FUTURE OF DESIGN

NEW YORK CITY

IABSE
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EDUCATIONAL ALLIANCE
LOWER EAST SIDE
The International Association of Bridge and Structural Engineers (IABSE) was founded in Zurich in 1929. It is an international organization with members from 80 countries and including the world’s leading bridge and structural engineers. IABSE aims to facilitate the exchange of information on all aspects of structural engineering and organizes regular symposia, conferences and workshops.

The IABSE Future of Design Conference is a one-day event for engineers, architects, academics, students, contractors, fabricators and other professionals working in the built environment. The purpose of the conference is to facilitate conversation about topics that are of importance to our industry now and in the future. It seeks to energize, educate and inspire the next generation of designers.

In order to maximize interaction among participants, the conference includes panel discussions, short lectures and a hands-on workshop. Accomplished designers and researchers will pair with emerging and innovative designers to present ideas on what the future holds for structural engineering. We will also discuss the future of our practice and how we adapt as designers to ever changing contexts with increasing complexity. Future of Design provides a unique opportunity to learn about cutting edge design work, discuss the future challenges of our profession, and to work together collaboratively.

Future of Design 2017
NEW YORK CITY, USA
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<th>Topic</th>
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<td>08:30 - 09:00</td>
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<td>Welcome</td>
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<td>10:50 - 11:15</td>
<td>Q + A</td>
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<td>Coffee</td>
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<tr>
<td>11:45 - 13:00</td>
<td>Panel Discussion</td>
<td>Future of Practice</td>
<td>Elizabeth Mahlow, Christopher O’Hara, Josh Lobel, Aaron Forrest, Ben Tait, Paul Kassabian</td>
<td>Nous Engineering, Studio NYL, C.W. Keller + Associates, Ultramoderne, UAP, Simpson Gumpertz &amp; Heger</td>
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<td>13:00 - 13:45</td>
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<td>13:45 - 14:00</td>
<td>Dessert Talk</td>
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<td>Rebecca Buntrock, Leonard Leung</td>
<td>Silman, PBDW Architects</td>
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<td>14:00 - 15:30</td>
<td>Presentations</td>
<td>Future Contexts</td>
<td>Eliza Montgomery, Matt Carter, Jennifer Anna Pazdon, Simon David</td>
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<td>15:30 - 16:00</td>
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<td>16:00 - 18:00</td>
<td>Design Workshop</td>
<td>A Resilient Future</td>
<td>Ted Segal</td>
<td>Hofstra University</td>
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<td>18:30 - 20:00</td>
<td>Reception sponsored by Silman</td>
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SPEAKERS & PANELISTS

GLENN BELL
SIMPSON GUMPERTZ & HEGER

Glenn Bell, a Senior Principal, joined SGH in 1974. He has worked closely with architects and contractors on the design of structures and building enclosure systems, seismic design and risk assessment, materials analysis, and investigation of distress and failure of building systems. Glenn has lectured and published papers extensively on technical, managerial, and professional practice in structural engineering and has served on many professional committees and boards, including for the American Society of Civil Engineers and the Building Seismic Safety Council. From 1995 through 2016, Glenn served as Chief Executive Officer of SGH.

ANTONIO RODRIGUEZ
LESLIE E. ROBERTSON ASSOCIATES

Antonio has been with LERA since 2006. He holds a Master’s Degree in Numerical Methods for Design and Analysis in Engineering and a Postgraduate Degree in Structural Design and Analysis, both from the Universitat Politècnica de Catalunya (Barcelona, Spain), as well as a Bachelor’s Degree in Mechanical Engineering from the Universidad Simon Bolivar (Caracas, Venezuela). Antonio guides the efforts of LERA Immerse, a Virtual Reality consulting service that uses custom VR design and coordination tools to enhance the design process. He focuses his work on developing projects with complex geometries using advanced techniques, such as parametric design, computational methods, digital fabrication and VR.

