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Campus Connection Grants

The following is a list of recommended speakers from the 2025 NASCC: The Steel Conference. Other speakers from the Steel Conference may also be invited, from 2025 or earlier. You can browse all past conference sessions at learning.aisc.org. Filter by 'Conference Recordings and Papers' and the year.

Sessions marked with the following codes are most appropriate for the following programs.

CE: Civil/structural/construction engineering

AE: Architectural engineering

AR: Architecture

CM: Construction Management

Hunter Ruthrauff
X-Factor: The First Mass Customized Signature Bridge: A pedestrian bridge project can be an opportunity for a city to express its architectural identity. Some clients desire both the efficiency of prefabricated elements in their bridge as well as distinctive expression. In other industries, the maturation of steel 3D printing and parametrically powered web applications are powerful agents behind mass customization. This presentation explores the X-Factor concept of the first mass customized signature bridge through parametric design software and definition, interoperable tools, and processes that enable this project to make business sense. The parametrically driven Shape Diver Web Application puts the power of design at the fingertips of customers, and the cutting-edge steel 3D printing technology simplifies the fabrication and assembly process of this signature structure. [AE, AR, CM, CE]

Karen Grossett, Cam Baker
Branching Out: The Design and Construction Innovations Behind Pittsburgh's New Terminal: The new terminal building at Pittsburgh International Airport serves as the marquee project for the $1.1 billion Terminal Modernization Program. Distinguished by its iconic roof design and location above an active transit tunnel, this project required innovative approaches in both design and construction. This presentation will provide

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an overview of the project, highlighting three key features: the advanced foundation transfer system, the organically shaped roof structure, and its supporting tree columns. This presentation will explore the creative solutions applied throughout both the design and construction phases to bring this ambitious vision to life. [AE, AR, CM, CE]

Emma O'Brien
The New Frederick Douglass Bridge - 3 Different Perspectives: The New Frederick Douglass Bridge won the 2024 Bridge of the Year Award. This session takes a deeper dive into the design, the fabrication, and the construction of the bridge. [CE, CM]

Andrea Chiu, Holly Schaubert (primary contact for scheduling)
Building with HSS: Linking Manufacturing to Design: Do you need to know more about the design and construction of Hollow Structural Sections (HSS)? Whether you're using them for primary support members, architectural elements, or bracing, it's important to understand the best practices for HSS design. This presentation will cover HSS manufacturing, sustainability impacts, and insights from the fabricator community on how to optimize HSS detailing for optimized fabrication. [AE, AR, CE]

Matt Yarnold
AISC Research: Innovations and Applications with Asymmetric Shapes: A recent study established hot-rolled asymmetric steel I-beam (or A-Shape) cross-sectional dimensions (for potential adoption in Part 1 of the AISC Steel Construction Manual). The primary motivation for hot-rolled A-shapes is to improve steel building economy, speed, and efficiency. Medium- to long-span floor systems in residential and commercial buildings have utilized shallow steel-concrete composite construction to compete with flat slabs. These composite floor systems typically use built-up asymmetric steel beams, along with other elements. A hot-rolled section using partial composite construction can provide a faster and more cost-effective solution. Extensive numerical and experimental research was performed to ensure the A-Shapes could be efficiently rolled while the partial composite performance met the construction and in-service demands for shallow-depth floor systems. [CE, AE]

John Cross
Embodied Carbon of Construction Materials: What's In the Numbers: This is a deep dive into the numbers of sustainability. Steel production in the U.S. experienced an 11% decrease in GWP since 2021. The speaker discusses what's behind the decrease as well as standards behind global warming potential numbers, product category rule

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development, and environmental product declarations. Steel, concrete, and wood material EPD numbers are compared. [AE, AR, CM, CE]

Zac Brownson, Robbie Camann, Jamie Armitage (primary contact for scheduling)
A Landmark Case Study on Steel Reuse: the Boulder Community Hospital: Is it possible to dismantle a building, stockpile all of the steel, and then reuse it on a variety of other projects? The Boulder Community Hospital is a landmark project for the advancement of steel recovery and reuse in the United States. Hear from the project team as they share their approach to developing a unique steel deconstruction specification, establishing material testing protocols, and cultivating a reuse market in Boulder, CO. Attendees will gain valuable insights into the strategies and execution that made this project a success. [AE, AR, CM, CE]