

# Facade Tectonics 2020 World Congress Speaker Program

## Day 1 – Wednesday, August 5

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9:00 Plenary Session							
9:30	Session 1	FACADE <> MATERIAL	ENERGY <> SUSTAINABILITY	SAFETY <> STRUCTURE	PROCESS <> DESIGN	INTEGRATION <> ADAPTATION	EFN   SAFETY <> STRUCTURE
		<p><b>Reinforced Polymer Concrete Screen Walls: Merging Structural Integrity of Reinforced Masonry with Environmental &amp; Aesthetic Benefits of Breeze Blocks</b> Brock DeSmit / Belzberg Architects Becher Neme / Neme Design Studio</p> <p><b>Terra Cotta Skins: An Expression of Climate Change</b> Laura Garofalo, University at Buffalo</p>	<p><b>Passive House Facade Design and Construction: Performance-Based Criteria Allow Flexibility While Reducing Energy Consumption</b> Louis Koehl / Handel Architects</p> <p><b>The First Triple Certified Facade: Merging Sustainability and Building Well-Being</b> Stephen Katz / Gensler</p> <p><b>Put Your Sweater On! A Case for Low Performance</b> Eric Haas / DSH Architecture</p>	<p><b>More Than a Facade: A Need for a Design and Testing Standard for Partially Composite Precast Concrete Insulated Wall Panels</b> Edward Losch, PhD, Marc Maguire, PhD / Losch Engineering</p> <p><b>From Design to Experiment: Proposed Design Procedures for Full-scale Structural Testing of Flat Cable-net Facades</b> E. Yagdir Celiker, MSc. / Istanbul Bilgi University Architecture Faculty, Istanbul Technical University Graduate School of Science Oguz C. Celik, PhD. / Istanbul Technical University, Architecture Faculty</p> <p><b>The Seismic Capability of Curtainwalls: Designing &amp; Assessing Curtainwalls in New Zealand &amp; Australia</b> Peter Lalas / Janus Facades</p>	<p><b>Facade Mock-ups: Laboratory Testing of Glazing Systems as Part of a Quality Assurance Program</b> Andy Lang / Morrison Hershfield</p> <p><b>Build Test Iterate Repeat: Constructing Low-Tech, Low-Cost Thermal Testing Strategies in Building Facades</b> Elizabeth McCormick</p> <p><b>Building Scale Mock-Up: Facade Optimization &amp; Performance Verification through Consultant and Owner Partnership</b> Michael Martinez, Asim Tahir / Atelier Ten</p>	<p><b>Autonomous or Appropriate: New National Gallery and Woodland Chapel</b> Katrin Terstegen / CalPoly Pomona</p> <p><b>Thermoelectric Facades: Simulation of Heating and Cooling Potential for Novel Intelligent Facades</b> Ajla Aksamija, Zlatan Aksamija, Guy Vignaeu / University of Massachusetts Amherst</p> <p><b>DePneumatic Facades: The Potential Advantages of Deflated Envelopes</b> Scott Uriu / Baumgartner + Uriu Architecture</p>	<p><b>Innovations with Glass</b> Jens Schneider / Technical University Darmstadt</p> <p><b>Fire Safety Facades Design - A Case Study</b> Paolo Rigone / Polimi &amp; UNICMI</p> <p><b>Comparison Between Fire Safety Regulations for Facades</b> Bahadır Buluk / Facade Design Factory, Istanbul</p>
10:45 Networking Break							
11:15	Session 2	FACADE <> MATERIAL	ENERGY <> SUSTAINABILITY	SAFETY <> STRUCTURE	PROCESS <> DESIGN	INTEGRATION <> ADAPTATION	EFN   ENERGY <> SUSTAINABILITY
		<p><b>Process of Repair Evaluation: Case Studies of Translucent Silicone Coating Repairs</b> Linda Fu, Christopher Morgan / Marx Okubo</p> <p><b>Influence of Performance and Design of Structural Silicone Joints on the Resilience of Curtain Wall Units Exposed to Seismic Impacts</b> Viviana Nardini, Florian Doebbel / Sika</p> <p><b>Sustainable Silicon: Building Blocks for Carbon Neutrality</b> Jon Kimberlain, Stanley Yee, Adrienne Bowman / DOW</p>	<p><b>Thermal Performance of Closed Cavity Facades: Performance Assessment of Closed Cavity Facade in California Climate</b> Andrea Zani, Carmelo Galante / Eckersley O'Callaghan</p> <p><b>Performance of Compact, Closed Cavity, Double-skin Curtain Wall: Thermal and Energy Simulations to Assess the Risk of Condensation</b> Stéphane Hoffman / Morrison Hershfield</p> <p><b>Carbon Lean Facades: Advancing New York City's Climate Mobilization Act and Zone Green Regulations through