SIGRID ADRIAENSENS
PRINCETON UNIVERSITY

Adriaenssens is a structural engineer and associate professor at the Department of Civil and Environmental Engineering at Princeton University, where she directs the Form Finding Lab. She worked as a project engineer for Jane Wernick Associates (London) and Ney + Partners (Brussels) where she found the form for the courtyard roof of the Dutch National Maritime Museum in Amsterdam (2011). At Princeton, she co-curated the exhibition ‘German Shells: Efficiency in Form’ which examined a number of landmark German shell projects. She is first author of Laurent Ney: Shaping Forces (2010) and Shells for Architecture: Form Finding and Optimization (2014). The pursuit of better structural urban forms runs as a Leitmotif through her research and teaching.

ERIC LONG
SKIDMORE, OWINGS & MERRILL

Eric is a Director of Structural Engineering in SOM’s San Francisco office. He incorporates innovative structural engineering design concepts to drive new solutions in building design and construction. Eric is involved in teaching an integrated architectural studio class, focusing on the creative collaboration of architecture and structural engineering with students from Stanford University, the University of California, Berkeley, and others.

LUCA FRATTARI
ALTAIR

Luca Frattari has a Ph.D. in Architecture and Industrial Design. He joined Altair as an employee in 2011 and is currently the Global Director for Architecture Engineering and Construction. He continues to pursue his passion to create and innovate through his involvement with some of the greatest design projects happening across the globe, using Altair’s technology to help people transform their creative intuitions into structural reality. At Altair Engineering, Frattari has worked for a company that has more than thirty years of experience in lightweight design, innovation and simulation technology. His effort is directed to helping teams deploy the software and methodologies developed at Altair in order to solve complex problems.

BILL WASHABAUGH
HYPERSONIC

Bill Washabaugh uses art, science, and technology to explore the world around and within us. He is the founder and creative director of Hypersonic, a studio that creates new media sculptures and interactive environments. For the past six years, Hypersonic has created sculptures based on the works of prominent architects and engineers. Prior to founding Hypersonic, Bill designed aircraft systems for a large airplane company. Bill has a B.S. in aerospace engineering, and has been a guest lecturer at RISD, NJIT, and Parsons the New School. He was recently a visiting research fellow at the Cadre Lab for New Media Art at San Jose State University.
Michael Stein
Schlaich Bergermann Partner

In his 20-year long career with schlaich bergermann and partner, Michael Stein has designed projects around the world. He believes in the creative skills of engineers and the potential benefits of an integrated design approach for construction projects. In 2004 he founded the New York office and leads U.S. operations as Managing Partner. Michael’s experience in North America includes serving as Engineer of Record for the 450ft high WTC Tower 1 spire. He was Project Director during the design and construction of the Consol Energy Wingtip (Boy Scouts) Bridge in West Virginia. Michael’s projects have received numerous awards, such as the SEAO-NY Award for Excellence in Structural Engineering 2014 for the Boy Scouts Bridge in West Virginia.

Anand Babu
Sidewalk Labs

Anand Babu is Chief Operating Officer for Sidewalk Labs. He previously led efforts in Google’s Special Projects team focused on cities and transportation and led product incubation within Google’s Machine Intelligence team. Prior to Google, Anand led platform strategy for Opendoor, a software company using real-time analytics to help utility customers save energy. He also led product for SkyDrive at Microsoft, growing it to 200 million consumer and enterprise users, and launched Azure, Microsoft’s cloud platform for developers. Previously, he worked as a venture investor at Crosslink Capital, where he led investments in cloud infrastructure and solar energy. Anand started his career as a consultant at Bain & Company.

Julian Rose
Formless Finder

Julian Rose grew up in Colorado and New York City. He received his Masters of Architecture from Princeton University where he was awarded the School of Architecture History and Theory Prize. Prior to attending Princeton he earned his BA from Harvard University in Art and Architectural History. He has worked for AMO on Rem Koolhaas’s proposal for the State Hermitage Museum in Saint Petersburg, Russia, and for the American firm LTL Architects on various buildings, installations, and exhibition designs, including projects sited at Lincoln Center and the Architectural League of New York. Rose’s writing on both art and architecture has been published internationally in such publications as Domus, Log, and Artforum.

