AIA Seattle

Future-Ready Building: Disruptive Technology & Data-Driven Design

Thursday, May 25, 2017 | Metropolist, 2931 1st Avenue South, Suite 1A, Seattle

** all sessions/speakers subject to change*

Future-Ready Building will explore some of the most exciting and challenging trends impacting modern buildings: disruptive technologies and data-driven design. Through a series of lightning talks, in-depth panel discussions and eye-opening presentations, this full day forum will explore what it means to design smarter. How do we make buildings and cities future-ready, considering the shifting tech landscape and the need for human-centered design? Considering big data uses and emerging technologies, is the architect the creator or curator? Thought leaders and industry experts in the fields of architecture, engineering, design, planning, and technology will want to join this provocative conversation!

Wi-Fi: Metropolist Guest | password: metropolist

THURSDAY – MAY 25, 2017

8:00 - 8:30 REGISTRATION + LIGHT BREAKFAST

8:30 – 8:45 PROGRAM: WELCOME + INTRODUCTIONS
Cassie Blair | AIA Seattle, Program Manager

FUTURE-READY BUILDING FORUM PLANNING TASK FORCE
Chair: Derik Eckhardt | Miller Hull
David Buza | WSP | Parsons Brinckerhoff
Dace Campbell | Autodesk
Nate Holland | NBBJ
Tom Marseille | WSP | Parsons Brinckerhoff
Heather Skeehan | GLY Construction

8:45 – 10:15 *what's next? (y)our evolving context*
Dr. Chris Luebkeman | Arup Fellow and Global Director, Arup Foresight + Research + Innovation

10:15-10:30 BREAK

10:30-11:30 PANEL *Data Rich / Knowledge Poor*
Chad W. Jennings | Product Manager, BigQuery Google
Chris Mefford | President & CEO, Community Attributes
Matthew Peck | Manager of Software Development, Onvia
Moderator: Heather Skeehan | Design Manager, GLY

11:30-11:40 LIGHTNING TALK PRESENTATION *Design by Listening*
Peter Dodds | Consultant, Arup

11:40-12:40 LUNCH

12:40-1:55 PANEL *Occupant Aware Buildings…Or Building Aware Occupants?*
Lindsay Baker | President, Comfy
Herbert Els | SVP of Building Technology Systems at WSP | Parsons Brinckerhoff
Neha Goel | Project Coordinator, Weber Thompson
Fran Heller | Founder and CEO, Good2Go, LLC
James Kummer | Director, Emerging Technology Business Development, Johnson Controls Inc.

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Moderator: Tom Marseille | SVP, WSP Parsons | Brinckerhoff

1:55-2:10 LIGHTNING TALK PRESENTATION *Building User Audit: Capturing Behavior, Energy, and Culture*
Julie Kriegh | Principal, Kriegh Architecture Studio / PhD candidate at University of Washington

LIGHTNING TALK PRESENTATION *Building Energy Data App Development*
Mark Stavig | Principal, Team Leader, Mazzetti + GBA

2:10-3:15 PANEL *Design Disruptions: People, Process, Tools*
Dan Anthony | Associate, NBBJ
Ed Clark | Sustainable Designer, ZGF Architects LLP
Scott Crawford | Design Technologist, LMN Architects
Philip Speranza | Assistant Professor, Department of Architecture, University of Oregon & Principal, Speranza Architecture
Sam Stubblefield | Principal of NBBJ Studio 07
Moderator: Derik Eckhardt | Architect, Miller Hull Partnership

3:15-3:35 BREAK
Feel free to grab a beer, kindly donated by Fremont Brewing!

