |
| F5 | Your Code of Standard Practice - Changes for Steel Erectors | As in any industry, trade practices have developed among those that are involved in the design, purchase, fabrication, and erection of structural steel. The COSP provides a useful framework for a common understanding of the acceptable standards when contracting for structural steel. As such, it is useful for owners, architects, engineers, general contractors, construction managers, fabricators, steel detailers, erectors and others associated with structural steel construction. This session will provide an in-depth review of the recent updates to the Code for the steel erection community. | 03/20/2024 | 3:00 pm | Fabrication & Erection | Adam Younkin PE |
| CAPS3 | Modern Manufacturing of Structural Steel Shapes and its Impact on Design - Not open to all attendees/only members of the CAPS Cohort | This session will present the basic overview of modern steelmaking processes involved for the production of structural steel shapes that are commonly used in structural steel framing. Attendees will also learn the difference between mill orders and service center orders and gain an understanding of mill rolling schedules. Attendance at this session is by invite only and is only open to accepted members of the CAPS program. | 03/20/2024 | 3:00 pm | CAPS | Dennis Pilarczyk PE |

| | | | | | | |
|-------|--|--|------------|---------|---|--|
| M2 | Ponding Analysis with the New AISC/SJI Design Guide | The ponding provisions that were in Appendix 2 of the AISC Specification are not in the 2022 edition, and ASCE 7 now requires ponding head be included in the rain load. Old approaches to ponding analysis are no longer permitted. AISC and SJI have a new Design Guide to help engineers navigate the new requirements. This session will review requirements for rain load and ponding in various specifications and codes, introduce a method of design for ponding that meets the requirements, and run through design examples to show how it all fits together. | 03/20/2024 | 3:00 pm | Manuals, Standards, and Design Guides, NASCC Online | Mark Denavit PE,PhD, James Fisher PE,PhD |
| N31 | Shoring and Sequencing for Two-Way Systems | Two-way truss systems and structures in which the gravity framing interacts with lateral bracing can have complex sequence requirements. The presentation will discuss the gray area between EOR responsibility to identify shoring and sequencing per the COSP, and contractor means and methods that may affect final dead load force distributions. | 03/20/2024 | 3:00 pm | Design & Analysis/Engineering | Nicholas Redmond SE,PE |
| SEI16 | NBIS & SNBI: Implementing the New National Bridge Inspection Standards & Specifications | The most recently revised National Bridge Inspection Standards (NBIS) became effective June 6, 2022, along with the new Specifications for the National Bridge Inventory (SNBI). This session will introduce both FHWA documents, highlighting the information bridge program managers and bridge inspectors need to know to be in compliance with the NBIS and to submit the inspection data to the National Bridge Inventory on an annual basis. Subsections of the NBIS to be discussed include Purpose, Applicability, Definitions (clarified/updated existing terms and added new terms), Bridge inspection organization responsibilities, Qualifications of personnel, Inspection interval, Inspection procedures, Inventory and Incorporation by reference. The SNBI will be discussed by describing the global significant changes from the prior documents used as coding guides and element level inventory specifications as well as significant changes regarding the data to be collected and reported to the FHWA. | 03/20/2024 | 3:00 pm | SEIcon | Andrew Herrmann PE, Brian Leshko, PE, Peter Harrison PE |
| SEI28 | Climate Change and Structural Loads | This session will inform participants on ongoing work aiming to provide recommendations for structural engineers on how to define structural loads in the US to account for climate change. The relevant loads include wind, ice, rain, snow, and flood. The session will cover ongoing efforts to incorporate future conditions into the ASCE 7 standards, including collaborations with federal agencies. It will also provide details on some of the key loads, showing how the effects of climate are being considered to maintain reliability of buildings and other structures. | 03/20/2024 | 3:00 pm | SEIcon | Abbie Liel PE,PhD, Jennifer Goupil PE, Don Scott SE,PE, Ahmed Abdelaal PhD, Therese McAllister PE, PhD, F.SEI, Dist.M.ASCE |
| W4 | Skilled Trades Competitions: Their Roles in Bridging the Skills Gap and Investing in your Recruitment Pipeline | A new take on an established welding competition and key community collaboration brought recruitment success for a fabricator committed to workforce development. The session will discuss the nature of competition and leveraging the excitement of recognition and reward for a job well-done to the benefit of the structural steel industry. Learn about the different ways skilled trades advocates are creating exciting events to build their own recruitment pipeline. Discover ways you might partner with local schools to start your own competition and bridge the skills gap. | 03/20/2024 | 3:00 pm | Workforce Development | Joshua Merrill, Carly Hurd |
| N44 | Stainless Steel Fabrication for Fabricators and Designers | Stainless steel is becoming a more popular choice for its structural performance with little to no maintenance. This session will present fabricators and designers with some best practices for handling and fabricating structural stainless steel, focusing on differences between fabrication of carbon steel and stainless steel. The presentation will include highlights from the Code of Standard Practice for Structural Stainless Steel Buildings, AISC 313-21, that are relevant to fabrication of stainless steel. | 03/20/2024 | 3:00 pm | Design & Analysis/Engineering, Fabrication & Erection | Benjamin Baer SE,PE, Gary Coates P.Eng. |

| | | | | | | |
|------|---|--|------------|---------|---|--|
| N18 | Connecting the Load Path: Chords and Collectors in Steel Deck Diaphragms | Steel deck diaphragms distribute lateral load to the vertical components of the structure lateral load resisting systems. Important components in this transfer are the diaphragm chords and collectors. This session will explore the role the chords and collectors play in the diaphragm design and how the design can vary depending on the location of the lateral resisting elements. Examples will include diaphragms in steel framed buildings and also diaphragms in bearing wall buildings such as warehouse (including four-or-three-sided boxes, interior collectors, and irregular plans). | 03/20/2024 | 3:00 pm | Design & Analysis/Engineering, NASCC Online | Gerald McKenzie, Hamid Foroughi PhD, John Hoffman |
| L2 | Design-Assist: Updates from AISC and AIA specifically for Steel Fabricators | The term design-assist is often used in contracting, but not well understood. And the combination of varying interpretations, together with little case law, has frequently led to misunderstandings among various project participants, and ultimately to litigation. AISC and AIA have been working together for several years to define what design- assist is and what it is not. Part 1 of their efforts lead to a paper that generally outlined the difference between design-assist, delegated design, and informal involvement. Part 2 of their work specifically related to the use of the design-assist format with steel fabricators. In this session we will review the work of AISC and AIA in Part 2 and what are the important provisions to consider in the event a steel fabricator is required to provide design-assist services. | 03/20/2024 | 3:00 pm | Legal | Jason Copley, Ed Seglias |
| SEI4 | Design of Safety-Related Structures | In this Session, the unique aspects of the design of safety-related structures are discussed. Safety-related structures can be differentiated from commercial structures as having a primary or secondary function that protects the workers and public from potentially hazardous situations (e.g radiological exposure, chemical vapor clouds, extreme high and low temperature materials). As such, the design of these structures is governed by a different set of codes and standards and are scrutinized at a higher level, with expectations of multiple paths of redundancy and additional requirements for peer and regulatory technical reviews. How the industry and technical codes and standards committees are addressing new advances in technology in this field is specifically discussed in this Session. | 03/20/2024 | 3:00 pm | SEIcon | Lisa Anderson PE, LEED A.P., Ting Shi PE, Saahas Bhardwaj PhD, Madhumita Sircar PE |
| EW6 | Autonomous Welding – Seat back, relax, have a coffee. Trouble free robotic welding. | TDB Exhibitor Workshops are not eligible for PDH credits | 03/20/2024 | 3:00 pm | | |
| T9 | Automatically Import Advance Shipping Notice and Material Test Reports | If you have no problem hiring people this session isn't for you. For everyone else struggling to find sufficient office personnel and looking to automate tedious tasks, continue reading! Join representatives from steel producers, service centers and fabricators as they explain how their software platforms utilize e-Acquire360 (formerly steelXML) to automate the importation of Advance Shipping Notice (ASN) and Material Test Reports (MTRS). This session will provide: an explanation what e-Acquire360 is and why it is needed a brief overview of the E-Acquire platform and its ability to automate the PO, RFQ, ASN and MTR processes examples of implementation and usage from both the software and fabrication world case studies of time savings that can be realized Instruction on how you can utilize this platform with your software | 03/20/2024 | 3:00 pm | Technology | Luke Faulkner, Ryan Vander Plaats, Mike Voran, Jennifer Wade, Ryan Hennen, Kevin Ray |
| Z15 | 10 Ongoing Lessons in Steel Construction | This session features (hard) lessons from life on the road by a life-long operations guy and is designed for everyone involved in steel construction; designers, administrators, detailers, suppliers, fabricators and erectors. Zimkor is a fabricator by nature but ends up responsible for detailing through installation so the lessons learned and stories shared span the spectrum of the skinned up knee steel experience. And let's face it; we | 03/20/2024 | 3:00 pm | Business | Casey Brown |

| | | | | | | |
|------|---|---|------------|---------|----------------------------------|--|
| | | don't mind attending the autopsy so long as it isn't our corpse they are cutting apart and describing so some dirty laundry and lessons learned is in fact a little bit healthy for us! | | | | |
| N50 | Steel constructability from the perspective of a fabricator and erector | The objective of this session is to review and discuss what the fabricator and erector see daily that would help everyone involved in the project from the engineers down to fabricate, erect, and become more efficient. Temporary Bracing vs Permanent Bracing – Discuss what we like to see vs what is typically shown. Welding Requirements – Weld all around symbols, partial pen vs full pen welds, preferred welding positions. Field Bolted vs Field Welded Costs – Discuss the cost saving associated on both the fabrication and erection side. Columns Lengths, Column Splice Locations & Types - Discuss where the erector prefers them and what all is associated in field welding vs field bolting. Anchor Bolt Patterns / Column Base Plate Dimensions Shop Attaching vs Field Welding (Flat vs Overhead Welds) – Discuss the cost savings and safety of shop welding vs field welding. Utilizing Common Member Sizes – Discuss why you just can't just pick sizes from the AISC book and assume they are all readily available. Member Weights vs Labor Costs Stitch Welding vs Cont. Welding | 03/20/2024 | 3:00 pm | Design & Analysis/Engineering | Colby Tribble, David Deem, David Garrett |
| G4 | Designing Green Roofs and the Impact on Embodied Carbon | Green roofs have become an increasingly popular solution to neutralize a building's carbon emissions by mitigating thermal heat loss/gain, in addition to improving the biodiversity of urban areas. However, designers must consider the additional structural measures needed to support a heavier roof and how these measures will affect the building's overall carbon footprint. This case study examines a typical structural steel building and assesses how the added weight of a green roof affects the embodied carbon of the building. | 03/20/2024 | 3:00 pm | Sustainability | Caitlyn Christian, Christina McCoy, SE, RA, Blake Mitchell |
| QC16 | Fundamentals of Root Cause | This session delves into the core principles of identifying and addressing the underlying causes of problems. Participants will explore methodologies to analyze issues at their roots, gaining insights into effective problem-solving strategies. This session aims to equip individuals with the essential skills needed to tackle challenges systematically and drive sustainable solutions. | 03/20/2024 | 3:00 pm | QualityCon | Zane Keniston, Theresa Molineaux, Tanya Fletcher-Scott |
| D4 | Connection Design Basics Steel Detailers Need to Know! | An overview of engineering information related to steel connection design which is helpful to steel detailers, providing information and explanation of basic connection design using ASD and LRFD engineering principles related to beam shear loads and simple shear connections. This session also offers an overview of deflection, camber and composite beam solutions for specific loads and connection types. | 03/20/2024 | 3:00 pm | Detailing | Tyler Sease PE, SE |
| S4 | Stability of Bridge Members II | Paper 1: Xiaoyi Chen, "Effects of Shear on the Elastic Lateral Torsional Buckling of Singly Symmetric I-beams" Paper 2: Balazs Kovetsdi, "Bending and shear buckling interaction resistance of hybrid steel girders" Paper 3: Lakshmi Subramanian, "Staggered Cross-Frame Layouts in Horizontally Curved I-girder Bridges" | 03/20/2024 | 3:00 pm | SSRC Annual Stability Conference | Cagri Ozgur PE, PhD, Lakshmi Subramanian PhD, Xiaoyi Chen, Balazs Kovetsdi PhD |
| SA4 | OSHA Regulatory Update: How Industry Should Prepare for an Uptick in OSHA Inspections and Penalties | In this session, the past Assistant Secretary Labor for OSHA offers his insight on how employers should handle an uptick in OSHA inspections. Advising that employers are likely to see "much more aggressive OSHA enforcement under the current administration,." Realities and real life solutions and guidance will be provided on what to expect and how to manage OSHA inspections in today's regulatory climate. | 03/20/2024 | 3:00 pm | SafetyCon | John Schuepbach, Ed Foulke |

| | | | | | | |
|-------|---|--|------------|---------|----------------------------------|---|
| B4 | Lean-On Bracing Experiences with TxDOT | On a per pound basis, cross frames can have the highest fabrication costs for a steel bridge. Lean-on bracing is one effective method to reduce those cross frame costs! This session will highlight a recently released NSBA Lean-on Bracing Reference Guide and recent research by the University of Texas at Austin on behalf of TxDOT. | 03/20/2024 | 3:00 pm | Bridges, NASCC Online | Natalie McCombs, David Fish, PE, John Holt PE, Claire Gasser, PhD, Aidan Bjelland |
| QC4 | How to develop your Quality Manager? | This session tackles talent retention, recruitment, and skill enhancement. It also explores key attributes for success, including implementing Quality Management Systems, understanding industry standards in inspection, materials, welding, and fabrication, and developing managerial skills and effective communication with external parties. Aimed at fostering a culture of excellence, it offers strategies for Quality Managers to ensure compliance with top industry standards. Participants will receive key takeaways and insights on company commitment to investing in the future. | 03/20/2024 | 3:00 pm | QualityCon, NASCC Online | Art Bustos, Nate Lindell |
| A14 | Steel in Contemporary Façade Design: Case Studies from international façade engineers Front | Front is a design consulting group that has built their reputation on original problem solving and a forward-thinking approach to technically advanced and aesthetically sensitive facade solutions. Marc Simmons, founding Principal, will present an overview of selected Front projects that rely on and integrate steel into facades in a myriad of system configurations. The presentation will adopt a case study format featuring a broad array of diverse facade projects. | 03/20/2024 | 3:00 pm | Architecture | Marc Simmons, Brian Tabolt |
| S5 | Stability of Building Members | Paper 1: Ghaith Abu Reden, "Critical moment of doubly-symmetric beams with prebuckling deflection: the effect of end supports" Paper 2: Mohammad Adil Dar, "Experimental investigation on the buckling stability of cold-formed steel laced stub columns: Influence of critical parameters" Paper 3: David Henriques, "On lateral-torsional buckling of steel I-section beams subjected to biaxial bending" Paper 4: Namita Nayak: "Revisiting the minimum I-section cross-sectional proportions to ensure adequate shear capacity" | 03/20/2024 | 4:45 pm | SSRC Annual Stability Conference | Rodrigo Gonçalves, Ghaith Abu Reden, Mohammad Adil Dar PE, PhD, David Henriques PE, PhD, Namita Nayak PhD |
| QC5 | Jobsite Lessons Learned: A Panel Discussion | Explore practical insights into steel erection with our panelist in 'Jobsite Lessons Learned.' Join us for a focused discussion on challenges faced, innovative solutions, and valuable takeaways from their hands-on experiences. Benefit from real-world knowledge to elevate your experience on your construction sites. | 03/20/2024 | 4:45 pm | QualityCon, NASCC Online | Mark Yerke, Drew Heron, Dennis Hought, Tom Ringelstetter |
| EW8 | Airless Shotblasting for the Steel Fabricator | TBD Exhibitor Workshops are not eligible for PDH credits | 03/20/2024 | 4:45 pm | | |
| SEI15 | Performance-Based Design: Current State of the Art | The Performance-Based Design process is constantly improving and adapting for use on various of our loads used for design of structures. Seismic design was the first hazard that Performance- Based Design (PBD) procedures were developed for in structural engineering, however in the past few years PBD procedures have been developed for the Wind and Fire Hazards. This session will review the current state of the art of PBD procedures for the Seismic, Wind and Fire hazards and provide examples of their current use. | 03/20/2024 | 4:45 pm | SEIcon | Don Scott SE, PE, David Shook PE, Sean Clifton SE, PE, Viral Patel |
| F6 | Your Code of Standard Practice - Changes for Steel Fabricators | As in any industry, trade practices have developed among those that are involved in the design, purchase, fabrication, and erection of structural steel. The COSP provides a useful framework for a common understanding of the acceptable standards when contracting for structural steel. As such, it is useful for owners, architects, engineers, general contractors, construction managers, fabricators, steel detailers, erectors, and others associated with structural steel construction. This session will provide an in-depth review of the recent updates to the Code for the steel fabrication community. | 03/20/2024 | 4:45 pm | Fabrication & Erection | Babette Freund |

| | | | | | | |
|-----|--|--|------------|---------|---|---|
| EW9 | Transforming the Future of Design: A Collaborative Chat with Pioneers for Engineering and Steel Design Software | Join us for a lively discussion with ENERCALC, IDEA StatiCa, KONSTRU, and Qnect: four Autodesk Industry partners and leading innovators in engineering and steel design software solutions. We will dive into how Autodesk and our partners are confronting the challenges faced in steel design today and how software is reshaping the industry's outlook for the better, from optimized designs that reduce material waste to streamlined workflows that allow you to do more with less. Engage with this panel of experts and leave with a fresh perspective on the role technology has in driving efficiency and enhancing the quality of your steel designs and workflows. Presented by: Autodesk Exhibitor Workshops are not eligible for PDH credits | 03/20/2024 | 4:45 pm | | |
| A5 | Houston Endowment: A Case Study for Hybrid Steel + Mass Timber | The Houston Endowment showcases the implementation of an award winning hybrid steel + mass timber project by highlighting steels distinct advantages. In addition to the framing system consisting of numerous exposed AESS elements, custom steel fabrications for canopies, and solutions for thermal bridging were also implemented in this building. | 03/20/2024 | 4:45 pm | Architecture | John Hand SE,PE,LEED A.P. |
| EW7 | Streamlining Construction Administration for Structural Engineers with Digital Transformation | Join us for a session focused on enhancing the construction administration aspect of structural engineering businesses. Explore the transition from conventional email and document-centric workflows to robust project management systems, fostering better management, tracking, and accountability throughout your projects. Discover valuable tools aimed at boosting efficiency and mitigating risks across various types of structural contracts. Presented by: Autodesk Exhibitor Workshops are not eligible for PDH credits | 03/20/2024 | 4:45 pm | | |
| M3 | Structural Steel Tolerances: What's included in the Code of Standard Practice and what may need to be specified by the EOR | This session will review the tolerances contained within the AISC Code of Standard Practice (COSP) and more importantly, what tolerances need to be specified by the Owners Designated Representative for Design (ODRD). | 03/20/2024 | 4:45 pm | Manuals, Standards, and Design Guides | Tim Bradshaw PE, Michael West |
| N5 | 50 Tips for Improving the Constructability of Steel-Framed Building Structures | This seminar presents 50 practical and easy-to-implement tips designers can use to improve the constructability and reduce the cost of steel-framed building structures. Illustrations and examples comparing constructable and "constructability-challenged" details are used to show how relatively small modifications to connection details and framing configurations can significantly improve constructability and reduce costs. Attendees will learn how to identify and avoid common constructability problems to make their steel structures more constructable. | 03/20/2024 | 4:45 pm | Design & Analysis/Engineering, NASCC Online | Clifford Schwinger PE, John Kennedy SE,PE |
| C5 | Delegated Design of Connections: A Comprehensive Exploration Using Finite Element Software | Building on the foundation set in last year's session on delegated design (available for viewing at www.aisc.org/learn), this presentation aims to offer a more in-depth exploration of the delegated design of connections using finite element software. As the construction industry evolves, the need for precise, efficient, and reliable design methodologies becomes paramount. This session will shed light on the advantages, intricacies, and potential challenges of using finite element software for connection design, ensuring participants leave with a comprehensive understanding of the topic. | 03/20/2024 | 4:45 pm | Connections | Adam Sanchez PE, David Eckrote PE |
| W9 | Empowering Diverse Voices in Corporate Leadership: Strategies for Advancing Employee Leadership Development | Join us for an engaging panel discussion where prominent AEC leaders converge to exchange insights on employing policy and management strategies to foster employee leadership growth. Our focus is deliberate: empowering all team members, with particular emphasis on underrepresented minorities across various industry sectors. | 03/20/2024 | 4:45 pm | Workforce Development | Erin Conaway PE, Amanda Dean, Paige Freeman, Janiece Williams |

