ACEC

Presented by

Coalition of American Structural Engineers CASE

NCSEA National Council of Structural Engineers Associations

SEI ASCE STRUCTURAL ENGINEERING INSTITUTE

# 2025 Joint Summer Series: ARTIFICIAL INTELLIGENCE

Register Today

## Collaboration for a Stronger Future

The Structural Engineering Institute (SEI), the National Council of Structural Engineers Associations (NCSEA), and the Coalition of American Structural Engineers (CASE) have come together in an unprecedented partnership to advance the profession of structural engineering. This Summer Series marks the beginning of an ongoing commitment to education, innovation, and excellence in our field.

## Expanding Expertise Across Disciplines

This first-of-its-kind initiative brings together experts and thought leaders from across our organizations to deliver insightful, cutting-edge educational content. Covering a range of topics that span our collective expertise, this series is designed to strengthen your knowledge, broaden your perspective, and inspire the next generation of structural engineers.

## A Foundation for the Future

The Summer Series is just the beginning. As we move forward, we envision an ongoing collaboration that will continue to bring timely, impactful, and relevant educational opportunities to the structural engineering community.

Join us as we kick off this exciting new chapter—where knowledge meets innovation, and where collaboration builds a stronger future.

### Session One: Tuesday, June 24, 1:00-2:00 PM ET, Online

*Towards AI Adoption in the Structural Engineering Profession, Presented by NCSEA*

Speakers: Dave Martin, SE; Andrew Sundal, AIA, PE; and Emre Toprak, PhD, PE

### Session Two: Tuesday, July 29, 1:00-2:00 PM ET, Online

*AI Strategy for Engineering Leaders: What You Need to Know, Presented by CASE*

Speaker: Mehdi Nourbakhsh, PhD, P.E.

### Session Three: Tuesday, August 26, 2025, Online

*AI Developments that will Shape the Practice of Structural Engineering, Presented by SEI*

Speakers: Kristopher Dane, D.Eng., CPEM and M. Z. Naser, PhD, PE

Register Today

# More About the Sessions

**Session One: Tuesday, June 24, 1:00-2:00 PM ET, Online**

***Towards AI Adoption in the Structural Engineering Profession, Presented by NCSEA***

Artificial intelligence is already transforming project delivery across the AEC industry. Getting started with AI should be a priority for every practicing structural engineer and firm this year. This article and webinar will provide a roadmap for getting started with AI, offering practical strategies for learning, integration, and long-term growth. We will provide suggestions for how smaller firms can harness new technologies that amplify their strengths and give them capabilities that were previously not available due to limited resources, and guidance for midsize and larger firms to navigate the training and deployment challenges of leveraging AI across a larger enterprise.

### About The Speakers

#### Dave Martin, SE

**Associate Principal, Degenkolb**

Based in Oakland, Dave is active member of SEAOC. He holds a B.S. in Architectural Engineering from Cal Poly San Luis Obispo and an M.S. in Structural Engineering, Mechanics, and Materials from UC Berkeley. As a leader in adopting AI technologies and advancing BIM integration at Degenkolb, Dave plays a key role in both project management and internal technology initiatives.

His primary focus is large healthcare projects, though his experience also includes several seismic retrofit and tenant improvement projects. Dave is a member of the ASCE 41 committee and former secretariat. Currently, Dave serves on the NCSEA AI Grant team, which promotes practice-specific education and advancing the use of AI in the structural engineering profession. Dave is passionate about structural engineering because it uniquely combines science and design, form and function, and he finds great fulfillment in seeing his designs come to life, serving communities safely.

#### Andrew Sundal, AIA, PE

**Senior Associate, HGA**

Andrew Sundal's fascination with artificial intelligence (AI) and its potential to transform industries has been a driving force throughout his career. He is a licensed Architect and Structural Engineer and started at HGA 10 years ago as a "Computational Design Specialist".

Andrew now works as a Structural Engineer with a portion of his time devoted to research in innovation. This passion for AI and its applications culminated in a series of research contributions at HGA, where he has the privilege to lead multiple research projects, including projects aimed at exploring AI's impact on the built environment.