3:35-4:50 PANEL *Architects Need^ed ~~Not Apply~~*
Michael Bergin | Principal Research Scientist, Autodesk
Jim Davidson | Founder and Principal, James Davidson Architects
Stephen Van Dyck | Partner, LMN
Moderator: Dace Campbell | Senior Customer Success Manager, Autodesk

4:50-5:00 CLOSING REMARKS

SPEAKER BIOS

Keynote:

Chris Luebkeman | Arup Fellow and Global Director, Arup Foresight + Research + Innovation
Chris' interest in the built environment blossomed early, propelling him to pursue a multi-faceted education, beginning with geology and civil engineering then culminating in a Doctorate in Architecture from ETH in Zurich, a city to which he remains deeply connected. Chris gained valuable experience as the protégé of esteemed Spanish Architect, Santiago Calatrava. But, subsequently turned to his other love, education, by accepting teaching positions at several prestigious universities. In 1999, Chris joined Arup as the Co-Director for Research and Development. A couple of years later, he formed the Foresight, Innovation and Incubation team, which evolved to its present form as Foresight + Research + Innovation in 2015.

Chris spends the majority of his time travelling the world to give keynote addresses, talks, workshops and expert interviews to a wide variety of government agencies, non-profits, corporations, schools, media outlets and industry groups. Ostensibly, Chris' mission is to facilitate conversations about how to best embrace change and its effects on the built environment, but in

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so doing he acts as an indispensable emissary to the very groups whose work intersects with that of Arup, building rapport and cultivating relationships with future clients.

Currently, Chris and his team are working on projects related to: the street in an autonomous, driverless world; the nature of work when AI's are more creative than humans; the intersections of resilient urban systems; and the meaning of circular economy for the built environment. Chris is on the Lee Kuan Yew World City Prize Jury this year and is continuing as an External Expert to the Urban Redevelopment Authority of Singapore.

Forum Panelists:

Dan Anthony | Associate, NBBJ
On the leadership team of NBBJ Digital, Dan organizes experts, knowledge share, and advancement in Design Computation. His work varies between architectural projects, technological specialization, and strategic R&D Initiatives. He likes parametrics, but loves code and interaction. Dan has a BS in Management Science & Engineering at Stanford University, and MARCH at University of Oregon. There, he was a Graduate Fellow establishing the Urban Interactions Lab and instructing architectural theory, hardware prototyping, and algorithmic design methods. In between, he worked in Bay Area tech as a consultant on cloud computing and a creative manager at startups. He's been at it for well over 10 years.

Lindsay Baker | President, Comfy
Lindsay is a technologist and catalyst of the cutting edge in smart building, having led some of the most successful building initiatives in the country. Lindsay is the President of Comfy, a software company based in Oakland, California. She serves on the board of the US Green Building Council in Northern California, and was a lead convener and author of the LEED green building rating systems, as well as having worked in Google's real estate sustainability team. She did her PhD work in Building Science at UC Berkeley on human interactions with the built environment, and has published broadly on these issues and others throughout the building industry.

Michael Bergin | Principal Research Scientist, Autodesk
Michael contributes to the field of generative design and creative artificial intelligence in domains including automotive, aerospace, manufacturing and the built environment. He has authored publications, patents and led teams designing software applications in the areas of design synthesis algorithms, requirements definition and data visualization. Focusing on research management and product design for emerging technologies, he develops systems to allow for the generation and rapid evaluation of high-performance design alternatives to support a more flexible, iterative workflow. He currently serves as Principal Research Scientist for Autodesk in San Francisco.
Michael holds a Master of Architecture from the University of California, Berkeley. He has given lectures at the University of Washington, University of Illinois, Sci-ARC, University of Colorado, Penn State, UPenn, UC Berkeley and Stanford University. His work has been covered in the Wall Street Journal, Wired and the MIT Technology Review.

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Dace Campbell | Senior Customer Success Manager, Autodesk

Dace Campbell, AIA, LEED AP is a Senior Customer Success Manager at Autodesk and a nationally recognized expert and thought-leader in innovative tools and processes, including Building Information Modeling, Lean Construction, and Integrated Project Delivery. He is a licensed architect with almost 30 years of experience in design, construction, innovation, collaboration, and business consulting, and over 25 years of applied research in virtual reality and augmented reality in AEC. Dace's projects have won four AIA BIM awards, and he is a winner of the 2011 Building Design + Construction "40 under 40" award. His work and writing about BIM, Lean, IPD, and VR and AR have been published internationally, and he is an active member of local and national BIM and Lean communities.