| | | | | | | |
|-------|---|--|------------|---------|---|--|
| N19 | Deep Steel Deck for Composite Floor Systems | Using deep steel deck for composite floor systems allows longer spans and fewer members, which leads to faster construction and cost savings. Fundamentals of the design of composite slabs and composite beams will be discussed. The state-of-the-art research and design of floor systems will be presented. Ongoing research will be described along with associated recommendations. | 03/20/2024 | 4:45 pm | Design & Analysis/Engineering, NASCC Online | Matthew Eatherton, W. Samuel Easterling PE,PhD, Devin Huber PE,PhD |
| N32 | Site Observations -- Don't Get Bit in the Field | Visiting the site can be one of the most rewarding and educational aspects of the engineering profession. In can also be a roller coaster ride of highs, lows and surprises. This session will discuss overall approaches to site observations for steel structures from responsibilities to best practices for field observation reports. Examples describing some of the most important things to look for and other important things to try to avoid will be presented. | 03/20/2024 | 4:45 pm | Design & Analysis/Engineering, NASCC Online | Patrick McManus PhD, Wade Lewis |
| SEI17 | Blast: Challenging the Standard | The foundational knowledge for the current blast design guidance was collected in the 1940s through the 1980s. Our understanding of blast and it's interaction with complex structures has significantly improved since then. Additionally, our computational capability and computing power, instrumentation techniques and technology, and data acquisition systems, have all improved. This session intends to be a thought-provoking discussion on how these current advances should influence how structural engineers approach protective structure design. This session will include three speakers from the Tri-Services lead for Survivability & Protective Structures, the US Army Engineer and Research Development Center, and a short Q&A afterwards. The topics presented will include: 1) A Holistic Approach to Understanding Blast Phenomenology and Structural Dynamics, 2) Advancements in Understanding of Blast Loading, 3) Limitations on Commonly Used Methodologies for Protective Design. | 03/20/2024 | 4:45 pm | SEIcon | Genevieve Pezzola PhD, Jason Roth PE,PhD, John Hoemann PE |
| SEI29 | The "Customer" Speaks - structural engineering education and professional development from the eyes of current students and recent grads. | Activities at the last two Structures Congresses make it clear that current structural engineering students and recent graduates must be more formally and actively engaged in conversations about how education and professional development can be improved to better prepare them for engineering in 2040. This coupled panel and interactive session, held in association with ongoing activities by SEI's Education/Leadership Task Committee (ELTC), will engage a group of students and young practitioners with session participants from a variety of backgrounds to collectively establish where challenges and opportunities lie in association with attracting, exciting, challenging, and retaining future structural engineers. Panel members will address a series of questions focused on identifying good practices and areas for improvement while they were in school and during their first few years of work. All participants will then respond to a series of prompts to determine how panel feedback can be implemented in educational and workforce activitie | 03/20/2024 | 4:45 pm | SEIcon | Daniel Linzell PE,PhD, Maggie Sullivan-Miller, Kara Stall PE, Connor Adamsick, Fizz Hassan |
| N45 | Mission to Mars- Design of the NASA ML2 Mobile Launch Tower | The Mobile Launcher 2 (ML2) is a new rocket support structure developed in conjunction with NASA's Artemis Program. The 380-foot tall ML2 tower will be used to assemble, transport, and launch NASA's Space Launch System (SLS) rocket and Orion spacecraft. It is significantly larger and supports a vehicle nearly 1 million pounds heavier than its predecessor Mobile Launch tower. As a portable structure, ML2 must interface with existing NASA infrastructure at the Kennedy Space Center, including three different facilities and the Crawler Transporter which moves it between these facilities. The design SLS is currently one of the largest rockets in the world, weighing up to 6 million pounds. It will blast ML2 with 9.5 million pounds of thrust. Critical components of the structure will be exposed to plume and vibro-acoustic loading, reaching pressures of 150psi and temperatures of 2,200 °F. Design considerations required producing a | 03/20/2024 | 4:45 pm | Design & Analysis/Engineering | Peter Carrato PE, Joe Cartledge PE, Kevin Macleod SE,PE |

| | | | | | | |
|-----|--|---|------------|---------|-----------------------|---|
| | | lightweight structure that complied with stringent stiffness requirements governing the dynamic interaction between the spacecraft and the tower. Advanced analysis leveraging virtual work techniques were utilized to identify and optimize critical members in the tower. High strength API steel pipe is used for tower columns and vertical bracing similar to off shore rigging platforms. | | | | |
| G5 | HSS and Sustainability: Removing the Myths | Engineers and architects face new decisions on how to lower the embodied carbon of the built environment. The type of material used in a project has an impact on these decisions and there is a lot of misinformation out there. This presentation will show how HSS, like all structural steel, can be a contributor to lowering the embodied carbon for a project. It will explore the site specific EPDs that are available and the information that is used to develop them. | 03/20/2024 | 4:45 pm | Sustainability | Brad Fletcher, SE |
| L3 | Recovery of Shop Fabrication Costs for Delay: Where to Start and How to Present. | Delays caused by design drawing revisions or on-site project disruptions can have a direct impact on the fabrication shop costs and the profitability of the steel fabricator. That impact is often ignored or discounted by above stream project participants such as owners, design professionals and general contractors. General Counsel for AISC, in collaboration with a group of fabricators, accountants and claims consultants, has developed a paper that sets forth the unique challenges facing steel fabricators seeking to recover shop overload costs, and explains how to present those costs to improve their chances of recovery. In this program, we will identify common events that cause delays and disruption and the potential cost impacts to your company. We will also discuss the damages presentation of those claims and the likely defenses to those claims. | 03/20/2024 | 4:45 pm | Legal | Matthew Skaroff, Ed Seglias |
| B5 | How Press Brake Tub Girders Are Making Inroads Into the Bridge World | Press Brake Tub Girders (PBTG) are a new solution for short span bridges that has tremendous upside for designers, fabricators, and owners. This session covers the recently released guide for PBTG and a built-up PBTG project that was recently designed. | 03/20/2024 | 4:45 pm | Bridges, NASCC Online | Ashley Thrall PhD, Stephanie Wagner, Theresa O'Riorden, Scott Wilson PE |
| B17 | NSTM, IRM & SRM: Pragmatic Practices for Project Performance | 2022 National Bridge Inspection Standards (NBIS) implemented radical changes enabling owners to move to risk-based inspection programs. The changes open up awesome opportunities to explicitly design with new modes of steel bridge redundancy that are intrinsically linked to structural reliability and inspector probability of detection. The changes have also left many practitioners wondering how best to incorporate the new practices into project flow and project documentation. Two presentations will deliver on the latest redundancy-based changes to the NBIS, an owner's inspection implications, and provides best practices for how designers and fabricators should use the new NBIS terminology in their project documents to ensure project success. | 03/20/2024 | 4:45 pm | Bridges | Jason Lloyd PE, Ronnie Medlock PE, Robert Connor PE |
| Z5 | Illusion, Deceit, Transparency, and Trust: The Ethics of Negotiation | Negotiation raises some interesting ethical issues. We often think that misleading or bluffing our counterpart is part of the process. Can we lie in negotiations? How far can we mislead the other party without getting into trouble? What can we say, and what must we say? This interactive session will explore the legal and practical implications of the ethics of negotiation and will provide some guidelines that will help you in developing your negotiation strategies. | 03/20/2024 | 4:45 pm | Business | James Reeves |
| SA5 | Turning Pain into Purpose -- From Leadership Burnout to | Understanding the risks associated with burn out and mental fatigue in the construction industry. Justin highlights how taking on additional opportunities to further your career or maintaining additional long work hours to earn beneficial financial gains can impact you Mental Health and Wellness. Through sharing his story, Justin elaborates how his experiences reflects on real world scenarios as a leader hoping to bring light on the | 03/20/2024 | 4:45 | Safety/Con | Wayne Creasap, John Schuenbeck |

| | | | | | | |
|------|--|---|------------|---------|------------|--------------------------------|
| QA3 | From Leadership Burnout to Mental Health Advocate | term masking and the reason to always ask a person how they're doing being genuine. Justin presents on the importance of having a proactive vs reactive approach in maintaining your Mental Wellness and understanding how Self Care and setting emotional boundaries are the key to surviving the everyday challenges we face in the construction industry. His approach is to remind others that we are all humans; and it's ok to not be ok. | 03/20/2024 | pm | SafetyCon | John Schuepbach, Justin Azbill |
| QC13 | Nuts, Washers and Bolts, Oh My! | Let's journey down the yellow brick road through slots and holes into the land of connections. Along the way we will make structural fasteners brainless, find out how to keep them from rusty up solid, and courageously take on the combined method. We will even overcome the wicked calibrated wrench. The wizard will lead us beyond others' corrective actions and into the land of lessons learned. | 03/20/2024 | 4:45 pm | QualityCon | Larry Martof |
| D5 | Elevate your Steel Detailing Standards! | This session will review a suggested plan for creating Steel Detailing Standards best used for the steel Detailers, together with discussion on the steel fabricator's perspective on detailing standards. We will review why they are needed, what makes them relevant, how to incorporate them into your company, when they should be distributed. Provided also is list of 'Do's and 'Donts' of creating detailing standards. James Bennett has owned and worked for steel fabricators and currently has his own detailing firm. The goal is to provide both a visual and verbal aspect on the concepts and needs for steel detailing standards, speaking to the most fundamental reasons why steel detailing standards are needed. Mr. Bennett both explains on what works and what does not, while describing ways to create steel detailing standards which will not add to cost detailing and fabrication yet provides what is needed for our industry partners. | 03/20/2024 | 4:45 pm | Detailing | James Bennett |
| | Student Steel Bridge Competition Demonstration | SSBC demonstration in the Exhibit Hall | 03/20/2024 | 5:30 pm | | |
| EW10 | Structural Design from Start to Finish with RISA | Engineers have been using the RISA suite of software for almost 40 years to design steel structures both big and small. Whether working on entire buildings, pipe racks, or individual antenna mounts, RISA has been at the forefront of these designs because of its usability, accuracy, and, most importantly, its interoperability. In this workshop, learn how to leverage RISA-3D and its results to seamlessly integrate with products like RISAFoundation, RISAFloor and RISAConnection, creating an end-to-end design workflow no matter the project scope. Presented by: RISA Exhibitor Workshops are not eligible for PDH credits | 03/21/2024 | 7:00 am | | |
| K2 | The Stability of Resilient and Sustainable Structures | NASCC: The Steel Conference is honored to have Jerome F. Hajjar, PhD, PE, present on one of the hottest topics in the design and construction industry: "The Stability of Resilient and Sustainable Structures." Hajjar's presentation is a trifecta of success: first and foremost, he is the recipient of this year's Beedle Award, which is SSRC's highest honor. In addition, he is the current chair of AISC's Sustainability Committee as well as the president of SEI. When not engaged as one of the industry's most active volunteers, Hajjar is the CDM Smith Professor and Chair of Northeastern University's Department of Civil and Environmental Engineering. | 03/21/2024 | 8:00 am | Keynote | Jerome Hajjar PE,PhD |
| EW13 | How Can Steelweb Platform and Steelweb's Innovations Simplify Project Management and Enhance Your Role as a Project Manager? | The workshop will detail how we have introduced various new tech at Steelweb. We will talk about our Steelweb platform and its integration with robotic welding, StruMis, and PowerFab. We will also cover working with point clouds and, obviously, how we employ AI at the company. The workshop will feature brief descriptions and instructions, coupled with summaries and our experiences for each of the items mentioned above. Presented by: Steelweb, Inc. Exhibitor Workshops are not eligible for PDH | 03/21/2024 | 9:45 am | | |

| | | credits | | | | |
|------|--|---|------------|---------|---|--|
| EW12 | Reducing Schedule on Mission Critical Projects with Early Connected Models | Mission-critical projects are becoming a more critical sector of our built world. Structural steel is a great fit, especially if steel delivery and procurement can be streamlined. Traditional methods where steel is ordered before structural designs are complete result in RFIs and extras, which can delay schedules. However, proven integrated steel delivery methods like early connected models can be a great approach to meet client delivery schedules. Learn how early connected models ensure better design coordination on mission-critical projects to greatly reduce project schedule & improve cost certainty. Discover strategies and practical applications for deploying early connected models on mission-critical projects to streamline project delivery. Presented by: Qnect LLC Exhibitor Workshops are not eligible for PDH credits | 03/21/2024 | 9:45 am | | |
| F1 | Fabricator Roundtables: Navigating Trends in Steel Fabrication | Join us for an engaging roundtable discussion tailored specifically for steel fabricators looking to stay ahead in a dynamic industry. From technological advancements to market shifts, this session will provide you with the opportunity to delve into the key trends shaping the future of steel fabrication. Whether you're a seasoned industry veteran or a newcomer, this roundtable offers a unique opportunity to connect with peers, exchange best practices, and gain valuable insights to drive success in the competitive world of steel fabrication. Join us to navigate ahead with confidence into a future full of possibilities. | 03/21/2024 | 9:45 am | Fabrication & Erection | Erin Conaway PE |
| N6 | A Fresh Look at CASE 962D | Good design doesn't happen in a vacuum, although, sometimes, engineers think it does. This session will help the attendees to understand what information is required on the drawings to get reliable bid and a constructable structure. | 03/21/2024 | 9:45 am | Design & Analysis/Engineering, NASCC Online | Dave Isaacson SE |
| W17 | Priming the Space for Talent Retention through Self-Reflection, Humility and Belonging | Through an exploration of cultural humility and the ecosystem of an inclusive organization, participants will explore the role of perspective-taking in creating organizational cultures where existing and future talent of ALL backgrounds can thrive. This session will: Introduce cultural humility and its role in inclusion. Consider the intersection of organizational culture, change management and engagement in talent attraction and retention. Provide strategies for beginning a journey towards a culture of belonging. | 03/21/2024 | 9:45 am | Workforce Development | Shani Dellimore Barrax |
| QC18 | Use of High Strength Structural Steels: Effects on fabrication, erection, and your quality | Utilizing higher strength steel (65ksi, 70 ksi, etc.) can save on the weight of the structure, but can also create additional pre-heat and post-heat requirements, as well as, require a change in welding consumables, procedures, etc. which can have both cost and schedule impacts outside of the simple tonnage savings. While there is typically a net cost savings, it is not a straight line correlation. | 03/21/2024 | 9:45 am | QualityCon | Tim Bradshaw PE, Joel Chandler, Stacey Oxendine, Mike Gase |
| Q5 | Design and Detailing of Embedded Column Base Connections in High Seismic Areas | The force demand of Steel Moment Resisting Frame (SMRF) base connections in high seismic areas often requires foundation embedment. This session presents current research and reviews the proposed design method for commonly used embedded column base connection details. | 03/21/2024 | 9:45 am | Seismic | Ahmad Hassan |
| F16 | Using Tekla EPM in the Field | Tekla's (specifically Trimble connect mobile app) use in the field for project information, conflict resolution, documentation, collaboration and other valuable project management tool usage. | 03/21/2024 | 9:45 am | Fabrication & Erection | John Schuepbach, John Payne |
| | Steel Straddle Beams in | Steel straddle beams (bent caps) are the preferred solution when geometric constraints do not allow for a typical substructure. Historically, these types of steel members were typically considered nonredundant. However, recent designs and state-of-the art research have provided methods where these members no longer need to be considered as nonredundant. The first presentation of this session will discuss the design | | 9:45 | | Brandon Chavel PE, PhD, Niko Kalos |

| | | | | | | |
|-----|---|---|------------|---------|----------------------------------|--|
| D10 | Texas | and construction of steel straddle bent caps in Texas that use a load path redundant 3 I-girder system. The second presentation highlights recent Texas research that explored two possible approaches to provide internal redundancy to steel box straddle beam by (i) adding high-strength bars as a secondary tensile element and (ii) providing cross-boundary fracture resistance between the components in tension. | 03/21/2024 | am | Bridges | PE, ESTEBAN ZECUM III PhD, Kriton Theodoridis PE |
| SA6 | Disasters and How to Avoid Them, A Case Study of the Imperial Sugar Catastrophe | Once upon a time, the term "disaster" meant an explosion, crane or building collapse, or other deadly accident. The steel industry, including engineers, fabrication and erection have known exposure to these disasters, However, disasters now include shootings, public unrest, cybercrimes, hacking, and efforts by third parties to cripple a company's reputation and its dealings with customers, suppliers and regulators. If an event has disastrous effects, then it is a disaster even if there is no loss of life. In this session, Howard provides employers with tips on how to avoid these disasters and how to develop a disaster response procedure. A case study of an actual disaster (the imperial Sugar Catastrophic Accident) will be used as a case study for this session. The speaker was directly involved in the governmental response to this major disaster. | 03/21/2024 | 9:45 am | SafetyCon | John Schuepbach, Ed Foulke |
| QC6 | How do You, as a Leader, Drive Results? | We hear it all the time, "Business is driven by results." As business managers, how do we drive results? Are we intentional about our methodology? Is our business model for driving results sustainable over a longer period of time? How do we evaluate our model? This session will cover these topics and push attendees to adopt these principles into their day-to-day practices. | 03/21/2024 | 9:45 am | QualityCon, NASCC Online | Christian Crosby PE, Art Bustos |
| S6 | Stability Under Extreme Loading I | Paper 1: Bashar Hariri, "Design Guidelines for Mitigating P-Delta Effects on the Seismic Response of Multi-Storey Steel Building Structures in Moderate and High Seismic Regions" Paper 2: Chenzhi Ma, "Structural fire analysis of steel-concrete composite floors designed with prescriptive and performance-based methods" Paper 3: Arka Maity, "A Novel Fiber element to Simulate Interactive Local and Lateral Torsional Buckling in Steel Moment Frames" Paper 4: Prithvi Sangani, "A Comprehensive Approach for Estimating Residual Capacity of Damaged Steel Tubular Sections: From Surface Scanning to Stress Analysis" | 03/21/2024 | 9:45 am | SSRC Annual Stability Conference | Tricia Clayton PhD, PE, Bashar Hariri, Chenzhi Ma, Arka Maity, Prithvi Sangani |
| B6 | Life Cycle Costs & Preservation of Steel Bridges | Corrosion protection is always an important topic, but is sometimes overlooked in the initial TS&L phase of a project. This session will consist of two presentations highlighting advances in corrosion protection for steel bridges. One focused on duplex stainless steels and the other on preservation benefits of bridge rinsing. | 03/21/2024 | 9:45 am | Bridges, NASCC Online | Nancy Baddoo, Jennifer McConnell |
| D6 | Fabricator Tips for Selecting a Good Steel Detailer | Many Fabricator Project Managers select for low price steel detailing without a thought to accuracy and quality. While this seems like the norm, but is it possible to get good economy with selecting a good quality steel detailer? This session provides a comprehensive list of what to look for in good quality steel detailing and the trickle-down economics of making such a selection. | 03/21/2024 | 9:45 am | Detailing | Ryan Wunderle |
| T4 | Augmented Reality in Structural Steel Construction | This session presents updates to the Speed-XR initiative, specifically implementing augmented reality technology to assist with the steel fabrication process. An overview of the big-picture aims of the project will be presented followed by progress achieved over the past year. The presentation will include both conventional slides and a live demonstration and will conclude with the future goals of this initiative. | 03/21/2024 | 9:45 am | Technology | Hannah Blum PhD, Will Kraus |