#### Emre Toprak, PhD, PE

**Senior Structural Engineer, WSP**

Dr. Emre Toprak is an Assistant Vice President of Structural Engineering at WSP. With 20 years of experience, Emre has led and managed a diverse range of projects in the profession, including new design buildings and portfolios of existing structures across Europe and the Americas. Emre specialized in the analysis, design, and evaluation of complex structures and holds a Ph.D. in Structural Engineering, focusing on the performance-based design of wall systems and their components in tall buildings.

Emre's digital leadership has been pivotal in driving organizational digital transformation and fostering a data-driven design culture. His expertise in structural-earthquake engineering and leadership in guiding digital initiatives have been instrumental in shaping the future of structural engineering services. Emre is also an active member of the NCSEA Foundation Artificial Intelligence team, contributing to initiatives related to education, tools, processes, and partnerships.

**Session Two: Tuesday, July 29, 1:00-2:00 PM ET, Online**

***AI Strategy for Engineering Leaders: What You Need to Know, Presented by CASE***

As AI technology reshapes engineering firms, companies need a well-defined AI strategy to stay competitive and foster innovation. This webinar provides leaders with practical guidance on the importance of having an AI strategy and presents a proven step-by-step framework for developing it in engineering firms. It also offers a framework to assess the AI maturity of engineering companies, enabling leaders to understand their current position and how to elevate their companies to the next level. The session also shares lessons learned and real-world examples from engineering firms that have effectively utilized AI to help leaders navigate their AI journey with confidence.

### About The Speaker

#### Mehdi Nourbakhsh, PhD, P.E.

**CEO, YegaTech**

Dr. Mehdi Nourbakhsh is an author, speaker, and CEO of YegaTech, a technology consulting company in the AEC industry specializing in AI strategy, governance, and implementation for AEC companies. As the author of two Amazon bestselling books "*Augment It: How Architecture, Engineering, and Construction Leaders Leverage Data and Artificial Intelligence to Build a Sustainable Future*," and "*Disrupt It: How Architecture, Engineering, and Construction Executives can Transform their Organizations in the Age of AI Disruption*," Dr. Mehdi co-created new frameworks for understanding and integrating AI technologies in AEC, establishing a solid foundation for innovation in the field.

**Session Three: Tuesday, August 26, 2025**

***AI Developments that will Shape the Practice of Structural Engineering: Presented by SEI***

Artificial Intelligence (AI) is positioned to revolutionize knowledge work. Examples can be seen in professional fields from medicine to law and there are several examples where AI may have a transformative impact on everyday engineering practices. This article highlights how Artificial Intelligence (AI) is shaping the civil engineering practices, with a focus on structural engineering. AI tools, such as those that analyze complex documents or use visual data to assess infrastructure, are being developed to make engineering tasks more efficient and reliable. Key areas include using AI to help interpret and improve codes and standards, automate document creation, streamline voting processes for standards approval, and assist in real-time monitoring and maintenance of infrastructure.

### About The Speakers

#### Kristopher Dane, D.Eng

**Associate Principal, Thornton Tomasetti**

#### M. Z. Naser, PhD, PE

**Assistant Professor, Clemson University and AI Research Institute for Science & Engineering (AIRISE)**

Dr. Naser is an assistant professor at the School of Civil and Environmental Engineering and Earth Sciences & a member of the Artificial Intelligence Research Institute for Science and Engineering (AIRISE) at Clemson University. His research group is creating Causal & eXplainable machine learning methodologies to discover new knowledge hidden within the domains of structural engineering and materials science. He chairs the SEI Advances in Technology Committee and is among the top 2% of highly-cited scientists worldwide, according to the Elsevier-Stanford study since 2022.

Need More Information?

Email Alec at coalitions@acec.org

ACEC

American Council of Engineering Companies
1400 L Street NW, Suite 400, Washington DC 20005-3502 | P: 202.347.7474 | E-mail: acec@acec.org