High-Performance Facades</b> Stefanie Schober, Jonce Walker / Thornton Tomasetti</p>	<p><b>Slipping through the Cracks: Case Study – High-rise Curtainwall Courthouse in the Midwest</b> Jason Siwek / Walter P Moore</p> <p><b>Steel As A Curtain Wall Framing Material: New Forming Methods Advance Material's Use in Building Construction</b> Charles Knickerbocker, III / Allegion</p> <p><b>Hurricane-Acoustic Glazing Barriers Using New Interlayer Technology</b> Stephen Bennison / Kuraray America</p>	<p><b>Realizing Bespoke Structural Glass Facades: The Denver Art Museum Welcome Center</b> Ned Kirschbaum / Fentress Architects Peter Koukos / Harmon, Inc. Richard Kaire, PE / Sentech Architectural Systems, LLC.</p> <p><b>The Evolution of AEC Professional Silos: Project Team Advances the Project Delivery Process for California Hospital Reskin Project</b> David Olsen, Megan Leon / Ratcliff Architects</p> <p><b>The Academy Museum of Motion Pictures, LA: Design &amp; Engineering of the Iconic Spherical Shell</b> Roman Schieber / Knippers Helbig</p>	<p><b>Predictive Modeling in an Automated Building Facade: Validation of Method in a Passively Conditioned Building Using a Test Cell</b> Troy Peters / Wentworth Institute of Technology</p> <p><b>Breathing Lessons: Development of a Custom Motorized Facade</b> Xaver Nuiding, Thomas Lorenz, Alex Cox, Timo Bühlmeier / Permasteelisa North America</p> <p><b>Integrating Soft Robotics into Architectural Assemblies</b> Vera Parlac / New Jersey Institute of Technology</p>	<p><b>Shape Memory Alloy Activated Shading</b> Alberto Speroni / POLIMI</p> <p><b>Window in Wall: Back to the Future</b> Thomas Auer / Transsolar, Technical University München</p> <p><b>Retroreflective Coatings for Window Blinds</b> Luca Papaiz / Pellini Industrie, glassAdvisor</p>
12:30 Lunch Break							
1:30 Plenary Session							
2:15	Session 3	FACADE <> MATERIAL	ENERGY <> SUSTAINABILITY	SAFETY <> STRUCTURE	PROCESS <> DESIGN	INTEGRATION <> ADAPTATION	EFN   PROCESS <> DESIGN
		<p><b>ETFE Canopy at the Australian Embassy in Jakarta: Case study on a lightweight structure using ETFE</b> Bjorn Beckert / Fabritecture</p> <p><b>The Tectonics of Flimsiness: Celebrating the Insubstantial</b> Timothy Brown / Clemson University</p>	<p><b>Architectural Shape Optimization: Low-Energy Typical Housing Typologies in Humid Temperate Climate</b> Patricia Camporeale</p> <p><b>Two Sides to Sustainability &amp; High-Performance: City of Hope Administrative Office Building</b> Brian Fraumeni, Julia Ragragio-Ruiz / Gensler</p> <p><b>Balancing Visual Comfort and Energy Efficiency: Integrating Environmental Performance and Aesthetics in an Office Building in South East Asia</b> Berardo Matalucci, Edward Palka, Brad Groff, Jennifer Siqueira / SHoP Architects</p>	<p><b>Developments in Gridshell Design: A Look at Their Evolution</b> Cristobal Correa / Buro Happold</p> <p><b>Integrating Structure and Cladding: Case Study of a Residential Building</b> Christian Stutzki, Jerome Engelking / Stutzki Engineering</p> <p><b>Academic Wood Tower Choreography: Design and Planning for the University of Toronto's First Mass Timber Building</b> John Peterson, Leland Dadson / MJMA</p>	<p><b>Facade Expansion Joint Systems: Integrating Expansion Joint Cover Systems into Facade Design</b> Kevin Smith / Construction Specialties</p> <p><b>Detailing For Distance: The Vertical Split Mullion Connection</b> Daniel Kelso</p> <p><b>Geometric Patterns as Architectural Forms: A Case-Study in Development of a Taxonomy of Tilings</b> Joshua Schultz, Neil Katz / Gonzaga University</p>	<p><b>The Versatile Envelope Garden: A Communal Threshold for Urban Environments</b> Nathaniel Barlam / Virtual Construction Lab of Schüco</p> <p><b>Green Wall Rainscreen: Utilizing Established Cladding Technology to Build Vertical Garden Envelopes</b> Stephan Wurster / Pohl</p> <p><b>Growing Myceliated Facades: Manufacturing and Exposing Experimental Panels in a Facade Setting</b> Thibaut Houette, Brian Foresi / University of Akron</p>	<p><b>Facade Design and Engineering for the Fourth Industrial Revolution</b> Mikkel K. Kragh / University of Southern Denmark</p> <p><b>Prefab Facades - From Prototype to Product</b> Lisa Rammig / Eckersley O'Callaghan</p> <p><b>Digital Lifecycle of Building Envelopes</b> Daniel Arzmann / TH-OWL, Schüco International KG</p>