| | | | | | | |
|-------|--|---|------------|---------|---|--|
| A6 | Hybrid Structural Systems: The Design and Erection of Significant Steel Structures on Top of Tall Concrete Buildings | Many tall buildings utilize concrete for their primary lateral systems and structure, either because of building usage, local practices, or the benefits of adding mass to a tall structure. However, often there remain elements of these buildings that are more appropriate to be constructed in steel, such as spires or crowns, connecting elements between multiple towers, and cantilever features. The result in these cases is a significant steel structure that needs to be erected on the top of a tall concrete structure. This creates many challenges for both the design and erection of the steel structure. Often the erection strategy will dictate the detailing of the structure, as well as have a considerable influence on its design. This is in addition to the requirements of erecting steel hundreds of feet above the ground, considering the overall project construction sequences and their impacts, and considering how to engage with the concrete structure. Case studies are international, but the applications for architects in the U.S. will be discussed. | 03/21/2024 | 9:45 am | Architecture | James Pawlikowski SE, LEED A.P. |
| CAPS4 | What you need to know about the COSP - Not open to all attendees/only members of the CAPS Cohort | Whether you have just started in this business or been around for a couple of years, the Code of Standard Practice is a critical resource for you in this business. This document provides trade practices for those involved in the design, purchase, fabrication, and erection of structural steel. This session will provide an overview of all sections of the Code. Attendance at this session is by invite only and is only open to accepted members of the CAPS program. | 03/21/2024 | 9:45 am | CAPS | Jake Thomas |
| N20 | Don't Draw the Short Straw: Effectively Considering Gravity Shortening in Fabrication and Erection | There is a wide range of methods for addressing gravity shortening on structures during construction, from as simple as neglecting it, to as complicated as a full-scale structural analysis. This session will discuss how to determine whether shortening is an issue or not, and methodologies for effectively mitigating problems in advance. | 03/21/2024 | 9:45 am | Design & Analysis/Engineering, NASCC Online | Timothy Nelson SE, PE, Vincent Wenzel PE |
| N33 | Special Profile Steel Joists For Any Application | Steel joists and Joist Girders can be used to construct more than just flat roofs. This session will provide designers with details and design guidance for using Special Profile Steel Joists in these situations. Direction will be provided for designing and detailing Special Profile Steel Joists, particularly in pitched roofs, curved roofs, and hip roof framing. We will also examine best practices when using Special Profile Steel Joists. | 03/21/2024 | 9:45 am | Design & Analysis/Engineering | Ben Pitchford PE, Michael Whittle PE, Jane Kincaid |
| C6 | Existing Steel Connection DCR > 1.0...Where to Start | The speakers will introduce the basics of reinforcing existing steel connections and provide examples, offering actionable insights that can help you the next time you need to strengthen an existing steel connection. | 03/21/2024 | 9:45 am | Connections, NASCC Online | Christine Freisinger SE, PE, Matt DeSimone |
| Z6 | Find, Keep and Grow Great People | This session will discuss ways to strengthen your most valuable asset, your employees and how to engage mid-career AEC professionals with the experience and passion to lead. | 03/21/2024 | 9:45 am | Business | Justin Smith PE, Amy Bown PE |
| G6 | Sustainable Steel: What are the mills doing? | Almost 90% of the embodied carbon in fabricated structural steel occurs before the material leaves the mill gate. Notably, American steel stands as a low benchmark for global carbon intensity. Join this session to glean insights from the forefront – the leading domestic producers of hot-rolled sections, plate, and HSS. Gain a profound understanding of their concerted efforts to maintain this exceptional status quo. This session offers an exclusive glimpse into the strategies and initiatives these industry leaders employ to preserve the unparalleled sustainability of American steel. | 03/21/2024 | 9:45 am | Sustainability | Max Puchtel SE, PE, Luke Johnson, Rafael Garcia, Jeff Moskaluk, Sara Cupp |
| SEI18 | Updates to ASCE 7 Chapter 5 Flood Loads | This session will give an overview of the first major changes to ASCE 7 Chapter 5 Flood Loads in nearly 20 years. The session will discuss how these changes align the chapter with other risk-based chapters in the Standard, and other changes to companion standards (ASCE 24) and related work by FEMA. | 03/21/2024 | 9:45 am | SEIcon | Jessica Mandrick SE, PE, LEED A.P., Mariam Yousuf, Graham Brasic, P.E., S.E. |

| | | | | | | |
|-------|---|--|------------|----------|--------|---|
| SEI6 | The Future of the Structural Engineering Profession & Embodied Carbon Part I - Calculations with the SEI Pre-standard | Faced with a global climate crisis, structural engineers must now consider sustainability in addition to safety, serviceability, and constructability. The building industry is fast evolving and the motivation and requirement for structural engineers to quantify and reduce their embodied carbon is increasing. Yet, it can be difficult to know where to start when tasked with reducing the environmental impacts of a structural system. This workshop is intended contain two parts: (1) how to calculate and reduce the embodied carbon of a structural system and (2) the SE 2050 commitment. To calculate embodied carbon, a standardized methodology as described by an ASCE/SEI pre-standard developed by the SEI Sustainability Committee will be presented. Participants will then engage in a hands-on workshop to apply the methodology to assess the embodied carbon various structural systems. Material efficiency and procurement strategies, illustrated through real-world case studies, will be introduced to illustrate how embodied carbon can be reduced. | 03/21/2024 | 9:45 am | SEIcon | Jay Arehart PhD, Dorian Krausz, PE, LEED AP |
| SEI30 | Structural Reliability in Practice | This session discusses the concept of Reliability and how it is addressed in ASCE 7 for a range of design loads in the standard. Presentations include discussion of why and how reliability analyses are conducted to update existing loads or advance new loads in ASCE 7. | 03/21/2024 | 9:45 am | SEIcon | Abbie Liel PE,PhD, Terri McAllister PE,PhD, Michel Ghosn, Yue Li, Sabarethinam Kameshwar |
| SEI7 | The Future of the Structural Engineering Profession & Embodied Carbon Part II – Making the Commitment with SE 2050 | This session focuses on the structural engineering profession and how structural engineering firms are committing to measuring and reducing embodied carbon on their projects and publicly sharing the information through SE 2050. The national commitment program, launched in November 2020, has now collected and shared over 150 embodied carbon action plans (ECAPs) produced by signatory firms and tracked the embodied carbon impacts of over 750 real projects. The ECAPs and project data have been analyzed and preliminary results will be shared including national and regional trends of structural system impacts. Information on how structural engineering firms are responding to the commitment, including lessons learned, challenges and successes will be discussed by a panel of signatory firms. Though SE 2050 has demonstrated early successes, the program developers are working hard on addressing challenges and adapting to a changing market. Future plans of SE 2050 will be discussed and feedback and questions from the audience will be used to help ensure the Program continues its success. To that end, the audience will be invited to participate in drafting an ECAP and submit data in real time to the database. This session will elaborate on SE 2050's plans to align our new database with the developing SEI prestandard and our plans to produce guiding embodied carbon trends, benchmarks, and reduction targets over time. A discussion on how we anticipate the data from both ECAPs and the database will be used and in what format will be included. Come join us for this exciting session and help contribute to SE 2050! | 03/21/2024 | 11:00 am | SEIcon | Michael Gryniuk, Annabel Shephard, Dirk Kestner SE,PE,LEED A.P., Frances Yang SE,LEED A.P., Eric Borchers SE,PE |
| SEI31 | Loads on Temporary Structures - 2024 IBC and ASCE 7-28 | Loading requirements for temporary structures has been lacking in US building codes. A code change to correct this issue was undertaken by a diverse group of experts that have experience with the development of the ASCE 7 Standard Minimum Design Loads and Associated Criteria for Buildings and Other Structures, representatives from jurisdictions that have experience with large events and temporary structures, as well as representatives from the US entertainment industry. These new load provisions have been approved for inclusion in the 2024 IBC. Additional coordinating provisions will be added to the 2027 IFC. These new load | 03/21/2024 | 11:00 am | SEIcon | James Soules SE,PE,P.Eng.,PhD, Don Scott SE,PE |

| | | | | | | |
|-----|---|---|------------|----------|---|--|
| | | provisions will be migrated into ASCE 7-28. The session will discuss the reasons for creating the new load provisions for temporary structures in the IBC and the need to migrate these provisions into ASCE 7. | | | | |
| Y1 | 1900 Lawrence: A Case Study in Modern Innovation | Discover 1900 Lawrence: one of Denver's most significant Class A office buildings to commence construction in four decades. Envisioned through a lens of cutting-edge technology, unwavering sustainability, and paramount health and wellness benchmarks, this exceptional project stands as a testament to modern innovation. Join us for an insightful case study as we delve into the invaluable insights garnered by the structural engineer and steel fabricator throughout this remarkable endeavor. | 03/21/2024 | 11:00 am | Case Study, NASCC Online | Rob Chmielowski SE,PE, Wade Lewis |
| N47 | Reusing Heavy Structural Section Steel in Buildings | Designing with salvaged structural steel is a beneficial alternative for structural engineers to reduce embodied carbon in the built environment and implement life-cycle oriented and cost-conscious design of steel structures. This talk presents the case for steel reuse, and the intrinsic carbon, cost, and structural value potential. It aims to establish more certainty about the supply of steel elements, quantifies potential carbon and cost savings, and explains the implications steel reuse has for stakeholders in the structural steel industry, including fabricators and engineer and design teams. | 03/21/2024 | 11:00 am | Design & Analysis/Engineering | Juliana Berglund-Brown |
| Z7 | Reducing Costs by Reducing Unethical Behavior | To combat unethical behavior, many organizations focus their efforts on fostering ethical leadership, yet there is little or no discussion of developing ethical followership. What role do ethical followers play in preventing unethical behavior, especially if they are following an unethical leader? Dr. Kyle Payne will summarize two recent studies that investigated these questions. In the first study, Kyle points to the potential to reduce what social psychologists call "moral disengagement," as well as to increase a sense of "moral identity" and a state of "work engagement" among workers. The second study presents the results of detailed interviews with professional engineers about ethical dilemmas they have faced and their efforts to "do the right thing" when facing pressure to do otherwise. Kyle proposes developing followers who can competently and confidently apply "ethical follower behaviors." | 03/21/2024 | 11:00 am | Business | Kyle Payne |
| G7 | Sustainability And Beyond: The Untold Life Cycle of Steel Joist and Deck | The attributes and benefits of open web steel joists and steel deck are well-known to the civil engineering community. Their efficiency, high strength-to-weight ratio, versatility, ease of erection, high durability, and cost-effectiveness make steel joists and deck pivotal elements of today's roofing and flooring systems. However, less often discussed is how steel joists and deck are produced, leaving engineers and decision-makers curious about the production processes that occur in the manufacturing plant. This presentation will shed light on the typical life-cycle stages of steel joists and deck, leading the audience into the realm of steel manufacturing. The sustainability features of steel joists and deck will be described. Considerations on how steel joists and deck can support a circular economy and zero-waste policies will be discussed. | 03/21/2024 | 11:00 am | Sustainability | Laura Micheli PhD,LEED A.P., Bruce Brothersen PE,P.Eng., Bryant Fuller |
| N21 | Everything You Wanted To Know About Diaphragms ... But Were Afraid To Ask | Recent changes in design codes and construction practices have made diaphragm connection design more complicated and time consuming. This session identifies those changes, provides design guidance, reviews upcoming publications, and introduces available design tools. | 03/21/2024 | 11:00 am | Design & Analysis/Engineering, NASCC Online | Mahsa Mahdavian, Michael Martignetti PE,LEED A.P., Joshua Canova PE |

| | | | | | | |
|-------|--|--|------------|----------|---------------------------|--|
| A7 | Reviving the Master Builder: Computational Methods in Steel Design and Fabrication | The computational approach in design can connect the architect to the steel building process while increasing efficiency in fabrication and erection and improving precision. Factors like structural deflection and acoustical performance can become parameters in computational design. The speaker is an architect, sculptor, and builder, and he will discuss the evolution of his design process using computational methods in his award-winning projects of the Skydance Bridge and the Doris Miller World War II Memorial. | 03/21/2024 | 11:00 am | Architecture | Stan Carroll AIA |
| C7 | HSS - How to Splice Your Slice or Plate It | All good things must come to an end, including where any HSS sections used in your structure terminate. At that point, your HSS member often requires a splice to keep the good times going or a plate to close things off. This session will address considerations specific to HSS base plate, end plate, cap plate, and splice connections, such as: Welding at HSS corners vs flats When to apply weld increases or reductions Optimal bolt layout HSS factors including closed sections, weld seams, and matched cross-sections Real-world examples of both a spliced and a plated connection will be presented. | 03/21/2024 | 11:00 am | Connections, NASCC Online | Cathleen Jacinto SE,PE, Beth Suminski SE,PE |
| QC7 | A nonconformance walks into a CAR... | Identifying and correcting one's own mistakes is probably not at the top of any erector or fabricator's to-do list. But by using some simple techniques and strategies one can readily detect, correct, and leverage data to improve quality, safety, and production in a dynamic environment. Attendees will learn: · Active vs passive nonconformance discovery · Internal and external NCs · Gathering and breaking down the data · CAR creation · Closing NCs and CARs · NCs as a catalyst for change | 03/21/2024 | 11:00 am | QualityCon, NASCC Online | Harvey C. Swift, Josh Collins, PMP, CWI |
| CAPS5 | Construction Contracts 101: An Introduction to Important Contract Provisions and How They Impact Your Responsibilities - Not open to all attendees/only members of the CAPS Cohort | CAPS Course: Contracts are central to an understanding of the scope of work and the terms and conditions that identify the responsibilities of the parties. And while many contracts contain terms that are similar, not all contracts are the same and certainly they are not all equal in how they allocate performance risk. In this program, we will introduce you to important contract provisions that impact not only your responsibilities but also those of the general contractor and the structural engineer. For example, we will review scope of work provisions, scheduling provisions and payment provisions. We will also cover provisions of the Code of Standard Practice to better understand the requirements that impact the work of the steel fabricator and structural engineer. Attendance at this session is by invite only and is only open to accepted members of the CAPS program. | 03/21/2024 | 11:00 am | CAPS | Jason Copley, Matthew Skaroff, Ed Seglias |
| W7 | Building on Today: Workforce by the Numbers - A Data-Driven Interactive Panel Discussion | Join us for a dynamic exploration of the AEC industry's current landscape. This session brings together a diverse group of experts sharing critical data from academia, architecture, structural engineering, and the structural steel construction sectors. Our panelists will share current numbers regarding demographics, pathways, licensure, recruitment, and retention in the AEC industry. In this lively panel discussion, you'll gain a comprehensive understanding of "where we are right now" and have the opportunity to be part of an engaging dialogue that will shape the future of architecture, engineering, and construction. | 03/21/2024 | 11:00 am | Workforce Development | Jennie Traut-Todaro SE,LEED A.P., Jordan Jarrett PE,PhD, Derwin Broughton, AIA, NOMA, NCARB, WELL AP, Priscilla Nguyen SE,PE, Parley Dixon |
| F11 | Software for Success - From Estimating to Erection | One Fabricator/Erector shares several tools they have in their Pre-Planning, Estimating, Detailing, Erection, & Misc Construction Software tool bag. Flawless Steel Welding, LLC will be giving examples of how they use Tekla PowerFab, Tekla Structures, Bluebeam, and several other software solutions from estimating, project take-offs, Detailing, Pre-Planning, sequence plans, crane plans, drawing revision comparisons. | 03/21/2024 | 11:00 am | Fabrication & Erection | Nyckey Heath PE, Victor Garcia |

| | | | | | | |
|------|--|---|------------|----------|----------------------------------|---|
| | | They will spotlight just how powerful these tools are, and how they can benefit other Fabricators and Erectors in the steel industry. | | | | |
| B19 | Moveable Steel Bridges for the Heavy Lift | The high strength to weight ratio of structural steel is ideal for movable bridges. This session will include case studies on movable bridges and how steel was able to make these projects a success story. | 03/21/2024 | 11:00 am | Bridges | Christopher Higgins PE,PhD, Jamal Grainawi SE,PE, Jacek Krysiwicz, Stephen Boyington |
| S7 | Stability Under Extreme Loading II | Paper 1: Muhannad Alasiri, "Experimental and Numerical Analysis of Floor-to-SpeedCore Wall Connections Subjected to Fire Conditions" Paper 2: Merih Kucukler, "Fire design of carbon steel and stainless steel structural members by GMNIA with strain limits" Paper 3: Alexandre Landesmann, "DSM-based design for cold-formed steel lipped channel beams failing in distortional modes under fire conditions" Paper 4: Yao Sun, "Post-fire behaviour of high-strength steel welded I-section columns" | 03/21/2024 | 11:00 am | SSRC Annual Stability Conference | Erica Fischer PE,PhD, Muhannad Alasiri PhD, Merih Kucukler, Alexandre Landesmann PhD, Yao Sun |
| B7 | Fresh off the presses - New NSBA Design Standards | This session presents the latest information on new and updated steel bridge design standards. These include relevant AISC and AASHTO provisions that enable engineers to design safe, efficient, and economical steel bridges. | 03/21/2024 | 11:00 am | Bridges, NASCC Online | Jeff Carlson PE, Francesco Russo |
| SA7 | Uh Oh, OSHA's Here: How to Prepare For and Manage OSHA Inspections | Over the past year, the number of OSHA inspections has soared. We are seeing, as part of OSHA's focused effort to use (and sharpen) all the tools in its toolbox, more inspections, higher penalties, record numbers of \$100K+ citation packages, and a continuing rise in willful and repeat citations and worker safety criminal prosecutions. OSHA continues, also, to look for new and creative ways to proactively inspect employers with targeted enforcement initiatives and emphasis programs, while also significantly expanding punitive measures such as the Severe Violator Enforcement Program (or SVEP), and the new Instance-by-Instance citation policy), creating a number of minefields for even the most conscientious employers. In short, the consequences for employers being caught ill-prepared for an OSHA inspection, and making bad choices during an inspection, are more dire now than ever. This presentation will provide employers with the knowledge and tools they need to prepare in advance for an OSHA inspection and mitigate the risk of citations, and once an OSHA inspection begins, to manage it to a successful outcome. Participants in this webinar will learn: Employers' goals for managing an OSHA inspection Steps employers can take now to prepare in advance for an OSHA inspection Employers', employees', and OSHA's rights during OSHA inspections Stages of OSHA inspections, with tips and strategies to manage each stage | 03/21/2024 | 11:00 am | SafetyCon | John Schuepbach, Dan Deacon |
| QC19 | Stump the Coatings Panel! | Are you ready to put our coatings experts to the test? Join us for an exhilarating and interactive session of "Stump the Coatings Panel!" where you, the audience, get to challenge our distinguished panel of experts with your most perplexing questions and scenarios. This session is designed to push the boundaries of knowledge, spark lively discussions, and perhaps even leave our panelists scratching their heads. | 03/21/2024 | 11:00 am | QualityCon | Zane Keniston, Roger Abercrombie, Dave Evans, Ron Runk |
| N34 | Stability Fundamentals and Practical Considerations – Session 1: Basic Behavior of Compression and Flexural Members (Part I) | This session will provide an overview of the behavior of compression and flexural members The assumptions in the solution to the Euler column problem will be used as a basis for systematically moving from the theoretical solution presented in 1757 to the modern-day methods of design and analysis of compression members. These fundamentals will be illustrated with an example from practice. The session will then transition to provide an overview of flexural member behavior including elastic and inelastic lateral torsional buckling under uniform moment. A brief preview | 03/21/2024 | 11:00 am | Design & Analysis/Engineering | Ronald Ziemian PhD, Craig Quadrato PE,PhD |