Ed Clark | Sustainable Designer, ZGF Architects

Ed Clark, LEED AP BD+C, Ed Clark, LEED AP BD+C, develops building- and district-scaled sustainable strategies, is instrumental in the national effort to create conventions of materials transparency in design, and is at the cutting-edge in the application of circadian lighting research in healthcare and workplace environments. Ed is among a group of ZGF architects and designers that has collaborated with academics and researchers to advance circadian lighting design and its application. He was instrumental to the creation of Lark Spectral Lighting, a circadian lighting design tool created by the University of Washington and ZGF Architects. Ed firmly believes that the use of technology can improve the building /user interface and result in rich design solutions.

Scott Crawford | Design Technologist, LMN Architects

Scott Crawford is a designer at LMN Architects and co-founder of LMNts, the in-house R&D group that works to integrate emerging technologies into the firm's design process. He is also lead "scientist" of Frankenstein Inc., a design collective experimenting with digital fabrication through the creation of art, and has taught design and fabrication courses at the UW.

Scott has a BA in Psychology from UMBC (2004), joining the MArch program at the UW in 2005. His MArch thesis won a thesis citation for its focus on how the process of design with the integration of parametric modeling and simulation analysis. In 2008, Scott joined the Design Computing stream of the Master of Science program to extend his MArch research with an additional focus on digital fabrication. Since joining LMN in 2009, he has lead design efforts ranging from facades to high performance acoustic systems to pedestrian bridges.

Jim Davidson | Founder and Principal, James Davidson Architects

Jim Davidson has practiced architecture for over 30 years and is founder and principal of James Davidson Architects, a design studio with experience in custom residential, mixed-use, commercial, technology, and institutional facilities. The firms experience has included working on a number of large complex projects with significant custom hardware and software technology installations.

Jim graduated from Harvard's Graduate School of Design where he studied digital design with the late Bill Mitchell. His thesis was one of the two first all-digital thesis projects at the GSD. He has taught at the University of British Columbia and the University of Washington, where his teaching positions included running 'pre-web' virtual design studios and early VR research projects involving multi-participant virtual environments for design review. Jim is keenly interested in new technologies and their impact on the design process, culture and society.

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Derik Eckhardt | Architect, Miller Hull Partnership

Derik Eckhardt AIA, is an Architect with The Miller Hull Partnership in Seattle, Washington. The breadth of his work has developed into an intentionally diverse portfolio. Most recently he has been working on civic infrastructure facilities as well as mixed-use commercial developments. Derik was the 2016 recipient of AIA Seattle's Emerging Professionals Travel Scholarship, which allowed him to travel extensively, exploring the role of emerging technologies within the practice of architecture. In March of 2017, he curated the exhibition Smarter Buildings, which addressed overlapping themes of technology and architecture. Derik holds a Bachelor of Design and a Master of Architecture from the University of Nebraska - Lincoln. During his studies he participated in the University of Cape Town BAS (Honours) program in South Africa and also spent time studying in Tianjin, China.

Herbert Els | SVP, Building Technology Systems at WSP | Parsons Brinckerhoff

Herbert is the national leader of our Building Technology Systems group. He offers 17 years of experience in the design and implementation of a wide range of technology systems, including research of emerging trends and introduction of new concepts. Herbert's goal is to push the "Build Smart" concept for WSP | Parsons Brinckerhoff which applies not only to our Buildings practice, but extends to all WSP | Parsons Brinckerhoff practices as thought leaders in the Smart Building/Neighborhood/City concept. He leads our BOLD&R Innovation Center to explore the NOW|NEW|NEXT in our industry through ideas generated by all WSP | Parsons Brinckerhoff employees and clients alike. The BOLD&R Innovation Center mainly focuses on the impact of the built environment on the humanistic experience.