Aaron Forrest
Ultramoderne

Aaron Forrest (AIA, NCARB) is co-principal of the award-winning architecture practice Ultramoderne. He received both his Bachelor’s Degree and Masters in Architecture from Princeton University. Aaron is an Assistant Professor of Architecture at RISD, with previous teaching experience at University of Pennsylvania and Princeton University. Prior to founding Ultramoderne, he practiced in New York with Bernheimer Architecture and Guy Nordenson and Associates Structural Engineers, and in Madrid with Ábalos & Herreros Arquitectos. He was also a designer-in-residence at MoMA/PS1 for the Rising Currents exhibition.

Josh Lobel
C.W. Keller + Associates

Josh Lobel is Director of Engineering at C.W. Keller + Associates. C.W. Keller + Associates work hand in hand with architects, designers, and contractors to design, fabricate and deliver custom visions within a defined budget, effect, and performance.

Paul Kassabian
Simpson Gumpertz & Heger

Paul Kassabian joined Simpson Gumpertz & Heger Inc. (SGH) in 2003. He is experienced in structural design and investigation on a wide range of structural systems from buildings for architects to projects on the cutting edge of both structural systems and materials. He focuses on developing innovative methods of design and construction using SGH’s in-house materials lab, computational design approaches, and digital fabrication techniques. Paul was a lecturer at MIT in the fall semester to graduate structural engineering students and currently lectures at Harvard GSD in the spring semester to the graduate architecture students.

Liz is a Principal at Nous Engineering in Los Angeles who envisions a new kind of engineering practice combining social understanding with technical and design skill. Liz has 9 years of professional experience in the construction industry, focusing on high-rise concrete construction, seismic design and special structures. She has managed large-scale, fast-track projects within the US and internationally.
Leonard Leung has over 20 years of design experience and has contributed to the firm’s design vocabulary and aesthetics, especially its educational and institutional projects. He has worked on designs for the Mellon Foundation, the Poly Prep’s Lower School in Brooklyn, and the Educational Alliance’s flagship building. His current project is the design of a new natatorium, student center, and gymnasium for DeSales Media Group, a division of Studio NYL. The Skins Group was established to provide full service facade design specializing in thermal modeling, moisture/condensation analysis, in-depth detailing and more. They are known for their innovative approach to designing architectural structures, and are often sought out by those who need assistance with challenging systems. Although Studio NYL is recognized for its skins work with cutting edge glass and glazing, their team also specializes in digitally fabricated metal skins and facades, GFRC, reinforced polymers, stone, ultra high performance concrete, fabrics, terra cotta and traditional precast. Leung is currently working on multiple facade projects in the Boston area.

Eliza Montgomery is a designer at Ennead Architects. Current projects include the Peabody Essex Museum Expansion and the Arizona Center for Law and Society. She also co-leads Ennead Lab’s Rethinking Refugee Communities project. In collaboration with the United Nations High Commissioner for Refugees, this AIA NY Honor Award winning project is an initiative to design more cohesive, dignified and sustainable planning solutions for refugees and internally displaced people around the world. Montgomery has lectured on the project at a number of events including the 2014 Humanitarian Innovation Conference at Oxford and the UN Habitat 2016 Conference at the UN Headquarters. She also teaches on the subject jointly with Don Weinreich at Pratt Institute.

Ben Tait is President of UAP North America. As part owner of UAP’s global business and President of its North American arm, Ben holds over 20 years of experience in organizational leadership and specialized construction. Since the early days of UAP Ben has been instrumental in its transformation from a small Brisbane studio into a multinational operation. In 2014 Ben established UAP North America and now leads the company’s quickly growing US business head quartered in New York City. He contributes to the groups global strategy as a member of the UAP board.

Matt Carter joined Arup in 1997 and leads our Long Span Bridge business in the Americas region. He is a civil engineer with extensive experience in the conceptual and detailed design of long-span and complex bridge structures in North America, East Asia, Europe, Africa, and Australia. Through his work on major bridge projects, Matt has developed significant skills in seismic and aerodynamic design of bridges as well as marine foundations and ship collision risk. Matt has been involved in numerous design-build projects and public private partnerships with both owners and contractors as clients, gaining unique insights by working from different perspectives.