| | | | | | | |
|-------|--|--|------------|----------|---------------------------------------|--|
| | | of the follow-on session for beams with non-uniform moment and beam columns will be provided. | | | | |
| M5 | The NEW 16th Ed Steel Construction Manual - The Gold Standard in Steel | This session will present an overview of the new 16th ed Steel Construction Manual, highlighting new content and changes since the 15th ed Manual. Design Examples using the new Part 10 Tables will be featured. | 03/21/2024 | 11:00 am | Manuals, Standards, and Design Guides | Craig Archacki PE |
| EW14 | Designing Steel Connections Without Drilling or Welding | This workshop looks at the unique solutions, offered by Lindapter, for connecting steel faster and more cost-effectively compared to alternative traditional methods of welding or drilling and bolting. Presented by: Lindapter Exhibitor Workshops are not eligible for PDH credits | 03/21/2024 | 11:00 am | | |
| EW15 | Field Management Made Easy | Join Raken to learn how you can improve visibility and reduce risk with our easy-to-use technology. We'll show you how we can help you: Capture and share field data in real time Track hours worked at a granular level Better plan projects and manage resources Prevent issues with safety and quality Presented by: Raken Exhibitor Workshops are not eligible for PDH credits | 03/21/2024 | 11:00 am | | |
| EW16 | Ensuring Equipment Reliability Using Dynamic Testing | This workshop will provide participants with practical knowledge related to: An employer's responsibility to mitigate jobsite risks and optimize safety by ensuring equipment is in good working condition. The challenges of maintaining high pressure hydraulic equipment. The differences between dynamic and static testing of equipment (process, reliability, etc.) The advantages of dynamic testing. Presented by: Engineered Rigging Exhibitor Workshops are not eligible for PDH credits | 03/21/2024 | 11:00 am | | |
| SEI19 | Education and CROSS a "Win-Win" | This session will demonstrate the educational value of CROSS program to the following four stakeholder groups: academic, designer, insurance, and contractor including how to create and submit reports, and use reports as educational resource. | 03/21/2024 | 11:00 am | SEIcon | Andrew Herrmann PE, Glenn Bell SE,PE, Craig Durgarian PE, Norma Jean Mattei, PhD, PE, 2017.Pres.ASCE, 2024.Pres.COPRI, F.SEI, Scott Silvester PE |
| SCIS | Students Connecting with Industry Sessions | Students Connecting with Industry Sessions Join the AISC University Programs team and fellow students for a complimentary lunch and presentation. More information coming soon! Direct Connect Ever wish you could grab a cup of coffee with the top designers of the leading architecture, engineering, and construction firms? At this event, students will have the opportunity to connect and interact with leading industry experts from design and construction companies around North America in a relaxed setting. While not all firms at this event may be hiring, this is a great opportunity to meet significant designers and make key contacts at major firms. Schedule: Career Insights Session: 11:00 a.m. - 12:30 p.m. Lunch: 12:30 p.m. - 1:00 p.m. Direct Connect: 1:00 p.m. - 2:45 p.m. Location: Grand Hyatt 2nd Floor - Lonestar Ballroom | 03/21/2024 | 11:00 am | | Kristi Sattler SE, PE, PhD, Rachel Jackson, S.E., Luke Johnson |
| D7 | Why the NISD IDC Certified Steel Detailers are Industry Preferred! | The Individual Detailer Certification is a very broad based, 15 category knowledge based test, designed to prove the working education of the steel detailer. There is a 5 year minimum work experience requirement to qualify for a Class II , and a 10 year minimum for a Senior detailer to even qualify to take the test. The IDC provides verification of this working education experience. This session will explain the benefits of the behavioral differences of the IDC Certified steel detailer vs one who is not. | 03/21/2024 | 11:00 am | Detailing | Jim Truitt |

| | | | | | | |
|-------|--|---|------------|---------|----------------------------------|---|
| Z16 | Subcontractor Preparedness and Readiness | Geared to those who (generally) hold subcontracts in steel construction (fabricators and erectors typically). A pre flight checklist, in process triggers/risks and fully through the closeout & beyond; how to maximize your chances of success! | 03/21/2024 | 1:45 pm | Business | Casey Brown |
| S8 | Special Topics in Structural Stability III | Paper 1: Heera M. Titus, "Investigations on System Stability of Three-Dimensional Frames" Paper 2: Pablo Rico Gomez, "On the definition of geometrical imperfections in the F.E. modelling of CHS in compression" Paper 3: Zhanjie Li, "Machine Learning for predicting the cross-sectional elastic buckling strengths of cold-formed steel members" Paper 4: Sahar Dahboul, "Experimental studies on the stability of aluminum beam-columns" | 03/21/2024 | 1:45 pm | SSRC Annual Stability Conference | Daniel Linzell PE, PhD, Heera M. Titus, Zhanjie Li PhD, Pablo Rico, Sahar Dahboul |
| EW17 | Are detailers from MARS or VENUS ? | This workshop is oriented towards all fabricators to Get a holistic view of the detailing ecosystem in US Compare and contrast Detailing vendor Make educated decision on vendor selection, evaluation, administration, comm. ,exit etc. Learn about Pay-as-you-go service model from AYARI. Presented by: AYARI LLC Exhibitor Workshops are not eligible for PDH credits | 03/21/2024 | 1:45 pm | | |
| EW18 | Breaking Down Silos and Streamlining Communication with a Common BIM Platform | While 3D models have become the norm in today's construction workflows, bringing model data together and coordinating information across disciplines remains an ongoing challenge. In this session, we introduce a new BIM solution that gives you the power to break down information silos, enhance project communication, and streamline your digital workflows. From a simple visualization and presentation tool to interdisciplinary model coordination, learn what you can do with this powerful cloud-based platform. Presented by: SDS2 by ALLPLAN Exhibitor Workshops are not eligible for PDH credits | 03/21/2024 | 1:45 pm | | |
| EW19 | Navigating the New: Exploring Trimble's Latest Advances and Workflow Integration | Join us for a presentation that delves into the latest developments at Trimble. We will explore new features, uncover the benefits of integrated workflows, and demonstrate how these innovations are designed to streamline processes and enhance productivity. Whether you're a seasoned professional or new to Trimble's solutions, this presentation will provide valuable insights into the cutting-edge advancements shaping the future of technology in our field. Presented by: Trimble Exhibitor Workshops are not eligible for PDH credits | 03/21/2024 | 1:45 pm | | |
| EW20 | KRABO® - Sensorized IoT Bolts for Monitoring Bolted Joints | KRABO® technology transforms standard bolts into internet-connected fasteners for remotely surveying bolted joints in critical infrastructures. These innovative bolts are based on fully integrated sensors that are able to measure the clamp load and send the data wirelessly to the cloud. Any loosening or abnormal status can be detected in real time and notified with an alert, reducing inspection cost and improving safety. This workshop will introduce the novel KRABO® technology and how structures can benefit from it, envisioning the future of bolted joints. Presented by: Fontana Fasteners, Inc. Exhibitor Workshops are not eligible for PDH credits | 03/21/2024 | 1:45 pm | | |
| SEI20 | ASCE at work in Washington: The Biden Administration's National Initiative to Advance Building Codes | This session will explore how federal agencies are adopting up-to-date building codes and standards into their guidance and funding decisions, and how ASCE is educating local decision-makers on the role codes and standards play in improving community resilience. Speakers will also detail how ASCE is working with the federal government to improve data inputs that better consider the changing climate into the development of standards. | 03/21/2024 | 1:45 pm | SEIcon | Jennifer Goupil PE, Dan Walker PhD, John Ingargiola |

| | | | | | | |
|-----|---|--|------------|---------|--------------------------|--|
| QC8 | WPSs: What is the Primary Purpose of these Documents? | To some, WPSs are a necessary evil, a paperwork requirement that is required by codes like AWS D1.1. To others, a WPS is used by welding inspectors to ensure welding is performed within acceptable limits and is often used to shut down welding operations. Others may see WPSs as the method by which Engineers confirm that the means and methods of the Fabricator or Erector meet specification requirements. Finally, some Fabricators or Erectors see WPSs as an issue that needs to be addressed in order to pass an AISC audit. The authors will show that WPSs are critical tools for each group to control quality and productivity. When the primary purpose is understood, the focus of WPS development and enforcement changes. Practical examples of correctly and incorrectly prepared WPSs will be given to demonstrate the importance of proper WPSs | 03/21/2024 | 1:45 pm | QualityCon, NASCC Online | Mark Holland, Duane Miller PE, Art Bustos |
| B8 | What's happening with T1 Steel? | In 2021, the FHWA issued a memo regarding the inspection of T1 steel. This session will summarize inspection findings and repairs done and planned in various states. After the T-1 steel lower chord fracture on the I-40 Hernando Desoto Bridge in Memphis in 2021, bridge owners across the USA we're tasked with conducting new inspections of all NSTM bridges which we're build with T-1 steel. NSTM Bridge built with T-1 steel we're required to undergo non-destructive testing for all butt welds in members subject to tension loading. This resulted in 1,000's of bridge welds being tested with Ultrasonic Testing. This presentation will discuss some of the challenges of that work and discuss overall results. Following the FHWA mandate to test all CJP weld in T-1 steel tension members owners across the country worked to test, report, and repair bridges with T-1 steel. The range of bridge and challenges encountered were numerous. This presentation will provide several case studies of bridges with defects found and the repair and retrofit strategies. Understanding the messaging and public relations component will also be discussed. | 03/21/2024 | 1:45 pm | Bridges, NASCC Online | Todd Niemann, Finn Hubbard PE, Jason Stith SE,PE,PhD, James Edmunds PE |
| A8 | Structural Steel as Architecture: Case Story of Snapdragon Stadium | Architect (Garrett van Leeuwen AIA , Gensler) and Structural Engineer (Wyatt Henderson , Magnasson Klemencic Associates) share the design, construction story, and lessons learned of recently completed Snapdragon Stadium (San Diego, Ca). In the face of Budget and Schedule Challenges during the initial phases of the pandemic, the projects creative use of exposed structural steel is a primary design element throughout created a unified and distinct aesthetic perfectly suited for this stadium application. Unique features that blend aesthetics and structure work together resolve functional and logistical objectives. This session will cover the process the design team used to develop a Steel Super structure as a compelling design feature that resolved structural and logistical challenges. | 03/21/2024 | 1:45 pm | Architecture | Garrett Van Leeuwen AIA, Wyatt Henderson SE,PE |
| SA8 | How Root Cause Analysis Can Help You Investigate & Prevent Problems | Root cause analysis (RCA) is used to determine why something occurred, paving the way for targeted solutions to prevent it from happening again. While there are many explanations and methods for root cause analysis and incident investigations, it doesn't have to be confusing within your organization. In this session, we will unravel the complexities and provide clarity on essential fundamentals for every problem investigation, fostering collaboration between frontline workers and management to avoid incidents in the first place. We'll also explore common errors encountered during problem investigations and share valuable insights into crafting clear, accurate, and comprehensive investigation documents. | 03/21/2024 | 1:45 pm | SafetyCon | John Schuepbach, Mark Galley |

| | | | | | | |
|------|--|--|------------|---------|-------------------------------|---|
| T6 | Database Driven Design Methods | There is great potential for the application of data-driven design methods. A significant amount of data is archived from structural engineering testing on materials, connections, members, structural subsystems, and full-scale structures. This session explores several projects where existing data was collected, curated into databases, and applied to advance state-of-art structural design and research through data-driven methods. | 03/21/2024 | 1:45 pm | Technology | Hannah Blum PhD, Cristopher Moen PE,PhD |
| D8 | Integrated Design and Detailing, a Format for a Workable Process | Integrated design and detailing, also known as integrated building design and detailing, is a holistic approach to the architectural engineering and construction AEC Industry. It involves the collaborative and seamless integration of various design and detailing aspects throughout the entire building or construction project's lifecycle. This session reviews a comprehensive approach to support optimizing the design, construction and performance of a building while minimizing and possibly eliminating design inefficiencies and errors. Attendees will be equipped with practical insights and tools for implementing IDD in their own projects, including best practices for information sharing, risk management, efficiency and a reduction to construction related challenges. | 03/21/2024 | 1:45 pm | Detailing | Borys Hayda, Brian Pyper |
| Z8 | Resolving Organizational Conflict to Create a 'Learning' Organization | In our professional lives, we work in organizations (companies, associations, work teams). Within those organizations, disagreements and conflict often occurs. While we usually think of conflict as a bad thing, conflict within organizations, if managed well, can actually lead to building stronger relationships, and improving communication and processes within the organization. This seminar will examine how organizations can "learn" from conflict and will provide some tips on handling organizational conflict productively. | 03/21/2024 | 1:45 pm | Business | James Reeves |
| QC20 | Integrating Quality and Safety Management for Project Success | Are "safety" and "quality" mutually exclusive? This presentation will review elements of quality management systems, safety and health management systems and the problems with projects when quality and safety goals are not met. This presentation will discuss risks of failing to utilize quality and safety management systems; impacts on project performance and overall business outlook and potential solutions in integrating for successful project management. | 03/21/2024 | 1:45 pm | QualityCon | Harvey C. Swift, Wayne Creasap |
| N35 | Stability Fundamentals and Practical Considerations – Session 2: Basic Behavior of Flexural Members (Part II) and Beam-Columns | This session will provide an overview of the behavior of flexural members subject to non-uniform moment and an overview of beam-columns. After a brief recap of flexural members from Session 1, the subject will be extended to study the effects of non-uniform moment. The strength of beams subject to uniform and non-uniform moment without slender elements will ultimately be presented in the form of beam resistance curves. These fundamentals will be illustrated with an example from practice. The session will then shift to review the basic concepts related to the stability of beam-columns, which will also include an illustrative case stud | 03/21/2024 | 1:45 pm | Design & Analysis/Engineering | Ronald Ziemian PhD, Craig Quadrato PE,PhD |
| N46 | What's Wrong with This Picture? | In this fun, interactive roundtable session, pictures of design and construction errors—some of which may not be patently obvious—will be shown to attendees seated at roundtables by engineers with careers spanning over 40 years. Guided discussion will encourage interaction with the presenters. | 03/21/2024 | 1:45 pm | Design & Analysis/Engineering | John Kennedy SE,PE, Socrates Ioannides SE,PhD, Tony Hazel |
| C8 | HSS Truss Overlapped K-Connection: Fabrication and Design Developments | The layout of HSS truss members is frequently based on a coincident work point for the branch and chord members at a panel point. The overlapping or gapping of the branch members at the chord face is then pre-determined, regardless of fabrication considerations and AISC 360 design guidance. Problematic fabrication details often then occur. AISC/STI/AISI research has recently been concluded, looking at two fabrication quandaries: Does the "hidden toe" beneath the overlapping | 03/21/2024 | 1:45 pm | Connections, NASCC Online | Jeff Packer P.Eng. |

| | | | | | | |
|-------|--|---|------------|---------|---|---|
| | | branch need to be welded, per the current AISC 360 Chapter K criteria? Can the two branches be welded toe-to-toe, with zero overlap/gap? These questions will be answered, for both designers and fabricators – with some conditions – and changes proposed for AISC 360-27 will be previewed. | | | | |
| N24 | FastFloor – The Need for Speed – Session 1 | AISC’s Need for Speed initiative has prompted a number of creative ideas which are currently in development. One of these is a prefabricated, modular, steel floor framing system dubbed FastFloor. Taking cues from the shipbuilding industry, FastFloor re-imagines the construction of a typical floor in a commercial building by shop-fabricating large, all-steel floor panels, then erecting them in the field to quickly and safely form the structural floor system. Combined with a raised access floor MEP needs are accommodated, and vibration and acoustic performance is achieved. The system eliminates all cast-in-place concrete resulting in a 30% reduction in construction time and a substantial reduction in embodied carbon. Research and development of this system is ongoing. This session will introduce the system, its details and advantages. An overview of the multi-year, multi-university research program will be presented. | 03/21/2024 | 1:45 pm | Design & Analysis/Engineering | W. Samuel Easterling PE,PhD, Ron Klemencic SE,PE, Jerome Hajjar PE,PhD |
| G8 | Year One of the AISC Fabricator Sustainability Partner Program | Steel fabricators inherently embrace sustainability, constantly striving to minimize waste and decrease energy consumption. Now, they have the opportunity to showcase these eco-conscious practices to their clients and project teams. Join us to discover the path to becoming an AISC Sustainability Partner. Learn from those who have already embraced this journey and explore the compelling reasons why your business should follow suit. | 03/21/2024 | 1:45 pm | Sustainability | Max Puchtel SE,PE |
| SEI8 | Business Issues Roundtable Discussion Hosted by CASE | Members of the Executive Committee of ACEC’s Coalition of American Structural Engineers (CASE) will lead a roundtable discussion of current business issues affecting structural engineering firms. | 03/21/2024 | 1:45 pm | SEIcon | Kevin Chamberlain SE,PE, Bruce Burt |
| SEI32 | Considerations in Steel Modular Design and Fabrication | Over the recent years, modular steel fabrication and construction are extended to be applied to structural subassemblies. For example, floor panels are being modularized in order to expedite construction, such that cost of schedule is reduced. To meet the needs of practicing engineers for steel module designs, fabrication, and construction, the ASCE Energy Division’s Task Committee on Onshore Heavy Industrial Modularization has worked for the past 5 years to create the state-of-the-practice engineering report on Onshore Modularization for Heavy Industrial Applications which will be available in next year. Topics related to design and engineering of onshore modules that are addressed in this report include overview of onshore module types, philosophy and early design development concepts, modularization studies, detailed engineering, module weight management, fabrication and assembly, logistics and transportation, site construction and installation, and case histories. Presentations of this session will be focusing on the following topics: how to modularize structures assemblies for expediting construction, fabrication weight management, module land transportation, structural modeling of hydraulic trailers, and summary of the upcoming ASCE state-of-thepractice engineering report. | 03/21/2024 | 1:45 pm | SEIcon | Silky Wong SE,PE,PhD,LEED A.P., David Kerins PE, Robert Hundl, Tony Nguyen, Sanjay Dankar |
| N22 | Performance Criteria for Facade Attachments to Steel-framed Structures | Whether the facade connection is a deferred submittal or designed by the EOR the design is a crucial component in ensuring the building is safe and performs as designed. This presentation will highlight the critical performance criteria that engineer should verify. | 03/21/2024 | 1:45 pm | Design & Analysis/Engineering, NASCC Online | Kevin O’Connell SE |

