Industry Trends

SESSION #6

WeWork
777 6th Street NW, Washington, DC, 20001

By Gina Volpicelli, AIA, LEED AP BD+C | Shalom Baranes Associates & Devon Hogan, RA, LEED AP BD+C | Quinn Evans Architects
March 1, 2019
I. Program Summary & Learning Objectives

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PROGRAM SUMMARY:
The process by which design becomes a building requires the architect to control many variables beyond the aesthetic, and understanding how to control that process is key to a successful project. As buildings become more complex, so does the role of the architect. This session provides an overview of the fundamentals of the profession up to now, exploring how emerging technological trends are currently changing the AEC industry, and takes a critical look at how they will influence the profession in the future. Experts on the leading edge of their profession will discuss the evolution of their practice and anticipated changes to how we work and what we do.

LEARNING OBJECTIVES:
1. Explore issues and trends in digital practice and building information modeling (BIM) to better understand potential business and practice implications that should be considered by owners, architects, and contractors
2. Evaluate the benefits and challenges of adopting new technologies throughout various stages of a project
3. Through hands on exploration of visualization tools, Scholars will be able to identify how augmented reality can be implemented in the way architects conceptualize and communicate ideas in connection with project delivery methods.
4. Through case studies on the leading edge of technology in architecture, Scholars will examine how exploring new ideas in research and practice through prototyping can be incorporated into the project process.

PROGRAM ABSTRACT:
What will the future of architecture look like? Virtual and augmented reality (VR and AR) is informing the way architects can communicate their vision through the design and construction process. Advancements in visualization technologies have allowed for VR to be more accessible for implementation and use without major financial investments, which is paving the way for a future where traditional spatial concepts are no longer valid. Designs made using VR will enable the user to fully immerse him/herself in a full scale, 3D model which can be manipulated and provide an accurate sense of presence in a space that’s yet to be built. In this session of the CKLDP, we will challenge how professionals are working now, in contrast to how professionals could be working in the future by examining emerging technological trends, and how they are being incorporated into the building industry.
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Date: March 1, 2019
Location: WeWork, 777 6th Street NW, Washington, DC, 20001
Time: 12:00 pm – 5:30 pm

AGENDA

12:00 – 12:15 Lunch Reception & Session Introduction
Gina Volpicelli & Devon Hogan

12:15 – 1:30 Presentation #1
by Karen Whitt, Colliers International

1:30 – 1:35 Break

1:35 – 3:00 Presentation #2
Round Table & Scholar Image Discussion
Panelists: John Schippers, Adaptive Studio; David Stone, HITT Contracting; Julia Siple, Quinn Evans Architects
Moderated by Gina Volpicelli & Devon Hogan

3:00 – 3:05 Break

3:05 – 4:00 Group Activity - Building Overtime
by Devon Hogan & Gina Volpicelli, with Marcus Monroe, Graphisoft

4:00 – 5:25 Presentation #3
by Lorenzo Villaggi, The Living

5:25 – 5:30 Conclusion & Housekeeping
Gina Volpicelli, Devon Hogan & the CKLDP Executive Committee

5:30 – 6:30 Happy Hour @ Penn Commons
700 6th Street NW, Washington, DC 20001
III. Speakers & Presentations

Presentation #1:
Virtual Reality & Augmented Reality Technologies in Real Estate

Through her presentation, Karen will discuss how AR and VR technologies are impacting commercial real estate. Scholars will gain an understanding of the benefits and challenges that AR and VR scenarios offer developers and property owners, the potential ways that occupiers can engage with the built environment, and the impacts on the legal and financial aspects of commercial real estate.

Karen J. Whitt, CPM, RPA, CRE
Ms. Whitt oversees property management assignments in the United States and leads business development activities. She is responsible for ensuring professional, competent management in all of Colliers markets. She focuses on strategically connecting Colliers’ retail, industrial, office and multifamily, brokerage investment sales, project management and property management groups to provide investor clients with complete real estate solutions.

Based in Washington, DC, Ms. Whitt specializes in the delivery of holistic real estate solutions that leverage the strengths of working with one company to add value to client assets.

Ms. Whitt has more than 20 years of experience in property management on both coasts. Prior to joining Colliers, Ms. Whitt served as the President of Management Services/Strategic Accounts with Grubb & Ellis for four years. Prior to that she was a Principal with Trammell Crow Company (TCC) for nine years and with Faison & Associates for five years for the Mid-Atlantic area. She began her career in San Diego and she has directly managed office, retail and mixed-use portfolios for large institutional clients like TIAA-CREF, Clarion Partners, UBS and Principal. She holds a BA from Villanova University.

Presentation #2
Round Table & Scholar Image Discussion

Leaders within the design and construction industries will share experiences within their respective sectors, highlight lessons learned, and discuss what they see as future trends of the interconnected industries, in an effort to answer the overall question of ‘What does the future of Architecture look like?’ Scholars will have an opportunity to engage in the discussion by providing an image of a “visual disruptor” of what technologies they feel are impacting the future of our industry and to ask the panelist questions.

Julia Siple, AIA, LEED AP BD+C
Julia oversees all aspects of Quinn Evans Architects’ sustainability practice, including building performance, operational performance, resource efficiency, resiliency, and equity of places and communities. She directs the development of the practice nationwide and contributes to sustainable project outcomes.

