

Preliminary Technical Program

Thursday, April 4

8:30 – 10:00 a.m. Opening Plenary, <i>Fairfax Ballroom</i> Keynote Presentation: Kevin Kampschroer, <i>Director of the Office of Federal High-Performance Green Buildings and GSA Chief Sustainability Officer</i>				
10:00 – 10:30 a.m. Networking Break, <i>Fairfax Ballroom Foyer</i>				
10:30 a.m. – 12:00 p.m. Technical Sessions				
<i>Great Falls Room</i>	<i>Potomac Room</i>	<i>McLean Room</i>	<i>Vienna Room</i>	<i>Falls Church Room</i>
SESSION 1.1 Case Study	SESSION 1.2 Deliver	SESSION 1.3 Enclose	SESSION 1.4 Sustain	SESSION 1.5 Panel Discussion
<p>Minnesota State Capitol Restoration, Sarah Bersith, P.E., HGA</p> <p>The Public Safety Answering Center II: Synthesizing Safety and Security with User Wellness and Comfort, Gary Haney</p>	<p>Standardizing Virtual Design and Construction Performance Metrics and Project Key Performance Indicators, Calvin Kam, Ph.D., P.E., AIA, LEED AP, Stanford University</p> <p>Quantitative Assessment of Construction Site Pollutant Emission and Dispersion, Yi Chen, Chongqing Jiaotong University</p> <p>Best Practices for BIM Requirements, LOD, and Ensuring Compliance, T.J. Meehan, AIA, LEED AP, CADD Microsystems, Inc.</p> <p>Interactions of Multidisciplinary Indoor Comfort Factors Over Time in K-12 Classrooms, Kieren Smith, B.M., University of Nebraska-Lincoln</p>	<p>Daylighting and Visual Comfort Performance of Integrated Dynamic Roller Shades and Lighting Controls, Niraj Kunwar, Iowa State University</p> <p>Considerations for Shotcrete and Blindsided Waterproofing Applications, Kenrick Hartman, P.E., RBEC, RRC, RWC, REWC, LEED AP BD+C, Wiss, Janney, Elstner Associates, Inc.</p> <p>Strength of Unclipped Cold-Formed Knee-walls Under Uniform Lateral Loading, Deanna Engelmeyer, M.S., Milwaukee School of Engineering</p> <p>Facades, Fires and Failures – An International Problem with International Solutions, Robert Solomon, P.E., NFPA</p>	<p>The Solar Architecture Taxonomy: A Historical Analysis, Anthony Denzer, Ph.D., University of Wyoming</p> <p>Virtual Reality Takes Over: Assessing the Impacts of VR on Architecture and the AEC Industry, Jon Gardzelewski, University of Wyoming</p> <p>Advances in Transparent Wood Composites for Application in Large Office and Mid-Rise Apartment Buildings, Jay Arehart, S.M.ASCE, University of Colorado Boulder</p> <p>A Structural and Architectural Review of the Ancient Persian Domes and Arches, Shideh Shadravan, Ph.D., College of Architecture, University of Oklahoma</p>	<p>The Commission Process: All Stakeholders' Roles and Responsibilities, Liz Fischer, Building Commissioning Association</p>
12:00 – 1:30 p.m. Keynote Luncheon, <i>Fairfax Ballroom</i> Integrating Data and Design: The Future Stadium , Scott Radevic, LEED®AP, <i>Senior Principal, Populous</i>				
1:30 – 3:00 p.m. Technical Sessions				
<i>Great Falls Room</i>	<i>Potomac Room</i>	<i>McLean Room</i>	<i>Vienna Room</i>	<i>Falls Church Room</i>
SESSION 2.1 Case Study	SESSION 2.2 Deliver	SESSION 2.3 Perform	SESSION 2.4 Resilience	SESSION 2.5 Panel Discussion Deliver
<p>Alvina Engineering - River Point or Northwestern Mutual, Stephanie Guy, MAE, PE, LEED AP, Alvina Engineering</p> <p>DC Water Headquarters, Sven Shockey, AIA, LEED, SmithGroupJJR</p>	<p>Bank of Beijing Headquarters: Example of Integrated High Performance Design, Marzia Sedino, P.E., LEED AP, Skidmore, Owings & Merrill LLP</p> <p>Bridging the Generational Chasm: Innovative vs. Tried and True, Lisa Anderson, P.E., M. ASCE, LEED AP, Bechtel National, Inc.</p> <p>South Atlantic Architects Validation of the Construction Decision Making Inventory (CDMI), Tulio Sulbaran, Ph.D., The University of Texas at San Antonio</p> <p>Bubble Deck Slab Construction and Analysis, Archit Garg, Ch. Brahm Prakash Government Engineering College Delhi</p>	<p>Building Commissioning: Do Cost Benefits Outweigh The Initial Investment For U.S. Army Corp of Engineers?, Scott Kramer, Ph.D., Auburn University</p> <p>Best Management Practices in Design, Construction, and Maintenance of Mechanical Systems in Data Centers, Scott Kramer, Ph.D., Auburn University</p> <p>Design Technology: Architects' Early Impact on Indoor Air Quality, Shideh Shadravan, Ph.D., College of Architecture, University of Oklahoma</p>	<p>The Evolution of Earthquake Load Provisions, Ryan Solonosky, Ph.D., P.E., Penn State University</p> <p>Design and Construction of Resilient Facilities in Hospitality Industry, Sandeep Langar, Ph.D., LEED AP, The University of Texas at San Antonio</p> <p>Vulnerability of Societies in Coastal Cities, Through Human Development Patterns in Galveston, TX, Angela Lombardi, Ph.D., The University of Texas at San Antonio</p> <p>An Investigation of Building Resilience in Hurricanes Case Study: Harvey and Irma 2017, Shideh Shadravan, Ph.D., College of Architecture, University of Oklahoma</p>	<p>Lean Construction Institute: Introduction to Lean Practices, Erin Miller, P.E., Lean Construction Institute</p>
3:00 – 3:30 p.m. Networking Break, <i>Fairfax Ballroom Foyer</i>				