Neha Goel | Project Coordinator, Weber Thompson

Neha Goal is an integral member of Weber Thompson's internal sustainability task force in addition to her mid-rise and high-rise project work. She is also a core member of the team that is studying energy consumption data at The Terry Thomas. For the last several months, she has been compiling and analyzing plug load data collected during a 2016 occupant engagement study, in order to educate occupants and help further reduce the building's energy loads.

Working in India after graduation gave her a robust background in culturally appropriate design. Many of her design decisions are driven by challenges of location, climate, resources and context – issues that also fuel her passion for sustainability. Her projects at Weber Thompson have included a mixed-use, urban infill mid-rise residential project in Kirkland, and the firm's tallest upcoming mixed-use residential tower in downtown Seattle. Currently, she is working on a sustainable office project in Fremont.

Fran Heller | Founder and CEO, Good2Go, LLC

Fran Heller is the founder and CEO of Good2Go, LLC, a startup dedicated to developing technology to enhance people's everyday needs. Good2Go's 1st product launch is an innovative system that bridges the physical and digital worlds to grant consumers credentials for immediate access to secure sites and structures. The first application of the Good2Go system allows users to reliably locate and access modern, redesigned retailer restrooms all over major cities.

Prior to starting Good2Go, Fran was an executive in the pharmaceutical and biotech industries with expertise in business development, licensing and legal affairs. Most recently, she was senior vice president of business development at Bristol-Myers Squibb and a trustee of the Bristol-Myers Squibb Foundation. Fran currently serves as a trustee of the Dana Farber Cancer Institute and is a member of the board of directors at Zafgen, Inc., a public biotech company, and Affinivax, a private early stage vaccine company. Fran was also previously involved with Silicon Valley Social Venture Capital and Acumen Partners. Fran is a member of the California State Bar and licensed by the U.S. Patent and

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Trademark Office. She holds a B.S. in biology from Tulane University, an M.A. in biology from American University, and a J.D. from Golden Gate University School of Law.

Chad W. Jennings | Product Manager, BigQuery Google

Chad is a Product Manager on the BigQuery team. BigQuery is Google's cloud-based Enterprise Data Warehouse. Chad holds a PhD from Stanford University and he comes to Google from the startup world. His businesses have ranged from aerospace navigation to location data for real estate site selection. When he's not working on Big things or playing in nature he's at home with his wife and two young children.

James Kummer | Director, Emerging Technology Business Development at Johnson Controls Inc.

Jim has a B.S. degree and an M.S. degree in mechanical engineering from the University of Wisconsin - Madison, is a Professional Engineer in the state of Wisconsin, and has 30+ years of experience in the energy industry. For the last decade he has been focused on the integration of information technologies into the built environment to design, build and operate smart and optimized buildings, central plants and cities. Jim is currently responsible for the evaluation and development of emerging technologies related to controls, system design, and optimization.

Tom Marseille | SVP/Director of Built Ecology Building Systems, WSP | Parsons Brinckerhoff

An award winning engineer, Tom Marseille, PE, Hon AIA, LEED Fellow, delivers performance driven building solutions to clients that balance innovation with what is practical, maintainable and resource responsible. He brings 30+ years of experience to his dual roles of sustainability director for WSP and managing director for their Seattle office a fully integrated buildings systems consulting practice. His specialties include energy/water systems master planning, feasibility and due diligence studies, passive and active high performance design, and operational performance verification and optimization.

An author of numerous published papers and journal articles and frequent speaker, Tom serves on the Board for AIA Seattle and is a member of their Strategic Advisory Council. He is a past Board member for ILFI and the Cascadia Green Building Council and was a moderator, presenter helped develop content for both the AIA+2030 and Getting to Zero Professional Series. Previously he has been a Senior Building Research Scientist at Pacific Northwest National Laboratory where he performed program management and analytic services on building energy systems, indoor air quality and thermal energy storage R&D projects. And as a Director at Honeywell he led a 50+ person global team in the development of the technology and analytic services needed for a start-up Energy Information Services business that focused on remote collection, storage, data mining and delivery of enterprise-wide actionable building information to clients to improve their operational efficiency.