Julia previously served as senior manager of the American Institute of Architects’ (AIA) Sustainable Knowledge and Practice area, where she directed the AIA 2030 Commitment program and the Design Data Exchange. Prior to AIA, she spent six years with Quinn Evans Architects, contributing to firmwide sustainable design and innovative technology initiatives. Julia served as a project architect for several major projects for the firm, including the design of George Washington’s boyhood home at Ferry Farm in Stafford County, VA; the renovation of the historic Stratford Middle School in Arlington, VA; and the renovation of the Smithsonian National Museum of Natural History’s paleobiology lab in Washington, DC.
David Stone, Director of Virtual Construction

David is the director of virtual construction, bringing 20 years of experience in architecture and construction to inform forward-thinking industry solutions. In his role, David is responsible for developing the vision and strategy for the implementation of virtual construction at HITT, including streamlining processes and coordinating design compatibility issues via the use of industry specific technology tools. He collaborates with project teams to identify and resolve workflow issues and conflicts, coordinate BIM based shop drawings, create visualizations for proactive planning, and communicate project objectives. David is the driving force behind HITT’s virtual construction initiatives, and is a registered architect and a DBIA design-build professional. He has presented at several A/E/C conferences on the topic of virtual design and construction (VDC), and has been a key contributor for multiple national VDC awards including AIA BIM TAP, Synchro Pro, and CETI.

John Schippers, AIA

John leads teams in the use of digital tools as they relate to BIM, parametric design, visualization and prototyping. He’s a licensed architect and holds a Masters of Architecture from Virginia Tech. He stays connected to academia through guest lecturing at the VT Washington-Alexandria Architecture Center (WAAC) and the University of Maryland. He spent nearly a decade teaching beginner and advanced Revit courses at the VT WAAC. When not fiddling with technology, you can find John playing music or sports, often with his wife and seven-year old daughter.
III. Speakers & Presentations

Lorenzo Villaggi, Research Scientist Associate

Lorenzo Villaggi is a designer and research scientist with The Living, an Autodesk Research studio. His projects and research focus on computational design, material science, data-driven workflows as well as new forms of visualization. Lorenzo was a construction coordinator of the MoMA PS1 - Hy-Fi installation, and more recently he’s been part of the design team for Amphibious Wall, exhibited at the Chicago Architecture Biennial. He has also been conducting material research with mycelium investigating analog topology optimization methods.

Lorenzo graduated from the Columbia University Graduate School of Architecture, Planning and Preservation with a Masters of Architecture in 2015 and received his Bachelor of Architecture from the Politecnico di Milano in 2012.

Marcus Monroe, BIM Consultant

Marcus is currently a BIM Consultant at Graphisoft, where he educates and assist firms in improving their BIM workflows. Marcus provides training to architectural professionals, leading to in-depth proficiency with GRAPHISOFT BIM technologies. Prior to Graphisoft Marcus was a project architect/manager at NIH. Prior to that he worked as a designer and BIM manager at Quinn Evans Architects gaining experience on institutional, commercial interiors, ambassadorial residences, and historic preservation projects. Formerly Marcus served as an adjunct faculty member of the Montgomery College Architecture Program responsible for revamping and teaching 3D presentation and BIM coursework.

Marcus attended the University of Florida where he earned a Bachelor of Design and Master of Architecture with a concentration in historic preservation.

Group Activity - Building Overtime

In this exercise, scholars will be split into four equal groups, and tasked with constructing a number of forms. Starting only with written instructions, the ‘Specifications’, the groups will do their best to create a variety of forms that vary in complexity. As time passes, groups will be given diagrams, the ‘Contract Drawings’, to be used with the ‘Specifications’, with additional tools provided over time to aid in ‘construction’. After the activity, scholars will discuss the evolution of the construction process, as well as the architects' roles and responsibilities as BIM becomes a more tangible deliverable, with a presentation from Graphisoft.

Presentation #3:
Projects from Autodesk Research Studio

In this presentation, Lorenzo Villaggi of ‘The Living’ will explain how their studio utilizes its research in computational design and data-driven workflows to create projects such as the embodied computation lab. The Living, a first-of-its-kind Autodesk Studio, combines research and practice, exploring new ideas and technologies through prototyping. The studio’s work embraces the complexity at the intersection of ideas, technologies, materials, culture, humans, non-humans, and the environment. Focusing on the intersection of biology, computation, and sustainability, the studio has articulated three frameworks for harnessing living organisms for architecture: bio-computing, bio-sensing, and bio-manufacturing. The studio welcomes rapid change, embraces design with uncertainty, develops rules rather than forms, and designs with unknowable forces.

Lorenzo Villaggi, Research Scientist Associate

Lorenzo Villaggi is a designer and research scientist with The Living, an Autodesk Research studio. His projects and research focus on computational design, material science, data-driven workflows as well as new forms of visualization. Lorenzo was a construction coordinator of the MoMA PS1 - Hy-Fi installation, and more recently he’s been part of the design team for Amphibious Wall, exhibited at the Chicago Architecture Biennial. He has also been conducting material research with mycelium investigating analog topology optimization methods.

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IV. Acknowledgements

Sponsors

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Acknowledgements

We would like to thank our presenters for taking the time to work with us in creating an informative and productive session.