| | | | | | | |
|-------|--|--|------------|---------|---|---|
| W8 | Crafting Career Success: Candid Discussions on Steel Industry Career Paths | Careers are crafted by the folks in the structural steel industry. Explore personal stories in the structural steel industry, focusing on challenges and opportunities in career paths. Dive into how technological advancements in the shop, office, and on-site break barriers to career entry and progression. Uncover the significance of a supportive company culture in fostering healthy career growth in the structural steel field. | 03/21/2024 | 1:45 pm | Workforce Development | Jennie Traut-Todaro SE, LEED A.P., Charles Todd, Tony McGee, Stephanie Green |
| M6 | Torsion - Twisting the Night Away | Closed shapes provide more efficient torsional resistance than open shapes. The design of closed shapes for torsion will be discussed in this session. The behavior of large, thin-walled members, such as box girders and shell structures will be discussed briefly. However, the presentation will focus on member sizes that are common in buildings (round, square and rectangular HSS). | 03/21/2024 | 1:45 pm | Manuals, Standards, and Design Guides, NASCC Online | Bo Dowswell PE, PhD |
| B20 | Challenging Construction Projects and Steel was the Formula for a Solution | This session will showcase two complex construction projects where steel bridges were utilized to delivery successful projects. The first being located in Queens, NY where an interchange with several alignments were built as part of a Design Build Project. The second highlights the use of over 2500 LF of steel prefabricated bridges with steel substructures to create access in and out of the Strip of Las Vegas while being surrounded by a Formula 1 Grand Prix event. The use of steel allowed for a rapid installation and removal with no long term effects and is planned to be used each year the race visits Las Vegas. | 03/21/2024 | 1:45 pm | Bridges | Geoff Swett PE, SE, Tyler Brendlinger PE, John Brain PE |
| N51 | Modifying Existing Lateral Load Resisting Systems - Braced Frames | The codes are generally clear regarding designing and constructing new braced frame lateral load resisting systems. The codes are generally clear when the circumstances of an alteration require a lateral load resisting system to comply with code loads. What is not clearly addressed is the challenges faced by engineers when they are required to remove an existing braced frame to accommodate the alteration. This session will discuss the various challenges engineers must consider in removing an existing braced frame and the impacts not only on the steel lateral load resisting system, but the overall building superstructure. | 03/21/2024 | 1:45 pm | Design & Analysis/Engineering | Matt Johnson PE, P.Eng., Keith Palmer SE, PE, PhD |
| SEI9 | ASCE 41-23: A First Look | This session will provide participants with a high level summary of ASCE 41-23 "Seismic Evaluation and Retrofit of Existing Buildings," focusing on the major technical and organization changes compared to the previous edition. | 03/21/2024 | 3:00 pm | SEIcon | Rebecca Collins, PE, SE, Peter Somers SE, PE, Robert Pekelnicky SE, PE |
| SEI33 | Building a Better Structural Engineer - using improvisation to improve communication | Effectively educating the structural engineer of 2040 necessitates development and improvement of several essential nontechnical skills, with activities at previous two Structures Congresses making it clear that communication is one of the essential skills needing specific attention. Akin to a class offered at the University of Nebraska-Lincoln (https://engineering.unl.edu/news/230130/improv_for_engineers/), this session will utilize improvisation techniques to teach outside-the-box communication skills that will help structural engineers succeed throughout their careers. Individuals affiliated with the Nebraska effort will assist with development of an interactive session that will enhance skills and lay the groundwork for similar activities in classes or at professional development events. | 03/21/2024 | 3:00 pm | SEIcon | Daniel Linzell PE, PhD, Marc Hoit, Maria Moreyra Garlock PE, PhD, Mark Riley PhD, Linda Kaplan PE |
| | | The new Ismaili Center uses a contemporary design incorporating large open atrium spaces. The large open spaces are framed with structural steel while the majority of the remaining structure is concrete. The Prayer Hall is an open outdoor space with plan dimensions of roughly 110'x110' and 40' tall. The floor structure of the Prayer Hall is supported on deep plate girders arranged in a diamond pattern. This supports built-up plate columns in the form of a star that are 40' tall which carries the roof framing | | | | |

| | | | | | | |
|-----|---|--|------------|---------|-------------------------------|---|
| Y2 | Construction engineering solutions to a unique and challenging structure at the Ismaili Center in Houston | that uses a framing layout in the form of triangles. There is no lateral force resisting system as part of the steel structure because the floor and roof level use cast-in-place concrete diaphragms which will not be installed until several months after steel erection is complete. The Atrium uses stacked planar Vierendeel trusses to create a large tall open space. Similar to the Prayer Hall, lateral bracing and stability are provided by cast-in-place concrete slabs that will not be installed until well after erection is complete. The construction engineering aspects of this project required careful review of the partially completed structure of the Prayer Hall and Atrium, the design of fabricated temporary bracing, and lifting of heavy trusses. The unique geometry, missing load path, and long term schedule created engineering challenges for the partially completed structure. | 03/21/2024 | 3:00 pm | Case Study | Adam Friedman SE,PE, James Byrum, Thomas Getschman |
| Z9 | Storytelling for the Steel Industry Demystified | Marketing, public relations corporate communications... all of these are fancy words for storytelling. So while marketing may seem like a specialized industry, in truth each of us has plenty of experience selling outsiders on what makes our company and industry unique. In this session, we discuss how to leverage this storytelling experience into a marketing strategy for your business and effectively position yourself in the digital age. | 03/21/2024 | 3:00 pm | Business | Katy Williams |
| N36 | Stability: Applying Chapter C to Daily Engineering | This session will provide an overview of AISC Specification Chapter C along with practical examples and a synopsis of when various analysis tools/software could be utilized. | 03/21/2024 | 3:00 pm | Design & Analysis/Engineering | Joshua Buckholt SE,PE, Ronald Ziemian PhD |
| B21 | Steel Bridge Industry Roundtable | Roundtables are a great way to get all of the links in the supply chain together in one room. This roundtable aims to get owners, designers, mills, fabricators, contractors, and erectors in the same room to discuss "the things that keep you up at night". | 03/21/2024 | 3:00 pm | Bridges | Jeff Carlson PE |
| B9 | Sustainability and How It Affects Steel Bridges | Sustainability is a hot topic in 2024. Steel's ability to be recycled lends itself well to sustainability in today's world. This session will present current initiatives and requirements that are being discussed at various levels that will affect bridge designers. It will also address what the steel industry is doing to meet the goals of the entire sustainability effort and how the steel and concrete industries are doing together to provide guidance to designers. | 03/21/2024 | 3:00 pm | Bridges, NASCC Online | John Cross, PE, LEED AP, Emily Lorenz PE, Anthony Peterson |
| F12 | Case Study - Dickies Arena | Bosworth Steel Erectors (AISC Certified Erector) and Walter P Moore's Construction Engineering Group will present a case study on the erection of the new 14,000-seat, 715,000-sq.-ft multipurpose Dickies Arena in Fort Worth. Dickies Arena won the 2021 IDEAS ² Award in part due to the unique roof design. The arena boasts a 420-ft by 280-ft clear-span, double-arched steel truss roof. Curved shallow depth trusses provided some intricate temporary erection planning and analysis. Exposed structural steel was used extensively throughout the entire project. Bosworth and Walter P Moore will discuss several of the challenges they faced, as well as the keys to successfully erecting the project with exceptional quality and on schedule. | 03/21/2024 | 3:00 pm | Fabrication & Erection | Carl Williams PE, Vince Bosworth, Nyckey Heath PE, Brent Hungerford PE, Gulzat Atymtayeva SE,PE |
| A9 | The AISC AESS System: Effective Applications | The AISC specification system for Architecturally Exposed Structural Steel was designed to assist the team of the architect, engineer and steel fabricator with the effective navigation of AESS projects. The system works to standardize the approach to design and detailing and allow the team to focus on the more challenging aspects. This presentation will look at the application of the method to a range of projects with a focus on the importance of connection detailing as it feeds into the selection of the most appropriate AESS Category for the project. | 03/21/2024 | 3:00 pm | Architecture | Terri Meyer Boake LEED A.P. |

| | | | | | | |
|-------|---|---|------------|---------|----------------------------------|--|
| L5 | Unveiling the Courtroom Chessboard: Legal Advocacy for and Against the Steel Fabricator Part 1 of 2 | This program will take you into the courtroom where attorneys for the steel fabricator, general contractor and engineer of record will argue factual and legal positions concerning scope of work issues and cost impacts to a steel fabricator caused by design and project delays. The audience will participate in this interactive presentation by responding to questions via text messaging following the presentation of an issue, similar to what a judge or jury would have to decide. This is part one of this presentation which is two hours, divided into two sessions with an intermission. | 03/21/2024 | 3:00 pm | Legal | George Pallas, Jason Copley, Matthew Skaroff, Ed Seglias |
| D9 | Implementing the AISC Code of Standard Practice with Construction Teams - The Steel Detailer's Perspective | Steel Detailers are often frustrated by having their RFI's mis-understood or ignored, only to be later blamed for lack of production and scheduling delays. This session will present steel detailing project management behaviors which support the current requirements identified in the AISC Code of Standard Practice for contract drawings. | 03/21/2024 | 3:00 pm | Detailing | Jim Truitt |
| G9 | Thermal Breaks in Structural Steel | Over the last 10 years, thermal breaks have become more common in steel building construction in many parts of the country. In many applications, proprietary thermal break products are incorporated into the structural building system. The types of products and applications vary, and proper specification, pricing, design, and construction of thermal break connections can be challenging. A Colorado steel committee formed of structural engineers, fabricators, and erectors associated with SEAC and the Rocky Mountain Steel Construction Association have researched the most common products, applications, and design methods currently in use in the Rocky Mountain market and identified common challenges and best practices for the use of thermal breaks in steel buildings. | 03/21/2024 | 3:00 pm | Sustainability | Jim Foreman SE,PE, Eric Sobel SE,PE, Alex Stone SE |
| CAPS6 | Leadership Development - Creating an Environment for Team Success - Not open to all attendees/only members of the CAPS Cohort | Learn how to develop your own strengths as a leader. Learn to leverage your strengths and control for your weaknesses when you're placed in charge of a team or project. Learn to manage and participate as a leader with your team members and colleagues. Learn how to set up a creative environment for your team, and how to motivate the team to succeed. Attendance at this session is by invite only and is only open to accepted members of the CAPS program. | 03/21/2024 | 3:00 pm | CAPS | Phil McIntyre |
| SA9 | Construction and Suicide - How company policy can support team mental health | Hear Brandon's story and how he's using his experience to help others in reducing the stigma associated with mental health in the construction industry. Brandon will review the challenges faced by construction workers as they lead most occupations with higher-than-normal rates of addiction, mental health and suicide. Understand what the costs are to the industry as well as how mental health, addiction and suicide prevention can be woven into DEIB culture for effective policies that can support your team. Learn of current, readily-available resources that can be put to use right away | 03/21/2024 | 3:00 pm | SafetyCon | Wayne Creasap, John Schuepbach, Brandon Anderson |
| S9 | Advances in Stability Analysis I | Paper 1: Rodrigo Gonçalves, "A beam finite element for tapered and curved members" Paper 2: Barry Rosson, "Methods to improve the accuracy and efficiency of geometric nonlinear analyses of steel frames" Paper 3: Bálint Vaszilievits-Sömjén, "Practical computational modeling of the structure and its bracing system for the design of primary metal building frames" | 03/21/2024 | 3:00 pm | SSRC Annual Stability Conference | Rodrigo Gonçalves, Barry Rosson PE PhD, Bálint Vaszilievits-Sömjén, P.Eng. |
| Z17 | Forensic engineering of a Crane Disaster: Pick Your Own Path | In this interactive session, the speaker will present the facts and evidence available in an actual investigation of a crane that collapsed in a wind event, and the audience will choose what components to analyze and investigate in our search for the root cause of the collapse. Joelle Nelson investigated an interesting crane collapse where one failure at a minor connection triggered a chain reaction resulting in the catastrophic collapse of the crane. In the vein of the 2019 To Tell The Truth game show presentation on steel failure investigations, this will be an interactive | 03/21/2024 | 3:00 pm | Business, NASCC Online | John Schuepbach, Joelle Nelson PE |

| | | | | | | |
|-------|---|---|------------|---------|---|--|
| | | session as a pick-your-own-path investigation into the root cause where we'd poll the audience to decide what component to investigate at each step. There's a nice variety of steel failures in this one incident, with an overall message of the devil is in the details. | | | | |
| N23 | Fast and Efficient Design for Stability | The design of building structures requires consideration of both strength and stiffness. For strength design, methods that permit the use of K=1 are very convenient. This engaging session introduces the Indirect Analysis Method, a simplified form of the Direct Analysis Method (DM) that substitutes an amplifier on lateral loads for the DM modeling requirements. | 03/21/2024 | 3:00 pm | Design & Analysis/Engineering, NASCC Online | Rafael Sabelli SE |
| F13 | Case Studies in Project Change Management | Session will cover the key principles for Winning Change Orders and will use real world Case Study examples to illustrate those principles. The Key Principles: Contract Changes are inevitable, so you must be prepared to "Win". Project & Customer evaluation and selection. Presale Negotiation: 50% of C.O. recovery success is determined by the contract you sign. Identifying Risks and Preparing/Planning for Change Events. Change Order Execution: Converting Change events into opportunities or disasters. Case Study | 03/21/2024 | 3:00 pm | Fabrication & Erection | Mike Senneway |
| C9 | Navigating Delegated Design Projects | This session will discuss strategies the Engineers of Record can employ to provide more efficient projects that utilize delegated design. There will be an examination of the advantages of delegated design and how to maximize the benefit the project owner receives from delegated design. We will also explain how to properly define the role of the key players on a delegated design project. | 03/21/2024 | 3:00 pm | Connections | Michael Stubbs |
| F7 | Mission to Mars - Construction of the ML2 Mobile Launch Tower | The Mobile Launcher 2 (ML2) is a new rocket support structure developed in conjunction with NASA's Artemis Program. The 380-foot tall ML2 tower will be used to assemble, transport, and launch NASA's Space Launch System (SLS) rocket and Orion spacecraft. It is significantly larger and supports a vehicle nearly 1 million pounds heavier than its predecessor Mobile Launch tower. The base structure that supports the rocket and tower during rocket assembly and transport is framed with 22-foot-deep intersecting trusses and plate girders. Construction and fabrication planning includes offsite fabrication of full depth truss and plate girder sections and offsite fabrication of large floor sections. The construction of the tower section includes building and assembling large multi-level tower submodules while holding tight NASA dictated tolerances. Connections include complex piping connections manufactured as steel castings to simplify design, reduce weight, improve joint stiffness, and accommodate the modularized construction strategy. | 03/21/2024 | 3:00 pm | Fabrication & Erection | Mark Holland, Carlos Rubio PE |
| SEI21 | Blast Hardening and Environmental Sustainability | Buildings that are designed for blast protection generally require a larger quantity of building materials compared to those designed conventionally. This creates a dilemma between the goals of protective design and sustainability in the context of low-carbon building design. Protective design typically results in greater material consumption due to the requirement for increased strength and stiffness, site protection measures, and specialized detailing. Conversely, sustainable design aims to minimize embodied carbon in a project by enhancing construction practices, increasing structural efficiency, minimizing material usage, and employing more sustainable alternatives to conventional construction materials. With the rising popularity of net-zero structures, it is essential to consider the use of low-carbon materials and structural solutions in building design, as well as other strategies to decrease embodied carbon in structures, while still satisfying blast protection requirements. | 03/21/2024 | 3:00 pm | SEIcon | Shalva Marjanishvili SE,PE, Vincent Chiarito PE, Aldo McKay PE, Sarah Vandevent PE |

| | | | | | | |
|------|---|--|------------|---------|---|---|
| N9 | Appendix 6: Effective Application of Lateral and Torsional Beam Bracing Provisions | This lecture will cover the fundamental requirements of stability bracing (stiffness and strength) and outline effective use of the Appendix 6 lateral and torsional beam bracing provisions. The basic requirements will be outlined along with examples of utilizing the bracing provisions in design. | 03/21/2024 | 3:00 pm | Design & Analysis/Engineering, NASCC Online | Todd Helwig PhD |
| EW21 | Use It To Tube It: 6 STI HSS Design Tools and How to Use Them | The Steel Tube Institute (STI) has a wealth of information available to help engineers and fabricators design and specify HSS (hollow structural section) tubes. Join us as we review each product and how to Use It To Tube It. Presented by: Steel Tube Institute Exhibitor Workshops are not eligible for PDH credits | 03/21/2024 | 3:00 pm | | |
| QC21 | The Importance of Understanding AISC Specifications and AWS Codes: following the requirements can save you time and money | Join us for an insightful session tailored for designers, fabricators, erectors, and inspectors. Delve into the rationale behind AISC specifications and AWS codes, unravel the synergy between these crucial documents, and discover practical strategies for saving both time and money. This talk isn't about fluff; it's about equipping you with the knowledge and understanding that directly impacts your bottom line. Let's navigate the intricacies of standards with precision and purpose. | 03/21/2024 | 3:00 pm | QualityCon | Mike Gase |
| W5 | It's OK to Use Your Hands: Elevating the Skilled Trades | It's time to recognize that "It's OK to Use Your Hands" and to elevate the skilled trades to the respect and recognition they truly deserve. Join Andrew Parker (Be Pro Be Proud) and Amy Rogers (W&W AFCO) as they discuss industry partnerships, student outreach, hands-on virtual experiences, and student support. Hear from students about how Be Pro Be Proud boosted the students' confidence in pursuing a sustainable trade career. Learn how advocacy and partnerships can support your own workforce development program. | 03/21/2024 | 3:00 pm | Workforce Development | Andrew Parker, Amy Rogers, Dakota Pharr, Caleb Echols |
| QC9 | How do Robots affect your QMS - along with your workforce? | Robots and cobots are a hot topic in fabrication right now. But once you purchase one and bring it into your shop, now what? How do you integrate it into your workforce and QMS? We'll talk about some of the interesting lessons that we learned from our experiences. | 03/21/2024 | 3:00 pm | QualityCon, NASCC Online | Tim Bradshaw PE, Luke Faulkner |
| T7 | Engineering the AI Revolution: A Sustainable Approach to Structural Steel Design | Artificial Intelligence stands as a pivotal technology reshaping the engineering and construction industry, altering the very fabric of professional workflows. With the exponential growth of AI model capabilities, it is imperative for the AEC industry to not only adapt but also strategically align this technology for enhanced productivity and sustainability. This presentation outlines the latest work conducted by Thornton Tomasetti's CORE Studio R&D team, focusing on the development of bespoke AI-driven tools, particularly in structural steel design. The session will highlight how CORE.AI models are refactoring engineering processes, enabling reduced embodied carbon footprints in design and facilitating rapid prototyping and optioneering. In this presentation, we share insights into Thornton Tomasetti's journey in building responsible AI for the AEC industry, reflecting on our experiences and lessons learned. | 03/21/2024 | 3:00 pm | Technology | Robert Otani PE, LEED A.P. |
| A10 | Rooted Ligaments: 35 Years of the University of Houston Graduate Design/Build Studio | Involving architecture students in steel design-build activities offers a number of opportunities. 2024 marks 35 years of continuous hands-on learning provided at the University of Houston through the Graduate Design/Build Studio, a teaching vehicle that rapidly builds professional architectural skills and fosters student confidence while also creating lasting community improvements. Grounding site-specific design and construction decisions in an understanding of human needs is the basis for its community-building activism. The students grow to value design practice conceptually shaped by limits. Among these are the severe constraints imposed upon us by the construction activity itself, which does not fit neatly within academic coursework. | 03/21/2024 | 4:15 pm | Architecture | Patrick Peters |

