



The Future of Design

TAP Building Connections Congress 2018

Module I: Teach machines to think like us

8am	Breakfast Breakfast will be served in the social gallery	
8:30am	Introduction	Natasha Luthra 2018 Chair, TAP
8:40am	Exploring Ideas and Building Expertise through Machine Learning	Patrick Hebron Adobe Systems, New York University
9am	(Re)Designing the Client: Big data/machine learning as media for (re)training client expectations, capabilities, and outcomes	Michael Schrage MIT Sloan School of Management
9:20am	Discussion	
9:50am	Break	
10:20am	Data Before Automation: Collecting data today to drive automation and artificial intelligence in the future	Brok Howard dRofus
10:40am	Automatic for the People: Learning from machine learning, embracing and capitalizing on AI	Randy Deutsch University of Illinois Urbana-Champaign
11am	Functional Modeling: Enabling computational design	Zigmund Rubel Aditazz
11:20am	Discussion	
11:50am	What if? Design attitude in the age of digital disruption (Sponsored)	Heather Wishart-Smith Jacobs
12pm	Networking lunch Lunch will be served in the social gallery	

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Module 2: Have machines do things for us

1pm	Machine Learning and Project Delivery: Lessons from the field	Josh Kanner Smartvid.io
1:20pm	AI and Machine Learning for Construction	Pat Keaney Autodesk
1:40pm	Discussion	
2pm	Break	
2:30pm	Machine-Readable Deliverables	Brian Ringley WeWork
3pm	Collective Inquiry	Christopher Connock KieranTimberlake
3:20pm	Bio-Inspired Robotic Swarm Construction	Paul Kassabian Simpson Gumpertz & Heger
3:40pm	Discussion	
4pm	Closing remarks	Natasha Luthra 2018 Chair, TAP
5pm	Networking reception Drinks and light hors d'oeuvres in the social gallery	

Speakers

2018 TAP Building Connections Congress



Christopher Connock, Design Computation Director

KieranTimberlake

Christopher Connock's work leverages a deep understanding of building design and computation toward effective, agile, and imaginative design practices. As a Researcher at KieranTimberlake, Christopher transects several project teams and helps identify and respond to needs for inquiry that may encompass topics such as generative and parametric design, custom digital workflows, application development, data visualization, immersive environments, and digital fabrication. Christopher lectures to professional and academic audiences on the interface between data and design.



Randy Deutsch, Associate Director for Graduate Studies

University of Illinois Urbana-Champaign

Randy Deutsch AIA, LEED AP is the Associate Director for Graduate Studies and Clinical Associate Professor at University of Illinois Urbana-Champaign. Randy is a BIM authority and architect responsible for the design of over 100 large, complex projects. He is the author of three books: *Convergence: The Redesign of Design* (AD, 2017) on the nature of the ongoing convergence of technology and work processes; *Data Driven Design and Construction: Strategies for Capturing, Analyzing and Applying Building Data* (Wiley, 2015) and, *BIM and Integrated Design: Strategies for Architectural Practice* (Wiley, 2011)



Patrick Hebron, User Experience Designer, Educator

Adobe Systems, New York University

Patrick Hebron is a User Experience Designer at Adobe Systems and an Adjunct Graduate Professor at New York University. His research relates to the development of machine-learning-enhanced digital design tools.



Brok Howard, Technical Account Manager

dRofus

Recovering Architect and previous technology leader at both small and large design firms now focused on supporting AECO industry with data management through strategic implementation, training and support of the leading data management software for the global industry - dRofus.



Josh Kanner, Founder & CEO

Smartvid.io

Josh Kanner is Founder & CEO of Smartvid.io, a cloud platform for the intelligent management, collaboration and analytics of industrial video and photos. Most recently he was co-founder of Vela Systems, a pioneer in the use of web and tablet workflows for construction and capital projects. There he led the company's product, marketing and business development functions. Vela Systems grew from bootstrapped beginnings to include over 50% of the ENR Top Contractors as customers and deployments all over the globe. The company was successfully acquired by Autodesk in 2012 and has been rebranded as BIM 360 Field.



Paul Kassabian, Principal

Simpson Gumpertz & Heger

Paul Kassabian is a Principal at SGH and specializes in structural design of buildings, bridges, and sculptures. He develops innovative methods of design and construction using SGH's in-house materials lab, computational design approaches, and digital fabrication techniques. Paul taught at Massachusetts Institute of Technology for ten years and is currently teaching Structures at Harvard's GSD.



Patricia Keaney, Director

BIM 360 Enterprise Products

Patricia Keaney is the Director of BIM 360 Enterprise Products at Autodesk. She leads Project IQ which is the first construction solution to apply Machine Learning to identify daily risk on the jobsite. Pat led product management for BIM 360 products for five years and has focused on construction solutions at Autodesk for eight years. She delivered cloud and data-driven solutions at VC funded startups and leading software companies since 2000. Keaney graduated from the University of California at Berkeley and began her tech career at Apple Computer where she developed her passion for solving real problems with innovative solutions.



Natasha Luthra, 2018 Chair

Technology and Practice Knowledge Community

Natasha Luthra is Director, Emerging Technologies at Jacobs engineering. She leads a group of talented designers that act as the tip of the spear as it relates to technology in design. Currently, she leads a program christened "BlueShift" within Jacobs that is an aggressive Innovation Program focused on the introduction of emerging technologies into our practice, recognizing and rewarding innovation, and lifting the use of technology within the organization.

She has a Bachelors as well as a Master degree in Architecture but defines herself as the ultimate problem-solver.



Brian Ringley, Senior Researcher

WeWork

Brian Ringley is a Senior Researcher on WeWork's R&D team where he heads up research into construction automation and robotics. He teaches design computation and industrial automation at Pratt Institute's Graduate Architecture and Urban Design (GAUD) program. He has lectured at AIA NY's Center for Architecture, AIA SF's Center for Architecture + Design, Boston Architectural College, and Kansas State University, and has spoken at numerous industry conferences. Prior to WeWork, Brian was an Associate and Design Technology Specialist at the global architecture and consulting practice Woods Bagot and has also worked for KPF, R&Sie(n), and Dellekamp Arquitectos.



Zigmund Rubel, Co-Founder/Head of Design Services

Aditazz

Zigmund (Zig) Rubel, AIA is a co-founder of Aditazz and is the Head of Design Services. He is responsible for all building design services for the company whereby he ensures the performance and the quality delivery design using data. Zig has multiple US and international patents on the physical and software technology he has created. His built healthcare work can be found throughout California, as well as projects in China and India. Zig is a nationally recognized contributor to the advancement of Integrated Project Delivery (IPD) as well as a former President of AIASF.

Michael Schrage, Research Fellow

MIT Sloan School of Management

Michael Schrage is a research fellow with MIT Sloan School's Initiative on the Digital Economy where he teaches and does research on 'selvesware' and human capital innovation networks.



Heather L. Wishart-Smith, Vice President

Jacobs

Ms. Wishart-Smith is a Vice President, leading strategy and growth of digital solutions as part of the Jacobs Connected Enterprise (JCE) for Buildings & Infrastructure (B&I) globally. JCE is Jacobs' strategy to evolve into a "digital architecture, engineering and construction" company delivering technology-forward solutions that seamlessly integrate enabling technology with domain knowledge and expertise. Prior to this role, Ms. Wishart-Smith led the B&I Mid-Atlantic region. Other notable roles include Federal Market Sector Leader, Sales Executive, and Principal for Jacobs' Department of Defense (DOD) Global Buildings program, which included multiple large, full-service programs for the Army, Navy, and Air Force worldwide.

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