

2025 ALEXANDER CHAJES DISTINGUISHED CEE HISTORY AND HERITAGE LECTURE



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Think Global, Buckle Local: Exploring Local Buckling in Structural Steel

Abstract: Local buckling is an important phenomenon in steel structures, and this talk aims to place the phenomenon in the much larger global context of what structural engineers have achieved for society and what work we have left to do. Utilizing an historical lens the talk explores the origins of local buckling in civil structures and how engineers harnessed the best theory of the time to understand and control local buckling. The simple ideas that underpin local buckling limits in current structural design are revealed, and along with it the possibilities for harnessing local buckling to create new thin efficient solutions for the future. Given the extreme state of current global infrastructure challenges, specific examples of steel innovations rising to meet these current conditions, and the importance of local buckling in these solutions is highlighted.

Bio: Benjamin Schafer, Ph.D., P.E., is the Hackerman Professor of Civil and Systems Engineering at Johns Hopkins University, the Director of the Ralph O'Connor Sustainable Energy Institute, and an active volunteer and leader on multiple AISC committees.



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