| | | | | | | |
|------|--|--|------------|---------|---|---|
| EW22 | Training Out and Beyond: The Next Generation | How to build and scope training programs and sessions for the next generation of builders. How to bridge the generational gap in your workforce. How to leverage technology in both these efforts. Presented by: Procure Exhibitor Workshops are not eligible for PDH credits | 03/21/2024 | 4:15 pm | | |
| EW23 | Technology Strategy & Adoption: BZI's Journey with Procure | Technology implementation is a journey, not just a destination. In this dynamic session, join Wilford Jessop, Chief Information Technology Officer of Building Zone Industries (BZI); TJ Forbes, Senior Financials Solutions Engineer at Procure; and John Hollingshaus, Chief Business Officer at BZI as they share the roadmap to successful change management in the tech-driven world of construction. Discover the real-life story of BZI's transformation with Procure's Financial Management solution, a journey that revolutionized budget management to safeguard profits more effectively. This session will dive into how vision, skills, incentives, resources, and a solid action plan—elements of the lesser-known yet powerful Knoster model—were pivotal in navigating BZI's change. Expect a personal touch with anecdotes showcasing our panel's expertise in leveraging Procure to drive success. Engage directly with these experts through a lively Q&A and interactive polls, gaining insights you can apply to your own company's journey. Don't miss out on the chance to learn from those who've walked the path of technological transformation and culture enhancement. Join us to turn insights into action and to make your mark on the future of construction management. Presented by: BZI & Procure Exhibitor Workshops are not eligible for PDH credits | 03/21/2024 | 4:15 pm | | |
| EW25 | Structural Verification Made Simple: Navigating Design Codes Effectively | Join SDC Verifier at the Steel Conference for a practical breakout session on effective ways to perform structural verification according to design codes In this session, we'll dive into the essentials of structural verification, focusing on how to ensure your designs meet the various standards set by authorities like AISC. We'll discuss: The importance of structural verification and its role in maintaining safety and reliability. Understanding AISC design codes and standards and their impact on structural analysis. Methods for performing structural verification efficiently. Using software tools to simplify the verification process and boost productivity. Real-world examples illustrating successful verification strategies. Whether you're a seasoned engineer or new to the field, this session will provide actionable insights to help you navigate design codes and streamline your verification process. Join us to learn practical techniques for ensuring compliance and building with confidence. Presented by: SDC Verifier Exhibitor Workshops are not eligible for PDH credits | 03/21/2024 | 4:15 pm | | |
| EW24 | Increase product sales and automate engineering workflows with your very own online calculator | Learn more about how having an online calculator on your website can drive more traffic, leads and sales for your engineering products. As a structural engineer, you can also build these online tools yourself or use pre-packaged calculations to help you speed up your designs and automate part of your workflows. Presented by: SkyCiv Engineering Exhibitor Workshops are not eligible for PDH credits | 03/21/2024 | 4:15 pm | | |
| N37 | The Good, The Bad, & the Ugly - Drawing Notes | All contract documents have notes to convey information; however, not all notes are created equal. This session will review general note tips, focus on design note examples, review their impact on a project, and review what is required to be shown on the drawings. | 03/21/2024 | 4:15 pm | Design & Analysis/Engineering, NASCC Online | Matthew Kawczenski SE,PE, Bryan Peiffer |

| | | | | | | |
|--------|--|---|------------|---------|----------------------------------|--|
| W11 | How to Attract the Next-Gen Workforce: Embracing Diversity, Equity, and Inclusion, Flexibility, and More | Join us for an insightful session where a diverse panel of industry leaders and young professionals will delve into their recruitment, hiring, and retention journeys in today's dynamic workforce landscape. While certain successful approaches remain timeless, the evolving nature of the field calls for adaptation. Gain valuable advice and actionable tips to implement within your organization. | 03/21/2024 | 4:15 pm | Workforce Development | Max Puchtel SE,PE, Christine Freisinger SE,PE, Jessica Brown, Johnah Hrabowy, Charlie Carter SE,PE,PhD |
| B10 | Steel Railroad Bridges | Steel is the workhorse solution for railroad bridges. This session includes a presentation on the design and construction challenges associated with a new 90 ft long single span through plate girder railroad bridge where both substructures are skewed at 70 degrees to the roadway below. The second presentation discusses the recent application of steel filler beam decks for rapid emergency replacements of rail undergrade structures in a highly congested urban area. | 03/21/2024 | 4:15 pm | Bridges, NASCC Online | Brandon Chavel PE,PhD, Ed Baznik PE, Patrick D'Ambrosio PE, Kimberly Guice PE, Nicholas Bayer PE |
| SA10 | Productivity, Production, Quality & Safety of Human Performance | It's time to stop "toughing it out" and instead talk about extreme temperatures within the human performance strategy. In 2021, data showed that more than 2.5 billion hours [lancetcountdown.org] of labor in the U.S. agriculture, construction, manufacturing, and service sectors were lost to heat exposure. Another report found that, in 2020, loss of productivity from heat exposure cost the economy \$100 billion [onebillionresilient.org] with annual costs expected to grow to \$500 billion by 2050. Absenteeism, productivity losses, and unsafe events rise dramatically when the temperature swings – and in this market, that's not something any of us can afford. Attend this session to explore how our changing environment must be managed holistically – by scheduling, operations, logistics, and safety. | 03/21/2024 | 4:15 pm | SafetyCon | John Schuepbach, Hilarie Warren |
| SEI-P1 | SEI Keynote Future Ready Structures | ASCE has reunited with MacGillivray Freeman Films for another giant-screen feature film, following the success of Dream Big in 2017. Cities of the Future: Reimagining Our World is slated for release in 2024 and "...will take audiences into the imagination of the world's most innovative engineers who are working right now to design the cities we will live in 50 years from now," said producer Shaun MacGillivray. SEI will share the trailer from the movie and David Odeh, S.E. P.E., F.ASCE, F.SEI will share his thoughts on Future Ready Structures. | 03/21/2024 | 4:15 pm | SEIcon | David Odeh SE,PE |
| QC10 | Three More Fabricators Walk Into a Bar... | ...but when you have these three knowledgeable and respected steel fabricators sharing their collective wisdom, it's no joking matter. Join us for some top-shelf lessons learned and a generous pour of expertise, with answers to your steel fabrication questions as a chaser. | 03/21/2024 | 4:15 pm | QualityCon, NASCC Online | David Zalesne, Glenn Tabolt PE, Dennis Haught, John O'Quinn |
| S10 | Advances in Stability Analysis II | Paper 1: Mark Denavit, "Quantifying Error Associated with Simplifications to the Direct Analysis Method" Paper 2: Cristopher Moen, "A fast, scalable shell finite element formulation implemented with open-source software" Paper 3: Ann Sychterz, "Stability of a deployable awns on a compliant steel geosystem for nonlinear soil-structure interaction" | 03/21/2024 | 4:15 pm | SSRC Annual Stability Conference | Ann Sychterz PhD, Mark Denavit PE,PhD, Hannah Blum PhD, Cristopher Moen PE,PhD |
| W10 | Be That One Guy – Diversity, Harassment Prevention & Retention Training | Be That One Guy trainings teach participants about the domino effect of harassment and help members understand their own ability to transition from a bystander to an Upstander. Union supervision & leadership and signatory contractors learn a better way to handle situations—one that shifts us away from the aggressor-biased solutions used in the past and embraces the power of Upstanders to become part of the solution. The concept of bystanders having the power to change jobsite culture is the core of our program. | 03/21/2024 | 4:15 pm | Workforce Development | Vicki O'Leary, Harvey C. Swift |

| | | | | | | |
|-----|--|--|------------|---------|---|--|
| M8 | Designing, Detailing, Fabricating, Erecting and Inspecting Steel Structures to Resist Brittle Fracture | Brittle fracture is a rare event in traditional steel buildings subject to static loading. Under conditions of low temperature, high restraint and low redundancy, the concerns of brittle fracture increase. Key points made in the new Design Guide on this topic will be presented, including a review of the basics of brittle fracture, how to identify connections that may be vulnerable to fracture, and most importantly, a list of practical techniques that may be employed to increase fracture resistance. The presentation will be of interest to designers, detailers, fabricators, erectors and educators. While the focus will be on statically loaded building structures, the lecture will be of interest to those involved in seismic design, as well as those involved with bridges. | 03/21/2024 | 4:15 pm | Manuals, Standards, and Design Guides, NASCC Online | Duane Miller PE |
| F14 | Exploring the Synergy: Programming's Impact on Steel Production | Delve into the captivating world of steel production This session unveils the evolution of programming in the steel industry, from its early roots in relay logic to the modern-day marvels of Programmable Logic Controllers (PLCs) and Human-Machine Interfaces (HMIs). Discover how programming steel isn't just coding – it's a journey where technology meets magic. Explore how automation, quality control, optimization, predictive maintenance, data-driven decision-making, safety, integration with business systems, product innovation, global competitiveness, and environmental impact intertwine in the spellbinding tapestry of modern steel manufacturing. Join us to learn how the fusion of programming and steel transforms fabrication shops into enchanted realms of efficiency, precision, and sustainability. | 03/21/2024 | 4:15 pm | Fabrication & Erection | Stephanie Green, Eliot Jenkins, Nilesh Dalal |
| Y3 | Monorail into Treetop Trail: Adaptive Reuse at MN Zoo | Embark on a captivating journey that unveils the Treetop Trail at Minnesota Zoo: the ultimate adaptive reuse construction project. Witness the astonishing metamorphosis of an abandoned 1970s Corten monorail structure into the world's longest elevated pedestrian loop. This session will provide an insightful look at the intricacies of the project, exploring the distinctive hurdles in engineering and construction that were encountered. Discover the project team's strategies to surmount these challenges, illuminating the intersection of innovation and determination. | 03/21/2024 | 4:15 pm | Case Study | Fraser Reid, Hannah Valentine PE, Thomas Root, P.E., Michael Osowski |
| N10 | What Designers Need to Know about Beam Stability for Industrial Structures | The loading, bracing, and boundary conditions for beams in industrial structures can be unique - and designers should know precisely how because the AISC Specification is applicable to buildings and building-like structures. This session will provide practical design information for beam stability in industrial structures. | 03/21/2024 | 4:15 pm | Design & Analysis/Engineering | Bo Dowsnell PE, PhD |
| Z3 | Design Assist and the Steel Fabricator | AISC and the American Institute of Architects (AIA) have jointly issued a white paper detailing the practical application of design assist as it relates to fabricated structural steel. This session will discuss the whitepaper and provide important guidance about design collaboration on construction projects. | 03/21/2024 | 4:15 pm | Business | Tim Bradshaw PE, Babette Freund, Michael West, Bill Andrews SE, PE, Mike Koger AIA |
| C10 | Seismic Design of Connections | As most connection engineers can tell you, there is a world of difference between designing a simple shear tab versus designing any kind of seismic connection. Instead of just providing sufficient strength, the objective of seismic connection design is facilitating ductility in the seismic force resisting system. This session will introduce concepts related to seismic connection design, and go over specific considerations that aren't required for gravity or wind loading. | 03/21/2024 | 4:15 pm | Connections, NASCC Online | Matthew Eatherton |
| L6 | Unveiling the Courtroom Chessboard: Legal Advocacy for and Against the Steel Fabricator Part 2 of 2 | This is part 2 of a program that will take you into the courtroom where attorneys for the steel fabricator, general contractor and engineer of record will argue factual and legal positions concerning scope of work issues and cost impacts to a steel fabricator caused by design and project delays. The audience will participate in this interactive presentation by responding to questions via text messaging following the presentation of an issue, similar | 03/21/2024 | 4:15 pm | Legal | George Pallas, Jason Copley, Matthew Skaroff, Ed Seglias |

| | | | | | | |
|------|---|---|------------|---------|---|---|
| | 01 2 | to what a judge or jury would have to decide. This is part 2 of a presentation that is two hours, divided into two sessions with an intermission | | | | |
| Z10 | Strengthening Your Communication: Essential Soft Skills for Business Development | You know how to build a room--now you can learn to read a room and win more clients! This session will use real-life lessons learned from communication, psychology, sales, human behavior, and 23 years of practical experience training within the A/E/C industry. Attendees will learn: How to infuse curiosity into short-listed meetings; the #1 question to always ask when preparing for RFPs and interviews; and the latest trend in communication that helps grow people and organizations. | 03/21/2024 | 4:15 pm | Business | Susan Young |
| D10 | What is Wrong with my Shop Detail and Erection Drawings? | Many fabricators do not know the nuances of steel detail drawing editing which makes the difference between good and bad shop drawings that they are baffled by why the designers, shop workers and field installers all have problems with them. While shop detail drawings may be correct according to the software, incorrectly edited shop detail and erection drawings cause havoc for the reviewing design teams, shop workers and field installers trying to use them. This session will identify some common problems and describe how the issues caused by them may be prevented. | 03/21/2024 | 4:15 pm | Detailing | Kerri Olsen |
| EW26 | New! Steel Connection Design in RFEM 6 | RFEM 6, the most powerful FEA structural analysis software, now includes AISC connection design! Design goes beyond a standard analytical model with the automatic creation of an FEA model internally allowing design of unique or non-standard connections. Choose from the extensive library with predefined steel connection templates or create your own. Additionally, design of the steel members or hybrid structure is possible all within a single program. See first-hand how RFEM takes you beyond your current design software. Presented by: Dlubal Software, Inc. Exhibitor Workshops are not eligible for PDH credits | 03/22/2024 | 7:00 am | | |
| EW28 | The Bottleneck Of Our Industry = Time Taken To Answer The RFI. Resolved By Build Intra. | RFIs currently lead to huge number of emails exchanged and weeks' worth of block to mostly all projects. We need to look at this from a drone view and understand the reason for this. The delays and loss of time and money due to time taken to answer the RFI widely shows the important need of each company to try and clear this bottleneck. With better communication, a single place for data sharing and project management - Build Intra, a simple powerful software, is an effort towards 'zero emails exchanged' to answer the RFIs. Build Intra claims that with it's proper implementation, training, and with its use, our industry can ensure zero emails exchanged on a project to exchange/answer RFIs between the owner, GC, architect, subcontractors, engineers, and detailers. By 2030 on 35% of total construction projects done in USA, we can expect to see zero emails and delays that occur due to pending RFIs, on projects ranging from a small mezzanine project by a small contractor to a high rise tower project by a large construction company. Presented by: AL TECH GLOBAL, LLP Exhibitor Workshops are not eligible for PDH credits | 03/22/2024 | 8:00 am | | |
| EW27 | The Bottleneck Of Our Industry = Time To Answer The RFI | Improved communication, complete tracking, and training - improved project and worker efficiency using software. Presented by: AL TECH GLOBAL, LLP Exhibitor Workshops are not eligible for PDH credits | 03/22/2024 | 8:00 am | | |
| M9 | Base Connection Design for Steel Structures - the NEW Design Guide 1, 3rd Edition | This session is a jam-packed overview of the NEW AISC Design Guide 1, 3rd Ed., Base Connection Design for Steel Structures. This 3rd edition incorporates the latest research in base connections and includes new chapters on embedded base connections and seismic design. Additionally, reorganized and new appendices provide guidelines for the simulation of base connections in building models and finite element analysis. A demo of bonus materials will also be presented. | 03/22/2024 | 8:00 am | Manuals, Standards, and Design Guides, NASCC Online | Amit Kanvinde PhD, Mahmoud Maamouri SE,PE,PhD |

| | | | | | | |
|-------|--|--|------------|---------|---|--|
| N38 | Tips for Validating the Results of Structural Engineering Software | Knowing how to use structural engineering analysis and design software is an essential skill required of all practicing engineers. Equally important but seldom discussed however is the need for designers to be able to manually validate the results produced by their computer analysis. This seminar will discuss easy ways of validating the computer-generated analysis and design. Included will be a discussion on the limitations of computer analysis as well as examples of common problems associated with such analysis. | 03/22/2024 | 8:00 am | Design & Analysis/Engineering, NASCC Online | Clifford Schwinger PE |
| SEI10 | From New to Normal: Bringing Ideas To Life | <p>Presentation 1: Design, Collaboration, and Documentation of Complex Architecture The Amazon Spheres in Seattle provide a unique workspace that surrounds its inhabitants with nature. An ornate conservatory houses a collection of plants that were selected due to their ability to thrive indoors, and the plants were used to inform the structure. The resulting glass dome bubbles look light-weight and airy atop their support a 400,000 pound concrete ring beam that transfers loads to columns in the floors below. Along with other case studies, learn how structural engineers at Magnusson Klemencic Associates envision, develop, and refine such designs.as they demonstrate tools that were developed to effectively coordinate, design, and document these unique projects.</p> <p>Presentation 2: From Blue Sky to Blueprint - Implementation of Optimization for Real World Projects Skidmore Owings and Merrill is a laboratory that is constantly exploring new ways of practicing design. The two projects presented will highlight how in-house research initiatives were applied in structural design practice. The pedestrian bridge at Emory Winship Hospital utilized internally developed topology optimization tools to produce an innovative truss geometry. The generative design process for the second project, a large event center roof, harnessed probability and random chance to produce an optimized column layout from many input variables.</p> <p>Presentation 3: Researching Resilient Systems for Lateral Resistance Tessellated structural-architectural (TeSA) shear walls are made of interlocking modules (tiles) that join together like puzzle pieces to form a visually interesting whole. But can these be used as the lateral-load resisting element for a building?</p> | 03/22/2024 | 8:00 am | SEIcon | David Shook PE, Kevin Aswegan SE,PE, Raymond Sweeney PE, Mohammad Syed, Ph.D., Sam Wilson, PE |
| Z11 | Structural Steel: An Industry Overview and Economic Forecast | This session will cover the economic conditions in the US and how it relates to the overall health of the construction industry. It will discuss different measurements and indices used to gauge where the market is headed and how that will affect construction activity. It will also discuss the evolving mix of the construction market in terms of what is getting built and the materials being used. | 03/22/2024 | 8:00 am | Business | Brian Raff |
| S11 | Stability of Floor and Roof Systems I | Paper 1: Rajshri Chidambaram Muthu Kumar, "Effect of intermittent edge support on plate in-plane compressive strength" Paper 2: Kubilay Cicek, "The impact of analysis assumptions on buckling prediction in open-web steel joists" Paper 3: Maha Essa, "Experimental testing of single-overhanging I-shaped steel girders" Paper 4: Hyeyoung Koh, "Fiber optic sensing for buckling detection on profiled steel deck" | 03/22/2024 | 8:00 am | SSRC Annual Stability Conference | John Kintz, PE, Rajshri Chidambaram Muthu Kumar, Kubilay Cicek, Hyeyoung Koh PhD, Ali Imanpour |
| QC11 | Best Coating Practices: Taking the PAIN out of PAINT | It's just paint, right? Wrong! Complex coatings require sophisticated process control and an understanding of how they work on prepared steel surfaces. Learn best surface preparation and coating application practices (and the associated in-process quality checks) to help avoid problems or failures and take the PAIN out of PAINT. | 03/22/2024 | 8:00 am | QualityCon, NASCC Online | Zane Keniston, William D. Corbett |