Preliminary Technical Program *(continued)*

Thursday, April 4 *(continued)*

3:30 – 5:00 p.m.				
Technical Sessions				
Great Falls Room	Potomac Room	McLean Room	Vienna Room	Falls Church Room
SESSION 3.1 Case Studies	SESSION 3.2 Secure	SESSION 3.3 Perform	SESSION 3.4 Sustain	SESSION 3.5 Panel Discussion
<p>San Diego Central Courthouse – A Civic Landmark, Clifford Ham, AIA, Judicial Council of California</p> <p>Denver Union Station: A Dynamic Landmark in Transit Architecture and Engineering, Charles Besjack, PE, SE, AIA, Director of Structural Engineering, Skidmore, Owings & Merrill LLP</p>	<p>Integrating Early-Stage Pedestrian Comfort Modeling, Stephen Ray, Ph.D., P.E., LEED AP, Ph.D., P.E., LEED AP</p> <p>Inserting Blast Resistance, Andrea Reynolds, SE, PE, LEED AP, SmithGroupJJR</p> <p>In-Plane Static Response of Dry-Joint Masonry Arch-Pier Structures, Bora Pulatsu, MSc, University of Nebraska-Lincoln, Architectural Engineering</p>	<p>Characteristics of Glazing Layers of Double-Skin Facades and Energy Consumption: A Case Study in Arid Climate of Tehran, Mohammadmehdi Danesh, MS ARCH, Texas A&M University</p> <p>Non-Destructive Testing Technologies for Evaluating the Conditions of Buildings, Zhengqi Li, Ph.D., LEED AP, AM. ASCE, Terracon Consultants, Inc.</p> <p>Structural Foam Sheathing Test Program, Shideh Shadravan, Ph.D., College of Architecture, University of Oklahoma</p> <p>Chiller Assisted Cooling Chilled Water Plant for Data Centers, Stephen Spinazzola, BS A/E Penn State, PE, LEED AP, ASHRAE BEAP, Gannett Fleming</p>	<p>Re-Assess the Definition of “Net Zero” to Account for Nature in Tall Buildings, Marzia Sedino, P.E., LEED AP, Skidmore, Owings & Merrill LLP</p> <p>Indicators of Effective Design for Maintainability in Conceptual Design, Imad Khalek, Arizona State University</p> <p>Alternative Cements: Recent Developments and Future Directions, Juan Pablo Gevaudan, University of Colorado Boulder</p> <p>Mass-Timber Structures – Increased Ductility through Friction Mechanism, Resilience, Rupa Garai, PE, SE, LEED AP BD+C, Skidmore, Owings & Merrill LLP</p>	
	<p>Resilience</p> <p>Integrating Resilient, Efficient Electrical Systems on a Campus, William Faucette, PE, LEED AP-BD+C, SmithGroupJJR</p>			