Chris Mefford | President and CEO, Community Attributes

Chris Mefford, AICP, founded Community Attributes Inc. in 2005. He excels at working with jurisdictions on economic development and planning projects, providing market and feasibility analyses; economic and financial analysis; and policy analysis. He brings two decades of consulting, project management and analysis experience with regional economies, land use and transportation patterns. Based in Seattle, he brings in-depth expertise with the Puget Sound regional economy. He often speaks to audiences about the regional economy and community development considerations.

Chris is an expert in regional economic development, socio-economic and demographic analysis, financial feasibility analysis, and GIS. Prior to founding CAI, Chris led market analyses and managed projects with Seattle consulting firms and the Puget Sound Regional Council.

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Chris holds an MBA from the University of Washington; an MS in urban and regional planning from the University of Iowa; and a BA in mathematics from the University of Northern Iowa.

Matthew Peck | Manager of Software Development, Onvia, Inc.

Matthew is the Manager of Software Development at Onvia, Inc., a Seattle based sales intelligence and acceleration company that provides companies with data to win more business with the government. Onvia curates data about millions of exchanged contracts, agencies and decision makers, vendors and channels, projects and investment plans, awards records and market trends. Onvia's B2G Intelligence System (B2GIS) delivers quality leads, process agility and strategic foresight, equipping companies of all sizes to grow their public sector business and government agencies to gain procurement efficiency. Matthew's areas of specialty are distributed systems, high-load systems, and software development processes. He has built software for sectors including telecom, automotive, and consumer software.

Heather Skeehan | Design Manager, GLY

Heather, RA, AIA, LEED AP BD+C, Associate DBIA, is a registered architect and a Design Manager at GLY who facilitates a more seamless relationship between the worlds of design and construction. She leverages technology as a truly interactive platform to confirm examinations, reflect decisions made by the entire design team, suggest more effective ways to execute building in the field, minimize waste, and efficiently schedule and communicate project development. She is a strong advocate for fundamental project values and design identity, and brings a fresh perspective to the way GLY supports delivery of the design intent. Current projects include Bellevue's Lincoln Square Expansion and significant associated TIs. Prior to joining GLY in 2014, Heather spent seven years at ZGF. She is an alumnus of Tulane University, with a MA in Architecture, and holds a Construction Management Certificate from UW.

Philip Speranza | Assistant Professor, University of Oregon & Principal, Speranza Architects

Philip Speranza is an architect, urban designer and assistant professor at the University of Oregon, where he teaches design studios in architecture, urban design, computation and data visualization and directs the Barcelona Urban Design Program. Speranza's research scholarship and creative work explore the use of new geospatial design methods to understand small-scale social and environmental phenomena in urban design. Speranza has published widely through diverse lenses including geospatial parametric design, social interaction in Barcelona urban ecology, air pollution visualization, entrepreneurship and business fabric, bike sharing and interaction design, on-site and off-site data acquisition, adaptive urbanism and ethnicity, place branding, time and architecture, and memorial design. Publications include the *Journal of Urban Design*, *Architectural Design AD*, ACADIA, EDRA, and forthcoming in the *Journal of Urbanism* titled "A human-scaled GIS: Measuring and visualizing social interaction in Barcelona's Superilles." He has worked with architects Steven Holl and Carlos Ferrater, and artist Janet Echelman.

Sam Stubbelfield | Principal of NBBJ Studio 07

Samuel Stubblefield is a designer interested in how art, architecture and digital technology influence culture. Encouraging abstract thinking and experience design methods within design teams, Sam has successfully developed and executed several permanent exhibits, environmental graphic design programs, didactic spaces and immersive environments. He's also woven film, sound and mixed media into a number of architectural projects.