| | | | | | | |
|-----|--|---|------------|---------|---------------------------|---|
| W12 | Steel Trade Apprenticeships: Know Enough to Be Dangerous, or Really Safe, Actually | Embark on a comprehensive exploration of the intrinsic value of a structured training program within the steel trade sector, as two trade apprenticeship administrators guide you through this informative session. Delve into the pivotal role played by Registered Apprenticeship (RA) oversight in nurturing and sustaining structured training programs, offering mutual benefits to both employers and employees. Gain insights into the substantial advantages realized through the well-established Ironworker Apprenticeship program. Following this illuminating overview, join a compelling journey with Capone Iron Corp., a Certified AISC Member fabricator, as they establish their Registered Apprenticeship program in today's policy climate. Uncover the motivations driving their decision, navigate the challenges they encountered, and explore the inventive solutions they devised. Capone's experience provides invaluable insights and serves as an inspirational guide for those venturing into their own apprenticeship endeavors. This session is essential for anyone aiming to harness the transformative potential of apprenticeships as the foundation of their own workforce development initiative. | 03/22/2024 | 8:00 am | Workforce Development | Jennie Traut-Todaro SE, LEED A.P., Lucie Kinney, Lee Worley |
| Y7 | Letting the Light In With Steel: Austin Central Library Design Story | Aspiring to be the best daylight library in the world, the primary design goal was to leverage daylight to create a space that is bright, open, and welcoming through its connection to the natural environment. Consequently, structural engineering is on display throughout the building in both obvious and subtle ways, manifesting innovation from the foundation to the roof. The artful use of structural steel was critical to bringing the architectural vision to life without compromise. | 03/22/2024 | 8:00 am | Case Study | Luke Nelson PE, Brian Ward |
| B11 | Advancing Steel Bridges with Innovative Technologies | Innovative technologies have the potential to revolutionize steel bridge design, analysis, fabrication, inspection, and repair. This session will explore two emerging technologies that have the potential to impact the steel bridge industry positively. The first presentation will focus on the use of LiDAR and other scanning technologies for corrosion measurements. Using the data collected, AI is being trained to estimate the remaining capacity of deteriorated beam ends. The second presentation explores recent experimental investigations of large-format metallic additive manufacturing (3D printing) for use in the steel bridge industry. Extensive tensile and impact testing characterized the as-fabricated material performance, while cyclic testing quantified the fatigue performance of machined and as-built surface finishes. | 03/22/2024 | 8:00 am | Bridges, NASCC Online | Ryan Sherman, Aidan Provost, Hannah Kessler |
| F15 | Fundamentals of Project Scheduling for Steel Fabrication | This session will provide basic concepts necessary to plan and schedule the steel fabrication and erection process from award to final billing. Attendees will learn the fundamentals of Critical Path Scheduling (CPM) and how to determine the level of detail required to predict outcome but still enable efficient updates to the schedule. The speaker will emphasize the importance of the project schedule at bid and use examples to show how the schedule evolves with time. Concepts of baseline, resource management, and presentation of the schedule in different forms to provide tools to manage the shop and customer demands will be taught. | 03/22/2024 | 8:00 am | Fabrication & Erection | Mark Holland |
| C11 | Shearly Perfect | This session will focus on practical guidance on ensuring your modeled connections, particularly shear connections, turn out as "perfect" as possible. | 03/22/2024 | 8:00 am | Connections, NASCC Online | Larry Muir, Carlo Lini SE PE |

| | | | | | | |
|-------|---|---|------------|---------|-------------------------------|--|
| SEI22 | Stainless Steel Design with ASCE 8-22 | The new ASCE 8 standard, completed in 2022, and publicly released in May of 2023 provides a comprehensive standard for design of cold-formed stainless steel structures. This session will cover the updates and key design points for designing stainless steel structures from coil and sheet. In addition an overview will also be provided of the new AISC 370 standard for stainless steel design of bar, plate, and rolled shapes. | 03/22/2024 | 8:00 am | SEIcon | Nancy Baddoo, Benjamin Baer SE, PE, Benjamin Schafer PE, PhD |
| SEI34 | Agreement Basics for Engineers | Professional liability lies at the heart of a Civil Engineer's everyday life. "risk management" conjures up visions of contracts, attorneys, and the courtroom. Unfortunately, the vision seldom connects with daily engineering practice. While contracts, attorneys, and the courtroom are vital for resolving disputes, risk management also includes engineers knowing what activities, projects, or problems to pursue, which ones to avoid, and what level of quality is appropriate (standard of care). Education about contracts is usually taught by attorneys or risk managers, not engineers. For this reason, many of the essential professional practice issues are missing. Therefore, while the title "Agreement Basics for Engineers" implies information about contracts, this document, unlike many others, attempts to focus on professional practice issues. The session will present an introduction and summary of "Agreement Basics for Engineers" with interjections of several actual claim experiences where a claim could have been prevented by applying the knowledge contained in the document. | 03/22/2024 | 8:00 am | SEIcon | John G. Tawresey SE, Jim Harris |
| N11 | Blast-Resistant Design of Steel Buildings | This session will provide architects and engineers with an introduction to blast-resistant design of steel buildings. The physics of explosions and blast loads will be introduced along with their interaction with building and structures. Blast-resistant design and detailing of steel components, connections, and structures will be discussed using design examples based on real projects. Typical analysis methods, software tools, design criteria, and performance requirements for government and industrial buildings will also be covered. | 03/22/2024 | 8:00 am | Design & Analysis/Engineering | Aldo McKay PE |
| SA11 | Common Rigging Mistakes and How to Avoid Them | At any moment during the work week in the US there are countless rigging scenarios that are taking place. With that kind of frequency in overhead lifting it is critical that the rigger has accounted for all factors in ensuring that the lift they are making is safe. It is important to know and never assume that your riggers have the knowledge and training needed to ensure that all overhead lifts are being made safe and all factors are accounted for such as: sling angles, sling tensions and rigging capacities. Most employers would be shocked to discover that many riggers, whom they rely on to ensure safety, cannot even read simple capacity charts and perform basic mathematical calculations. Scott Seppers of Trivent Safety Consulting, a former rigger and iron worker of 20 years, has identified some of the most common mistakes made by riggers in the field. Please join him as he discusses these common mistakes and how to properly safeguard against them occurring on one of your projects. | 03/22/2024 | 8:00 am | SafetyCon | Scott Seppers, Harvey C. Swift, John Schuepbach |
| B22 | Breathing Life into Bridges Through Targeted Rehabilitation | The average age of steel bridges in the United States has now exceeded the design life for any bridges built prior to 1975. We continue to rely on these stalwart structures that have served our communities well, but some may begin to show need of repair. Repairability of steel bridges has always been a standout characteristic that empowers owners to safely extend the life of bridges well into the future. Two presentations will focus on targeted aspects of steel bridge rehabilitation that bring to light new and innovative practices to increase load carrying capacity and improve fatigue resistance. Practical and achievable, this session will share ideas that every owner and designer should hear. | 03/22/2024 | 8:00 am | Bridges | Todd Niemann, Finn Hubbard PE, Eric Weissinger PE |

| | | | | | | |
|------|---|--|------------|----------|-------------------------------|--|
| Y8 | SEAA 2023 Project of the Year - Transforming I-66 Outside the Beltway | SEAA 2023 Project of the Year - Transforming I-66 Outside the Beltway. Learn how Williams Steel Erection completed a highly technical, complex steel erection project with innovative rigging and erection methods to safety and successfully complete the project. The project scope was to transform 22 miles of I-66 from Front Royal VA to Washington DC consisting of 22.5 miles from Gainesville, Va to I-495. This 3.7B project was a joint success of Express Mobility Partners, the Design Build Contractor - FAM Construction, LLC and Williams Steel Erection of Manassas, VA. The erection included the assembly and erection of 10 HOV flyover express lane access bridges (20 box girders). These bridges were erected with highway closure restrictions, limited letdown, no conventional shoring, along with managing material delivery. | 03/22/2024 | 8:00 am | Case Study | Katy Williams, Matt Skinner |
| W15 | Student-Only Event Forge Your Future: Exploring the Structural Steel Industry | Introducing local high school students interested in the AEC industry to the exciting world of structural steel through unique resources made available by The Steel Conference environment. The experience is a multi-faceted, half-day event featuring career path education, industry connections, an exhibit hall tour, an employer meet & greet, a steel facility tour (Triple-S), and a potential steel project tour. | 03/22/2024 | 9:00 am | Workforce Development | Jennie Traut-Todaro SE, LEED A.P., Parley Dixon, Andrew Parker, Cam Turney |
| B23 | Better Bridge Bracing | Cross-frame designs and layouts for longer-span and severely skewed bridges can challenge designers. However, the 10th Edition of the AASHTO LRFD Specifications contains various new requirements for assessing the adequacy of stability bracing and global bridge stability in I-girder structural systems. Similarly, advances have been made in tools available to evaluate the global stability of longer-span bridges and/or innovative framing arrangements. This session will focus on new analysis tools that enable designers to directly assess the stability requirements and a case study demonstrating the cross-frame design and layout for a severely skewed steel bridge and how the AASHTO 10th Edition would have influenced the design. | 03/22/2024 | 10:00 am | Bridges | Donald White PhD, Dusten Olds, Ryan Sherman |
| SA12 | Intelligent Safety: Embracing AI for Safety Management | In an era where technological innovation is reshaping industries, embracing Artificial Intelligence (AI) can significantly elevate the efficacy and foresight in Environmental, Health, and Safety (EHS) Management. Delve into the myriad ways AI can be harnessed to enhance safety protocols, predict potential hazards, and foster a culture of proactive safety within the workplace. Through real-time monitoring, data analytics, and predictive modeling, AI unveils a new horizon of possibilities in making workplaces safer and compliant. Explore with us the journey of intertwining AI with EHS programs, unleashing a realm of operational resilience and inherent safety. | 03/22/2024 | 10:00 am | SafetyCon | Ben Thornburg, John Schuepbach |
| N15 | View from the Top: How an Erector Bids a Steel Project | Many engineers have questions about impacts of the design on the erection and schedule. This session will focus on the ins and outs of how erectors bid steel projects, with tips for engineers to consider early in the process. | 03/22/2024 | 10:00 am | Design & Analysis/Engineering | Colby Tribble |
| Y5 | Raising and Leveling an Existing Pedestrian Bridge at SFO | The southern end of the existing Terminal 1 pedestrian bridge was recently lifted off its supports at each end, and raised 5' at its southern end, to facilitate a bearing replacement and leveling. This presentation will discuss the detailed jacking sequence developed by Degenkolb and implemented by Herrick Steel. | 03/22/2024 | 10:00 am | Case Study | Alan Roberts SE, PE, Matthew Porter PE |

| | | | | | | |
|-------|---|--|------------|----------|-------------------------------|--|
| SEI11 | New Build or Retrofit – educating (and education) of the structural engineering profession about JEDI | Justice, diversity, equity, and inclusion are major societal issues within the US today; however, these issues do not stop at the walls of our structural engineering firms or academic institutions. Rather, we are watching how these issues are permeating through our profession either in the types of projects firms are considering, interactions with clients, understanding how large civil infrastructure impacts societies, or through retention of structural engineers within firms, academic institutions, or within the profession as a whole. At the 2023 Structures Congress, two panels were convened in a session to discuss the challenges early career professionals (industry and academia) face as it pertains to JEDI and the challenges institutional decision makers face in their firms on continual education and decisions with respect to clients and donors. Audience members engaged in an active conversation for over 45 minutes after the panel on discrimination within the workplace, solutions for addressing JEDI within the SE profession, and additional challenges SEs are facing with respect to JEDI. The goal of this session is to continue the conversation from the last to spotlight this topic and provide space for SEI members to openly discuss this very critical issue within our community. This is a multi-faceted topic that touches upon educating new engineers on the importance of JEDI within structural engineering and educating existing engineers on how to work with people of varying identities and backgrounds. Therefore, this session will acknowledge the other sessions on education to thread a common theme through these groups of sessions. | 03/22/2024 | 10:00 am | SEIcon | Elaina Sutley PE, PhD, LEED A.P., Daniel Linzell PE, PhD, Erica Fischer PE, PhD, Marcus Freeman PE, Cambria Flowers SE, PE, Rose McClure |
| N12 | Cold Storage Design | There are several unique considerations when designing a steel-framed cold storage structure. This session will review the various unique challenges that arise with this type of structure including thermal movements, interface with cladding and durability. | 03/22/2024 | 10:00 am | Design & Analysis/Engineering | Phil Mesker, Troy Dye SE |
| A11 | Shaping Visions into Reality: Parametric Modeling in Chicago O'Hare's Expansion | Architects come up with forms and shapes that are not always easy to engineer, but for Chicago O'Hare's airport expansion a solution was found using parametric modeling. The architect and engineer will discuss how the result satisfied structural integrity, constructability and, of course, the architect's vision. | 03/22/2024 | 10:00 am | Architecture | Mark Hendel PE, Kyle Ingber AIA |
| B12 | Major River Crossings - Challenging Design & Construction | The design and construction of major bridges across large navigable rivers presents many unique challenges. Not only from the bridge type and span arrangement selection, but also from the impacts of navigation traffic on the viable construction techniques and the impact of those challenges to refining the design of the bridge superstructure. This session will highlight two recently constructed steel bridge projects and how these challenges were overcome. The US 60 Smithland Bridge over the Cumberland River crosses a difficult s-curve stretch of the navigable river. The final design featured a 700-ft span modern Warren truss design featuring simplified connections, eliminated sway lateral bracing, and a mix of open and closed truss shapes for fabrication efficiency. During construction, the Contractor had to develop a float-in concept for the 700-ft truss span that utilized a riverport facility for erection and a 15-mile float up the Ohio River and into Cumberland River before being lifted into place, one of the longest known float-ins in North America. A \$224 million WVDOH design-build project along Interstate I-64 near Charleston, WV features dual-structure steel I-girder river crossings with main spans of 562'-6", the longest in the United States. The structure configuration and span lengths took advantage of existing substructure units, a navigable river, strand-jacking to lift the main span, and a "conventional" superstructure type to provide a cost-effective winning solution. While the superstructure was a "simple" steel girder bridge, its size and site constraints presented many design and | 03/22/2024 | 10:00 am | Bridges, NASCC Online | Taylor Perkins SE, PE, PhD, Tony Hunley SE, PE, PhD, Tony Ream, Jason Fuller PE, Austin Hart |

| | | | | | | |
|-----|---|---|------------|----------|-------------------------------|--|
| | | construction challenges including shipping lengths and piece weights; details to allow flexibility for fabricators; and complex analysis considerations such as nonlinear buckling, live load time history, thermal gradient, and others not often associated with steel girder bridge. | | | | |
| T10 | AI for Steel Fabricators & Erectors How AI is transforming structural steel workflow | Artificial Intelligence is impacting every arena of our lives. Whether it's chatGPT, self-driving cars, or automated machinery, fabricators and erectors are asking how they can leverage AI to solve their biggest challenges. Some of those challenges include labor shortages, capacity constraints, automating manual, repetitive and tedious workflows, and prioritizing technology integration. Join us in this session as we explore how steel fabricators and erectors are already leveraging AI to solve their biggest challenges and how you can use AI to address your biggest challenges. | 03/22/2024 | 10:00 am | Technology | Daniel Kamau P.Eng., Grayson Ingram, JP Martinez, Dave Clark |
| D12 | The NISD Quality Procedures Program - How the Steel Detailing Office Quality Procedures benefits the Steel Industry | This session focuses on the purpose, procedures and processes offered with using QPP Certified Steel Detailers. Attendees will receive a comprehensive review of how the procedures included with the QPP program supports quality control in the steel detailing process, what specific behaviors engineers and steel fabricators may expect, and how the Quality Procedures Program supports the production of quality shop detail and erection drawings. | 03/22/2024 | 10:00 am | Detailing | Kerri Olsen |
| Z12 | Building Your Growth Engine- Develop your strategy, build your team, execute your plan | Matt Smith, PE is a dynamic owner who grew his business 20X with a sound strategy and exceptional execution. In this session you will learn how to develop a strategy for your business, how to implement and execute that strategy, how to develop your people and how to adjust over time. This will be an interactive session with a goal of addressing your concerns. Business Statements: "If you don't create your own business strategy, the market will do it for you" The clearest path to run is to try to be everything to everyone. The path to mediocrity often comes from our current relationships pulling us into new markets or new regions etc. "Human capital is the primary engine for growth" Most everyone today recognizes that our true path to lasting success is our people. Unfortunately, we simply can't buy our way to success here. If we rely upon stealing great people from our competitors, with rare exceptions we only serve to elevate our costs and seldom get long term results. We have to grow our future. "You can't do this work alone" Actually, you have to do the bulk of this work internally. Consultants can help refine your strategic direction and formalize your development programs, but they won't and can't understand what truly makes your business great and what skills are required to excel within your business. | 03/22/2024 | 10:00 am | Business | Matt Smith PE, John Schuepbach |
| N25 | FastFloor – The Need for Speed – Session 2 | Research and development of the FastFloor system have been underway for more than 1 year. During this time, detailed analytic studies have been performed and physical testing for vibration and acoustic performance has been conducted. This session will highlight the results of work completed to date as well as provide an overview of ongoing research efforts. | 03/22/2024 | 10:00 am | Design & Analysis/Engineering | Matthew Eatherton, Benjamin Schafer PE,PhD, Onur Avci PE,PhD |
| N8 | Common Sense Engineering Practices for a Practical Engineered Erection Plan | This session will help guide Erectors through an Engineered Erection Plan prepared by an Erection Engineer, by applying common engineering principles to stability of partially erected structures. Erectors will gain from the knowledge of engineering principles so that they may identified potentially short comings in the field, and better plan for success. | 03/22/2024 | 10:00 am | Design & Analysis/Engineering | Michael Kempfert PE,PhD, Thomas Getschman |

| | | | | | | |
|-------|--|--|------------|----------|---|--|
| SEI23 | Machine Learning in Risk Analyses of Structural Engineering | Civil infrastructure systems are becoming more complex while more critical for societal well-being. These infrastructure systems, however, are exposed to various natural hazards posing risks of disruptions to their critical services, thus requiring risk-informed decision making for preventive maintenance, and post-hazard recovery and adaptation. In recent years, with the rapid improvement of artificial intelligence (AI), machine learning (ML), and the internet of things, infrastructure management has gained access to large amounts of data, which offers great opportunities to improve decision-making abilities. At the same time, some observations about the performance of structures and infrastructure systems during extreme events, while growing, remain still limited, raising questions about how to best utilize these limited data to gain the most insight about complex structure and infrastructure behavior and performance. With recent advancements in AI and ML techniques and the new capabilities they offer in tackling complex problems that require prediction and optimization, there is a strong argument that the future of many professions, especially in engineering, is tangled with AI and ML. Although significant progress has been made in recent years, AI/ML applications to risk assessment and management of civil structure and infrastructure systems are at very early stages of development. This session will discuss the application of machine learning (ML) and artificial intelligence (AI) in the risk and reliability analysis of structural systems. Presentations will cover data-driven applications of ML/AI in risk analysis of structures, recent progress of AI/ML in failure risk analysis of lifeline infrastructure systems, and ML/AI application in decision-making abilities. | 03/22/2024 | 10:00 am | SEIcon | Yue Li, Ram Krishna Mazumder PhD, Xiaowei Wang PhD, De-Cheng Feng PhD, Ao Du PhD, Mohsen Zaker Esteghamati PhD |
| SEI35 | Advancements and Challenges in Fire Engineering Codes and Standards: Implications for Practicing Engineers | This session on fire engineering will cover several topics related to code changes and their impact on practicing engineers. The first presentation will focus on the development of design-basis fire hazard levels for highway bridges, which will provide guidance on the proximity of bridges to fuel sources, the size of fires, and the likelihood of fire occurrence. The second presentation will discuss post-fire rebar-concrete bond degradation and its importance in assessing damage to reinforced concrete structures. The third presentation will focus on structural fire engineering for highly secured building environments, which presents unique challenges due to the need for increased fire protection measures. Finally, the session will conclude with a presentation on the inaccuracy of current codes and standards in evaluating the fire resistance of reinforced and prestressed concrete beams using binary restrained or unrestrained classification. The presentation will provide simplified design guidelines to help practicing engineers make more accurate predictions about fire resistance and prevent failures caused by fire. Overall, this session will provide valuable insights into the latest developments in fire engineering and their impact on engineering practice. | 03/22/2024 | 10:00 am | SEIcon | Shalva Marjanishvili SE,PE, Spencer Quiel PE,PhD, Kevin Mueller PE,PhD, Puneet Kumar PhD, Nima Tajik PhD |
| N26 | Floor Vibrations for Sensitive Equipment | Attendees will learn about the advantages and disadvantages of various options when designing suspended composite floors for highly sensitive equipment. A practical example of a composite floor vibration design in a Mixed-Use Lab building will be presented. | 03/22/2024 | 10:00 am | Design & Analysis/Engineering, NASCC Online | Amy Inhofer SE, Yvonne Tsui, SE, Ammon Hedin |
| C12 | The Drive for Faster Steel Connections | This session will detail the research and development of a novel drop-in connection, including a comprehensive exploration encompassing the experimental findings derived from full-scale testing and numerical results. The session will illustrate how cutting-edge engineering and empirical insights converge to redefine the possibilities of steel connection design. | 03/22/2024 | 10:00 am | Connections, NASCC Online | Matthew Yarnold PE |