Friday, April 5

8:00 – 9:30 a.m.				
Technical Sessions				
Great Falls Room	Potomac Room	McLean Room	Vienna Room	Falls Church Room
SESSION 4.1 Case Studies	SESSION 4.2 Case Studies	SESSION 4.3 Deliver	SESSION 4.4 Learn	SESSION 4.5 Panel Discussion Perform
<p>Shenzhen Shum-Yip: New Super Tall Systems Through A-E Collaboration, Chales Besjack, PE, SE, AIA, Skidmore, Owings & Merrill LLP</p> <p>111 Main – Hat Truss Suspended Office Tower: A Case Study Illustrating Vision, Integration and Collaboration, Mark Sarkisian, PE, SE, LEED AP, Skidmore, Owings & Merrill LLP</p>	<p>Leveraging Cloud-Based BIM for Facilities Management, Alan Todd, AIA, LEED AP BD+C, Barton Malow Company</p> <p>Utilization of Lean and IPD Techniques - Industry-Focused, Chuck Brawley, MBA, Barton Malow Company</p> <p>Engaging and Training a Field-based VDC-Enabled Workforce, Alan Todd, AIA, LEED AP BD+C, Barton Malow Company</p>	<p>Technical Design Integration for Complex AEC Projects, Alex Kunz, P.E., A.G. KUNZ LLC</p> <p>The Effects of Indoor Environmental Factors on Students’ Academic Achievement, Adel Kabirikopaei, University of Nebraska-Lincoln</p> <p>Review of Article 15 within the AIA A201 General Conditions – 2007, Caroline Clevenger, PhD, PE, AIA, M.ASCE, University of Colorado Denver</p> <p>Illustration of Time Limitations Related to Construction Tort Claims in the State of Colorado, Yinkai Wang, University of Colorado Denver</p>	<p>Virtual Reality for Design and Construction Education Environment, Sepehr Alizadehsalehi, Northwestern University</p> <p>Elevating Architectural Engineering Education through Cloud Computing, John Judd, Ph.D., S.E., University of Wyoming</p> <p>Mixed Reality to Enable Construction Design Comprehension for Digital Natives, Justin Hartless, Arizona State University</p> <p>BIM as a Pedagogical Tool for Teaching HVAC Systems to Architecture Students, Ahmed Mokhtar, Ph.D., American University of Sharjah</p>	<p>ASCE Forensics Division: Lesson Learned from Building Failures</p>
9:30 – 10:00 a.m. Networking Break, Fairfax Ballroom Foyer				

Preliminary Technical Program *(continued)*

Friday, April 5 *(continued)*

10:00 – 11:30 a.m.		Technical Sessions		
<i>Great Falls Room</i>	<i>Potomac Room</i>	<i>McLean Room</i>	<i>Vienna Room</i>	<i>Falls Church Room</i>
SESSION 5.1 Case Study	SESSION 5.2 Case Study Perform	SESSION 5.3 Enclose	SESSION 5.4 Learn	SESSION 5.5 Panel
<p>Museum of The Bible - Building Team Collaboration Yields Project Success, Lonel Petrus, P.E., The George Washington University</p> <p>New Life for Timeless Buildings, Andrea Reynolds, SE, PE, LEED AP, SmithGroupJJR</p>	<p>Winning Strategies for Facilities Operation - Sands Macao, Syed Mubarak</p>	<p>Impact Behavior of Sustainable Sandwich Panels with Flax FRP Faces and Cardboard Cores, Pedram Sadeghian, Ph.D., P.Eng., M.ASCE, Dalhousie University</p> <p>Parametric Study of Phase Change Materials (PCM) – Enhanced Building Walls Under Space Cooling Conditions, Xiaoqin Sun, Ph.D., Changsha University of Science & Technology</p> <p>Creative Solutions with Custom Curtain Wall Design, Brienna Rust, P.E., Simpson, Gumpertz, & Heger</p>	<p>Increased Global Awareness in Architectural Engineering Students through International Research Experiences, Ece Erdogmus, Ph.D, P.E., M.ASCE, University of Nebraska-Lincoln</p> <p>Seismic Design Provisions Updates by Building Seismic Safety Council, Jiqiu Yuan, Ph.D., P.E., PMP, National Institute of Building Sciences</p> <p>State of the Art of Architectural Engineering Education as a Contribution to the Foundation for the National Agenda: A Snapshot of Four Programs, Christopher Raebel, Ph.D., P.E., S.E., Milwaukee School of Engineering</p>	<p>Workshop: Defining, Enabling, and Evaluating Adaptability</p>
<p>11:30 a.m. – 1:00 p.m. Keynote Luncheon, <i>Fairfax Ballroom</i> What If? Design Attitude in the Age of Digital Disruption, Heather Wishart-Smith, P.E., PMP, LEED AP BD+C, F.ASCE, <i>Vice President, Jacobs</i></p>				
1:00 – 2:30 p.m.		Technical Sessions		
<i>Great Falls Room</i>	<i>Potomac Room</i>	<i>McLean Room</i>	<i>Vienna Room</i>	<i>Falls Church Room</i>
SESSION 6.1 Case Studies	SESSION 6.2 Case Study Perform	SESSION 6.3 Perform	SESSION 6.4 Enclose	SESSION 6.5 Panel Discussion Learn
<p>Futuristic Design of Pedestrian Bridges, Rupa Garai, PE, SE, LEED AP BD+C, Skidmore, Owings & Merrill LLP</p> <p>The Moynihan Train Hall: Revolutionizing the Urban Transit Hub and Enhancing User Experience, Marla Gayle, Skidmore, Owings & Merrill LLP</p>	<p>Jacobs: Work Smarter not harder, Heather Wishart-Smith, P.E., PMP, LEED AP BD+C, F.ASCE, Jacobs</p>	<p>Towards Real-Time Water- and Carbon-Responsive Buildings, Sameera Gudladona, University of Colorado Boulder</p> <p>Impact of Meteorological Data Composition on Cost-Optimal Retrofitting Strategy for a Residential Building in a Hot Climate, Ahmed Mokhtar, Ph.D., American University of Sharjah</p> <p>Approaching Net Zero in an 1834 Farm House Through Integrating Multiple Energy Strategies, Anton Harfmann, M.ARCH, Registered Architect, University of Cincinnati</p>	<p>Significance of Impact and Need for Modeling of Thermal Bridges in Energy Simulations of Net Zero Office Buildings, Georg Reichard, Ph.D., Virginia Tech, Registered Architect, University of Cincinnati</p> <p>Review of Building Science Application in Selected DOE's Race to Zero Student Design Competition Projects, Ehsan Kamel, Ph.D., New York Institute of Technology</p> <p>Use of Infrared Thermography Method for In-Situ Measurement of Thermal Properties of Building Envelope Systems, Xinrui Lu, Penn State University</p>	<p>AE PhD Panel Discussion, Wil Srurbar III, Ph.D., A.M.ASCE, University of Colorado Boulder</p>
<p>2:30 – 3:00 pm Networking Break, <i>Fairfax Ballroom Foyer</i></p>				