This work has contributed to projects that have won multiple AIA National Honor Awards, International Interior Design Association awards, the MOBIUS Gold Award, the Society of Environmental Graphic Designers Honor Award and the Cannes

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Lions International Award. Sam has been commissioned to create large-scale public art, is a co-founder of a future-focused incubator with an interest in architectural integration of art and internet and speaks globally on related topics.

Stephen Van Dyck | Partner, LMN Architects

Stephen Van Dyck, AIA, LEED AP, is a Partner at LMN Architects in Seattle, where he leads the design and delivery of public assembly, performing arts, transportation, higher education and mixed-use projects. Stephen has pioneered the project integration of Tech Studio, LMN's in-house research and development lab. He leverages the group's expertise and technology to explore the unique design opportunities and challenges of each project. Widely recognized as an industry authority in design technology, Stephen regularly presents on the subject at professional conferences across North America and currently serves as a member of the Autodesk Architecture Executive Council. He has served as a lecturer and studio critic at Yale University. He holds a Master's Degree in Architecture from Yale University, is a LEED Accredited Professional, and a Registered Architect in New York and Washington States.

Lightning Talk Presenters:

Peter Dodds | Consultant, Arup

Peter Dodds has been a member of Arup's acoustics, audio visual, and theatre consulting practice since 2015. Consulting on a broad range of projects including healthcare, higher education, performing arts, transportation, museum, and commercial facilities nationally and internationally, Peter specializes in room acoustic analysis and design and AV systems design as well as acoustic modeling and auralization. Since joining Arup, Peter has been an active contributor to the development of Arup's digital design tools including advancements in the use of virtual reality, spatial audio presentation, and building simulation. In addition to his consulting work, Peter maintains an active practice as a composer and multimedia artist, working with data and technology to elucidate the hidden architecture of our natural world. Recent presentations of Peter's work include the Acoustical Society of America annual conference, AIA Seattle, and the Mass Timber Conference in Portland, OR, among others.

Julie Kriegh | Principal, Kriegh Architecture Studio

Julie Kriegh, AIA, Ph.C., LEED AP, CPHC, is a Principal with Kriegh Architecture Studio and a PhD candidate in the College of the Built Environments at the University of Washington. Her current research is focused on pro-environmental behavior in high-performance buildings and neighborhoods. By linking high performance energy efficient technologies in the built environment with a deep understanding of pro-environmental human behavior, her research aims to answer the question: can architects and planners design in a way that affirms and reinforces pro-environmental behaviors in the context of the built environment? Julie founded her firm in 2000 and specializes in the design and construction of environmentally sustainable Passive House buildings and resilient master planning. Her office is located in Seattle's Bullitt Center in the UW Center for Integrated Design. In 2016, Ms. Kriegh co-authored: *The Building User Audit: Capturing Behavior, Energy,* and *Culture* and *Occupant-Behavior-Driven Energy Savings at the Bullitt Center in* Seattle for ACEEE Summer Study. In 2015, Ms. Kriegh was lead author for *On the Road to Smart Green Growth* in Planning the Pacific Northwest. She has presented her work at national conferences including: ACEEE, BECC, EDRA, ILFI, and Passive House North America.

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Mark Stavig | Principal, Team Leader, Mazzetti+GBA

Mark is the Principal and Team Leader for the Seattle Office of Mazzetti+GBA, leading global provider of MEP engineering design and technology/IT consulting in Healthcare. Mazzetti creates future-focused, technologically advanced buildings, rooted in local culture, climate, and economy.

Mark has over 30 years' experience in project management and mechanical design for multiple projects of varying scopes and sizes, including government, military, corrections, cultural, higher education, high-rise mixed-use and residential, healthcare, and K-12 education. In addition to the design of mechanical systems, Mark has managed engineering and support staff, providing team leadership, structure, marketing, contract review, financial and technical direction, and quality control services. Mark is a member of the Washington State Society for Healthcare Engineering (WSSHE) and the American Society for Healthcare Engineering (ASHE).

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