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Form, Force Flow: Structural Optimization in Practice

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ABSTRACT:

This presentation explores the practical application of structural optimization in engineering practice, demonstrating how the integration of optimization and computational methods enables engineers to achieve material efficiency, environmental sustainability, and architectural expression. The presentation provides historical context by tracing structural optimization's evolution from nature's principles and 20th-century pioneers to today's computational approaches.

BIOGRAPHY: Daniela Castano is a Senior Designer at Skidmore, Owings & Merrill (SOM), where she works on the design and analysis of complex structures, including international airports, large scale government facilities, and high-rise towers. Her work includes seamless integration between structural optimization and computational design methodologies, and performance-based analysis to deliver innovative and efficient structural solutions.
She earned her master's degree in Structural Engineering from Northwestern University and her bachelor's degree in Civil Engineering from the University of Houston. Additionally, she serves as a lecturer at Northwestern University, where she teaches optimization methods and force flow theory

Seminar Details

Friday, January 30, 2025 2:30pm – 4:00pm

UH Campus Classroom & Business Building Room CBB 110

Online via Zoom https://www.cive.uh.edu/research/seminars