Preliminary Technical Program *(continued)*

Friday, April 5 *(continued)*

3:00 – 4:30 p.m.	Technical Sessions			
<i>Great Falls Room</i>	<i>Potomac Room</i>	<i>McLean Room</i>	<i>Vienna Room</i>	<i>Falls Church Room</i>
SESSION 7.1 Case Studies	SESSION 7.2 Perform	SESSION 7.3 Learn	SESSION 7.4 Enclose	SESSION 7.5 Panel Learn
<p>The National Air & Space Museum- A Case Study of Building Enclosure Coordination, Anthony Nicasro, P.E., Simpson Gumpertz & Heger (SGH)</p> <p>The US Air Force Academy Center for Character and Leadership Development: A New Beacon for Optimized Design with Seamless A-E Interface, Raymond Sweeney, P.E., Skidmore, Owings & Merrill LLP</p>	<p>Net Zero Neighborhood: A Nexus of Food, Energy, and Water for Smart Cities, Mohamad Farzinmoghdam, Ph.D., Worcester Polytechnic Institute</p> <p>Multi-Sectoral Optimization for Low-Energy Districts, Amy Ilen, P.E., University of Colorado, Boulder</p>	<p>Collaborative Architecture Education Through Net-Zero Design Competition on Modular Container School Design, Laura Battaglia, AIA, LEED AP, Hampton University</p> <p>Enhancing Sustainability Education within an Architectural Engineering Curriculum, Deborah Jackman, Ph.D., P.E., LEED AP, Milwaukee School of Engineering</p> <p>Student Collaboration in Comprehensive Design: Towards an Increasingly Realistic Design Experience, John Phillips, P.E., Oklahoma State University</p>	<p>Modeling the Impact of Climate Change on Building Energy Use, Arfa Aijazi, University of California, Berkeley</p> <p>Building Enclosure Design for Water Vapor Diffusion Control in the US Mid-Atlantic Region, Ali Memari, Ph.D., Penn State University</p> <p>Building Enclosure Commissioning, Adam Ugliuzza, MS, Intertek</p> <p>Building Enclosure Condensation Moisture Control from Air Transport in Cold Weather Climates, William O'Brien</p>	<p>Young Professional Council: Transitioning from Theory to Practice, Mary Taylor, SmithGroupJJR</p>
4:30 – 5:30 p.m.	AEI Professional Project Awards Presentations, <i>Ash Grove Ballroom</i>			
6:30 – 9:00 p.m.	Awards Banquet, <i>Fairfax Ballroom</i> AEI Band Stand featuring HGA's Band TRAINWRECK			