Jennifer Anna Pazdon provides management and technical support to local CastConnex staff, as well as technical support for brick maker capacity-building, and lead new project start-ups as needed. Jennifer earned her MSE from Princeton University and has over 9 years’ experience as a structural engineer in new construction and renovations, primarily in the NY/Northeast area of the U.S.

Ted Segal is President of UAP North America. As part owner of UAP’s global business and President of its North American arm, Ben holds over 20 years of experience in organizational leadership and specialized construction. Since the early days of UAP Ben has been instrumental in its transformation from a small Brisbane studio into a multinational operation. In 2014 Ben established UAP North America and now leads the company’s quickly growing US business head quartered in New York City. He contributes to the groups global strategy as a member of the UAP board.

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THANK YOU TO OUR CONFERENCE SPONSORS
Lee Franck, Guy Nordenson and Associates
Powell Draper, Schlaich Bergermann and Partner
Julia Chapman, Ennead Architects
Victor Charpentier, Princeton University PhD
Alex Alaimo, PBDW Architects
Rebecca Buntrock, Silman
Shinjinee Pathak, Silman
Ryan Miller, Silman
Evan Speer, Kathmandu Valley Preservation Trust
Tracy Huynh, Knippers Helbig

Lee Franck
Lee is a structural engineer working for Guy Nordenson and Associates in NY. She has previously worked for Arup in London as a building and bridge engineer. She works closely with architects on projects such as museums, sculptures and footbridges. She enjoys being a visiting lecturer and tutor to engineering and architecture students at the AA, RCA and Bartlett in London and Princeton and Columbia in the US. She is an active member of IABSE and started the Future of Design in London in 2012.

Julia Chapman
Julia is an architectural designer at Ennead Architects and a registered architect in New York. She holds an Arts Bachelors and a Master of Architecture degree from Princeton University where she received the Henry Adams AIA Medal and the Suzanne Kolarik Underwood Prize for excellence in design. Previously, she was the Project Manager for Structures of Coastal Resilience, an interdisciplinary project featuring design proposals for coastal communities vulnerable to sea level rise and storm surge.

Rebecca Buntrock
Rebecca is a Senior Project Engineer at Silman, with a focus on existing buildings and preservation. She holds a Bachelor of Engineering from McGill University and a Master of Engineering degree from MIT. She was the sixth Robert Silman Fellow for Preservation Engineering at the National Trust for Historic Preservation. She is currently the vice president of the APT Northeast Board of Directors and a member of IABSE Working Commission 7, Sustainable Engineering.

Shinjinee Pathak
Shinjinee Pathak is a senior structural engineer at Silman. She began her career working on an iconic new construction project. Since then her focus has transitioned more to existing building renovation. Her projects range from museums to renovations of educational and religious institutions. Shinjinee is an active member of the Structural Engineers Association of New York (SEAoNY) and served as the Excellence in Engineering Awards committee chair from 2014-2016. She has written articles for Civil Engineering Magazine and Modern Steel Construction.

Evan Speer
Evan Speer serves as seismic/structural engineer & operations consultant at the Kathmandu Valley Preservation Trust in Nepal. He works on a variety of building design projects with a focus on historic preservation and adaptive reuse. He holds a Bachelor of Civil Engineering degree from the University of Vermont and a dual Master of Structural Engineering from the University of Minho and the Czech Technical University. He was the 8th Robert Silman Fellow for Preservation Engineering at the National Trust for Historic Preservation.

Tracy Huynh
Tracy received a Bachelor of Science in Civil Engineering at Rice University (Houston, TX) and a Master of Science in Structural Engineering at Princeton University. She joined Knippers Helbig in 2016 where she has worked on a variety of projects and competitions involving complex geometries and innovative technologies with a creative and passionate team. She makes an effort to stay involved in the design community by creating graphics for shirts and posters for various organizations.