



ARTISTE2025

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Keynote Speaker Bio



Mark Sarkisian, PE, SE, NAE, LEED

Skidmore, Owings & Merrill (SOM)

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Mark Sarkisian, PE, SE, NAE, LEED BD+C, is a Partner of Structural and Seismic Engineering at Skidmore, Owings & Merrill in San Francisco, California. He received his BS Degree in Civil Engineering from University of Connecticut where he is a Fellow of the Academy of Distinguished Engineers and his MS Degree in Structural Engineering from Lehigh University. He also received an honorary Sc.D degree from Clarkson University and an honorary MS degree from the Politecnico di Milano. In 2021, he was elected to the prestigious National Academy of Engineering (NAE) in the United States. His career has focused on developing innovative structural engineering solutions for over 100 major building projects around the world, including some of the world's tallest. Mark holds 15 U.S. and international patents for high-performance seismic structural mechanisms and environmentally responsible structural systems. He has written the book entitled "Designing Tall Buildings – Structure as Architecture" with the second edition recently released by Routledge -Taylor & Francis.

Keynote Title:

Innovative Applications of AI in Built Structures

Artificial intelligence is currently being applied across a wide range of fields, from self-driving car technology to art and music generation. The built environment can be enhanced through artificial intelligence (AI), from seismic assessment to construction verification and infrastructure health monitoring. A variety of computer vision approaches have been used for these purposes, including novel combinations of established machine learning, optical character recognition and geometric methods.

Using this technology and to help automate the construction verification process, machine learning models were trained to identify structural components from site photos and "read" shop drawings. These tools could be used to support construction inspection efforts and to reduce shop drawing review times from several days to a matter of hours, with an engineer reviewing a summary output from a machine learning program. Augmented reality techniques have led to creative methods of constructing structures. Examples will be shown where digital mapping of the site is overlaid with construction. Constructed projects designed by SOM will be presented.



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