| | | | | | | |
|------|---|--|------------|----------|---|---|
| N39 | Old Meets New: Creating Sound Welds to Old (pre-1960) Structural Steel | The introduction of ASTM A36 steel in the early 1960s marked a huge leap in weldability. Although pre-1960 steels (ASTM A7, ASTM A9, AREA and AASM steels, and pre-standardized steels) might be deemed "weldable" on the basis of compositional analysis, the older manufacturing processes tended to produce steels that frequently exhibit soundness concerns that make some older steels susceptible to lamellar tearing. Join us to learn how structural engineers can use metallographic examination of the old steel along with thoughtful design of the welded joint details to mitigate lamellar tearing susceptibility. | 03/22/2024 | 10:00 am | Design & Analysis/Engineering, NASCC Online | Conrad Paulson SE,PE, Tim Kern PE |
| M10 | The AISC Code of Standard Practice: Surprise! The COSP is the GC's Friend | The CoSP has provisions for almost all parties involved in a construction project using structural steel including the Owner, General Contractor, Architect, Engineer of Record, Fabricator and Erector. This session will review ways the CoSP applies to all parties involved in the structural steel project and how it promotes a teamwork approach to help all parties be part of making the project a success for all. | 03/22/2024 | 10:00 am | Manuals, Standards, and Design Guides | Tim Bradshaw PE |
| QC12 | Shop Welding Fundamentals for D1.5 | Are you looking to learn the basics of bridge welding? Then, this is the session for you. Topics will include learning about WPSs, setting up your machine and steel, to measuring your welds. Then, we'll move on to a few more advanced topics toward the end, along with time for questions and answers. | 03/22/2024 | 10:00 am | QualityCon, NASCC Online | Anthony Phillips, Art Bustos |
| W13 | Revolutionizing the Workforce: Unveiling Upcoming Equipment Innovations and Their Transformative Impact | Join us for an enlightening session delving into the future of technology-driven solutions that combat the industry's skilled trades shortage. Discover groundbreaking advancements poised to revolutionize productivity, witness real-world cases of seamless workforce integration with state-of-the-art equipment, and unveil the dynamic training strategies driving this transformative shift towards a more empowered tomorrow. | 03/22/2024 | 10:00 am | Workforce Development | Adam MacDonald, Kris Sikes, Mike Flagg, Erik Michener, Louis DiCaire, Christian Colombo |
| S12 | Stability Floor and Roof Systems II | Paper 1: Sheila Ariana, "Computational and experimental comparison on stability behavior of the cold-formed steel diaphragm sheathed with oriented strand boards" Paper 2: Divyansh Kapoor, "Influence of end connectivity on the out-of-plane buckling capacity of light-gage steel corrugated panels" Paper 3: Rohola Rahnavard, "Understanding the behavior of built-up cold-formed steel lightweight concrete (CFS-LWC) composite beams" | 03/22/2024 | 10:00 am | SSRC Annual Stability Conference | Sheila Ariana, Divyansh Kapoor, Rohola Rahnavard, Mina Seif |
| W14 | Industry Collaboration to Solve a Statewide Skilled Trades Shortage | Work IN Roads is an Indiana-based, heavy civil engineering and construction collaboration aiming to throw all they have at the skilled trade shortage. The program focuses on civil construction pathway programming for high school students. They support the pipeline by increasing awareness and connecting students to employers, ultimately providing better roads, better careers, and a better living. The unique, collaborative approach of all the industry stakeholders supporting the state's transportation infrastructure network provides a lesson in progress and growth that could potentially be replicated in your own neck of the woods. | 03/22/2024 | 11:15 am | Workforce Development | Eric Fisher, Chris Raebel SE,PE,PhD |
| N13 | Combined and Refined. How the industry is bolting forward. | The combined method of pretensioning has been approved in the latest editions of the RCSC Specification for Structural Joints Using High-Strength Bolts and the AISC Specification for Structural Steel Buildings. Learn about the history and concepts behind the new pretensioning method, how it differs from existing practices, and most importantly, how it improves upon them. We'll take a deep dive into the science of the combined method, demonstrate how it can improve reliability, and how it brings quality and efficiency to bolting. And we'll peek at what bolting might look like in the next 5 years. | 03/22/2024 | 11:15 am | Design & Analysis/Engineering | Chad Larson, James Swanson |

| | | | | | | |
|-------|--|--|------------|----------|-------------------------------|---|
| N27 | Interactive Steel Quiz | Various steel-related questions will be presented to the audience and the audience will have the opportunity to electronically vote for the correct answer. A brief discussion will follow explaining why the answer is correct. Topics include anchor rods, historic steel, welding, seismic connections, etc. | 03/22/2024 | 11:15 am | Design & Analysis/Engineering | Yasmin Chaudhry PE, Tim Price |
| SEI12 | Sharing the Stories of Real Claims: A Panel Discussion | A panel of practicing structural engineers will share stories of real professional liability claims that they have had to deal with in the course of business, what led to them, how they were resolved, and what lessons can be shared from those experiences. | 03/22/2024 | 11:15 am | SEIcon | John G. Tawresey SE, Kevin Chamberlain SE,PE, Bruce Burt, Justin D. Naser SE,PE |
| SEI24 | Innovations in Modular, Rapidly Erectable, and Deployable Structures | Modular, rapidly erectable, and deployable structures offer unique strategies for the accelerated construction of buildings and bridges, with specific applications for rapid replacement, disaster relief, and military operations. This session will introduce the audience to this class of structures, beginning with a brief overview by the moderator. The need for these structures will be discussed by the first presenter, with a focus on rapid replacement for transportation network resilience particularly considering increasing demands due to extreme weather. The second and third presenters will introduce active research projects in the area, indicating opportunities for growth and innovation for both bridge and geotechnical applications. The final presenter will then introduce resources for practicing engineers who seek to design and build these structures, including appropriate building code provisions, standards, and tools. The session will then wrap up with a panel discussion by the presenters where the moderator will ask targeted questions and the audience will also be able to ask questions. This session is proposed by the Modular, Rapidly Erectable, and Deployable Structures Committee of SEI. This would introduce the broader structural engineering profession to the need for these structures, active research projects, and available resources. It includes speakers from across academia and industry to provide a holistic approach to the topic, including cutting-edge research and practical considerations for designers. | 03/22/2024 | 11:15 am | SEIcon | Ashley Thrall PhD, Erik Zuker PE, Henrique Martins, Ann Sychterz PhD, Bill Gould PE |
| SEI36 | Case Studies of Complex Girder Erection and Temporary Works | The session will discuss four case studies associated with complex girder erection, rigging, and temporary works. The goal of each case study will be to present the project in terms how the unique challenges were addressed, with a focus on structural behavior and design requirements for this type of work. Various specifications and resources will be introduced with each of the case studies. The session will conclude with a brief summary of the key points and open for Q&A. 1. 30 Crossing – Little Rock, AR: The 1,366'-6" long river unit carries eastbound and westbound I-30 over the Arkansas River using 126" web plate girders. The erection plan utilized various temporary works including temporary bents and pier brackets with drop-in segments. Girder behavior, including in- and out-of-plane deflections and rotations, were evaluated to ensure that a constructable sequence was developed. 2. Marseilles Dam Repairs – Marseilles, IL: The Marseilles Dam was damaged by several runaway barges due to strong currents from heavy rainfall. The Army Corps of Engineers issued a contract to replace three of the tainter gates and repair two others. Due to a utility bridge located directly over the center of gravity of each gate, a unique C-shaped rigging beam was designed and detailed to pick the 80-ton gates without relocating the utilities. 3. Burlington Northern Santa Fe (BNSF) Railroad over the Central Tri-State Tollway (I-294) – Hinsdale/Western Springs, IL: The bridges carrying BNSF over the Central Tri-State needed to be reconstructed in a time-sensitive manner to mitigate both rail and roadway traffic impacts. 4. Metra Milwaukee District West | 03/22/2024 | 11:15 am | SEIcon | Hossam Abdou SE,PE,PhD, Matthew Hellenthal SE,PE |

| | | | | | | |
|-----|--|--|------------|----------|-------------------------------|--|
| | | Line over the Fox River – Elgin, IL: The Milwaukee District West Line carries Metra rail commuters over the Fox River with US 20 passing at a skew overhead. | | | | |
| C13 | Transfer Forces: What they are and why they are important | What is a transfer force? How do you show transfer forces on drawings? Who is responsible for calculating them? Mara Braselton, PE, will answer these questions and more using real-life project examples, calculations, and lessons learned from years of experience. | 03/22/2024 | 11:15 am | Connections, NASCC Online | Mara Braselton PE |
| Y4 | The Spiral: Inspiring the Future of Workplaces | Step into the future of the workplace with The Spiral, which is heralded as New York's most daring and culturally significant new tower. This groundbreaking project showcases the pinnacle of modern architecture and engineering expertise, reshaping the iconic NYC skyline. The Spiral is a Class A office tower at the forefront of the redevelopment of Hudson Yards in New York City. The tower slowly reduces its volume with each run, following the zoning envelope and creating an elegant silhouette on the skyline of Manhattan. Its stepping language resonates with the design aesthetics of the classic Manhattan skyscrapers such as the Empire State Building and the Rockefeller Center. At the same time, it adds quality to each office floor by creating an optional double-height amenity space, an accessible terrace, and the possibility to connect adjacent floors with a grand staircase. The exterior green space and the interior workspace intertwine seamlessly to create the workspace of the future. The Spiral integrates the green space into the workspace seamlessly. Each floor has a terrace and an adjacent amenity space, allowing people to move easily between inside and outside green areas while enjoying the beneficial effects green space has on productivity and overall well-being in the workplace. Join us to delve into the visionary concept driving this project and explore the dynamic interplay between architecture and engineering that brought this extraordinary building to life. | 03/22/2024 | 11:15 am | Case Study | Dominyka Voelkle, Patrick Chan, Judson Filkins, Jonathan Tavarez, Chris Santulli, Michael Morrissey |
| B13 | AASHTO Updates - What's Changing | AASHTO has new updates coming out in the new Bridge Design Specification and this session will cover current and future proposed updates to steel bridges. | 03/22/2024 | 11:15 am | Bridges, NASCC Online | Brandon Chavel PE, PhD, Finn Hubbard PE, Jamie Farris PE |
| N40 | What's hot in fire engineering – steel code advancements | New code advancements have provided opportunities for the application of structural fire engineering in building design. This session will consist of two parts: the first part will include an overview of codes for steel construction – through AISC, AISI, and ASCE – in the field of structural fire engineering. The second part of the session will provide an overview of new code developments, how these new developments are intended to be implemented, and where codes are going in the future as it pertains to fire and steel structures. | 03/22/2024 | 11:15 am | Design & Analysis/Engineering | Erica Fischer PE, PhD, Brian Meacham PE, PhD, Amit Varma PhD, Thomas Gernay PhD, Kristi Sattler SE, PE, PhD |
| D13 | Connection Design - Mutual Solutions for the Engineer and Fabricator | This session takes an in depth look into identifying and interpreting structural drawings regarding connection design, and includes case studies with contract drawing sections, RFI's ASI's, Addendums and other Alternatives. Discovery and Explanation on missing information within these details, together with some typical and economical resolutions for these omissions as discussed with one Steel Fabricator and Engineer team. | 03/22/2024 | 11:15 am | Detailing | Ravi Polamarasetty PE, Imre Szombathy |
| C14 | Treetop Trail at the MN Zoo: Technical Deep Dive | Join us for Part 2 of the fascinating look at the Treetop Trail at the Minnesota Zoo, which converted an existing steel monorail into the world's longest continuous pedestrian loop. Structural steel was utilized for both strengthening the existing built-up box beam monorail and structuring the new walking path on top of it. Encompassing a 1.25 mile long loop without any expansion joints, balancing thermal and lateral demands also presented a unique challenge for the design team. This session provides a | 03/22/2024 | 11:15 am | Connections | Jon Wacker, Craig Huhtala |

| | | | | | | |
|------|--|---|------------|----------|--------------------------|--|
| | | technical deep dive into the structural design challenges and solutions for the project, including an explanation of how the AISC design specifications were applied to this unique structure. | | | | |
| EW11 | AISC 360/341 Steel Member Design in RFEM 6 | Experience RFEM 6, the most powerful FEA structural analysis software, with a steel design example utilizing the AISC 360-22. View the efficient analysis and design process from start to finish with the intuitive user interface and CAD-like modeling tools. Comprehensive member design ratios, equations, and variables with code references provide full program transparency. Additionally, calculate seismic requirement checks according to the ASIC 341-22 including member ductility, stability bracing of beams, and slenderness ratios as well as the members' required connection strengths. See first-hand how RFEM takes you beyond your current design software. Presented by: Dlubal Software, Inc. Exhibitor Workshops are not eligible for PDH credits | 03/22/2024 | 11:15 am | | |
| A12 | Stainless Steel for Architects and Engineers | Demand is growing for high-performance and low-maintenance structural materials. This presentation focuses on stainless steel design and the benefits of using a material that is inherently durable, which will be illustrated by a range of recent applications. The structural performance of stainless steel will be compared to that of carbon steel, highlighting the key differences in the design provisions between AISC 370 and AISC 360 and addressing FAQs about the use of stainless steel as a structural material. | 03/22/2024 | 11:15 am | Architecture | Nancy Baddoo, Mattia Del Giacco PhD |
| EW29 | Who is Wurth? | At our workshop we will discuss who we are and what products and services we offer. Presented by: Wurth Construction Services Exhibitor Workshops are not eligible for PDH credits | 03/22/2024 | 11:15 am | | |
| Y6 | Preserving the Legacy: A Case Study in Transforming Boulder County Hospital's Future | Join this insightful session that delves into the remarkable transformation of Boulder County Hospital. Rather than succumbing to demolition, this hospital found new life through a unique deconstruction and reuse initiative. During the deconstruction of the hospital, 536 steel pieces were carefully salvaged, with 90 of these being repurposed immediately on a new construction project and the remainder made available to the public. This endeavor was made possible through close collaboration between the City of Boulder, the General Contractor, and the demolition subcontractor, highlighting the importance of stakeholder engagement in such endeavors. This case study will illustrate the journey of implementing a steel reuse process and offer insights into creating a circular economy within the construction industry. The presentation will not only shed light on the environmental benefits of reusing steel but also address the significant challenges that one may encounter when attempting to incorporate steel reuse practices. | 03/22/2024 | 11:15 am | Case Study, NASCC Online | Andy Paddock PE, Alex Hesse PE |
| QC17 | What do DOTs have to say about Quality? | Have you ever wanted to ask a Department of Transportation about quality control or quality assurance or hear theirs? Now is your chance! This panel will be composed of three of the top DOTs from across the country who will be giving their perspective of the quality world and will be answering questions from the audience. | 03/22/2024 | 11:15 am | QualityCon, NASCC Online | Nina Choy PE, Matt Filcek PE, Linda Hale |
| Z13 | Effective Communication for Project Managers | Effective communication is key to successful project management. In this session you will learn how to improve your communication skills. You will learn when to use an e-mail, a letter, or meet face to face. The session will focus on how to communicate with the shop, the customer, the engineer, the detailer, your owner, and others involved in project execution. | 03/22/2024 | 11:15 am | Business, NASCC Online | Mark Holland |

| | | | | | | |
|------|--|--|------------|----------|----------------------------------|--|
| Z14 | Maintaining Efficiency while growing your fabrication business | The growth of fabrication businesses presents challenges in maintaining efficiency during expansion. The three key steps for efficient and effective growth management are summarized in the acronym ACT: Automate Processes: To compete with larger fabricators, businesses should automate fabrication processes, utilizing technological advancements to increase capacity and efficiency. Control Information: Efficient management involves gathering, analyzing, and using information for quick decision-making. Trust Your People: Delegating responsibilities and trusting employees is crucial for successful growth. | 03/22/2024 | 11:15 am | Business | Ricky Horton |
| S13 | Special Topics in Structural Stability II | Paper 1: Nicolas Boissonnade, "Influence of residual stresses on the cross-section stability of WF shapes" Paper 2: Xinlong Du, "Deformation analysis of solar photovoltaic (PV) structures: lateral-torsional buckling of C purlins restrained by solar modules" Paper 3: Dehui Lin, "Flexural buckling tests on 1:4 scale wind turbine tower tubes" Paper 4: Raghavan Ramalingam, "Elastic post-buckling behaviour of single layer steel reticulated barrel vaults" | 03/22/2024 | 11:15 am | SSRC Annual Stability Conference | Nicolas Boissonnade, Kara Peterman, Xinlong Du, Dehui Lin, Raghavan Ramalingam |
| SA13 | OSHA Subpart R Steel Erection - Understanding, Bidding, and Executing | In this OSHA Subpart R Steel Erection safety session, we will discuss the importance understanding, bidding for and executing the requirements of OSHA Subpart R. Topics include: fall protection, controlled decking zones, starting and executing steel erection, hoisting and rigging, crane safety, How to Execute Site-Specific Erection Plans, Multiple Lifts, Column Anchorage Requirements, Beams and Columns Connections, Falling Object Protection and Training Requirements. CEU's will be awarded for this session. | 03/22/2024 | 11:15 am | SafetyCon | John Schuepbach, Mike Minter |
| B24 | Shear Studs - Fact or Friction | Recent research may allow for a reduced number of shear studs in composite steel bridges. Presentations will highlight the contribution of friction and adhesion as well as larger-diameter shear studs (up to 1-1/8"). | 03/22/2024 | 11:15 am | Bridges | Todd Helwig PhD, Alana Alves de Moraes, Shay Rutenberg |
| K3 | Think Global, Buckle Local: Exploring Local Buckling in Structural Steel | Structural engineers designing in steel must master yielding, buckling, and fracture limit states to create a reliable solution. This talk will focus on the role of local plate buckling in the global behavior of structural steel members. Local plate buckling is a fascinating phenomenon and one that every structural engineer should have some degree of comfort predicting and understanding. AISC Specifications provide guidance for how to avoid local buckling when desired, consider its effects when necessary, and control or leverage this limit state under extreme loading. In this talk, we'll delve into the roots of the AISC local buckling provisions, demystifying their origins and significance. As we look to the future, where advanced high strength structural steels are more common and every designer is pressed to maximize sustainability and minimize the thickness of the steel they employ, the importance of mastering local buckling is only growing. So, we will also examine some of the newest procedures, tools, and software that will give engineers of the future better predictions and more design flexibility. Together, we'll Think Global, Buckle Local, and explore this critical aspect of structural steel behavior. | 03/22/2024 | 12:30 pm | Keynote | Benjamin Schafer PE, PhD |