3:30 Networking Break							
4:00	Session 4	FACADE <> MATERIAL	ENERGY <> SUSTAINABILITY	SAFETY <> STRUCTURE	PROCESS <> DESIGN	INTEGRATION <> ADAPTATION	EFN   EDUCATION <> RESEARCH
		<p><b>Duplex Stainless Steel Cladding: For Highly Corrosive Environments</b> James Halliday, Fred Deuschle / Rigidized Metals</p> <p><b>Lightweight Veneer in High-rise Unitized Facades: Design and Performance Considerations for Manufactured Alternatives to Natural Stone Veneer</b> Antonio Luz / Vidaris</p> <p><b>Solid Surface Material for Facades: Innovative Uses and Technical Challenges</b> Christopher Payne / Gensler</p>	<p><b>Hydroformed Shading: A Calibrate Approach to Solar Control</b> Michelle Lee, Roman Schieber / Behnisch Architekten</p> <p><b>An Energy-harvesting Building Façade: for Building Information System</b> Fangliang Chen / Schüco USA</p> <p><b>Designing with Photovoltaics: BIPV</b> Wayne Walker, Julia Ragragio Ruiz / Gensler</p>	<p><b>Rammed Earth &amp; Wildfire: Building Complexities in the Wildland Urban Interface</b> Brittany Dhawan</p> <p><b>Fire Safety and Code Challenges for Mass Timber in Curtain Wall Systems: Negotiating Codes for a Sustainable Design</b> David Barber / Arup John Neary / HOK Mic Patterson / Facade Tectonics Institute</p> <p><b>The Big Issue Downunder: Combustible Composite Cladding</b> Juliet Landler / Arcadis Design &amp; Consultancy</p>	<p><b>Execution Ways: Peeling back Layers from Geometrical and Structural Complexities in Facades</b> Viswanath Urala / Enclos</p> <p><b>Façade with Innovation: Case Study of Super High-Rise Complex Unitized Facade</b> Hui Yu</p> <p><b>Translation from Concept to Construction: The Enclosure of Uber's Mission Bay HQ</b> Ryan Donaghy / SHoP Architects Matt Spahr / Heintges</p>	<p><b>Carbon-Dioxide-Inhaling Facade: Design of a Bioreactor Facade to Produce Active Ingredients and High-Value Products</b> Timo Schmidt, Carmen Herrmann, Michael Lakatos / Hochschule Augsburg University of Applied Sciences</p> <p><b>The Butterfly: A Case Study in Performative Spectacle</b> Zhuoli Yang, Shinobu Homma / Revery Architecture</p> <p><b>Invert Auto-Shading: Daylighting Performance and Visual Comfort Analysis of Dynamic Thermostatic Bimetal Shading</b> Jae Yong Suk / University of Texas San Antonio Doris Sung / University of Southern California</p>	<p><b>Modern Heritage and Facade Improvements</b> Uta Pottgiesser / TU Delft, TH-OWL</p> <p><b>Active and Energy Autonomous Window Spectacle</b> Annalisa Andaloro / Eurac Research</p> <p><b>European Facade Networks</b> Ulrich Knaack / Technical University Delft</p>
5:30 Welcome Reception   Hosted by Walter P Moore							

Day 2



Facade Tectonics 2020 World Congress Speaker Program

**Day 2 – Thursday, August 6**

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9:00 Session 1							
GLASS <> MATERIAL	ENERGY <> SUSTAINABILITY	LIGHT <> AIR	DESIGN <> DIGITAL	EDUCATION <> FACADES			
<p><b>Thermal Glass Stress Analysis: Design Considerations</b> Michael Elstner / Interpane</p>	<p><b>A Light Mass Envelope Solution for Reducing Carbon Emissions – The CCAPP System</b> Brian Stern / Glumac Mike Ryan / Clark Pacific</p>	<p><b>Managing Solar Reflections from the Building Envelope: A Meta-Analysis of Case Studies</b> Ryan Danks, Joel Good / RWDI</p>	<p><b>Performance-based Facade Framework: Automated &amp; Multi-Objective Simulation &amp; Optimization Method</b> Mahsa Minaei / University of Massachusetts Amherst</p>	<p><b>Systems Thinking: Teaching Facade Design in Professional Architecture Degree Programs</b> Gabrielle Brainard / Rensselaer Polytechnic Institute</p>			
<p><b>Heat-Treated Glass: Designer's Guide to Navigating Industry Trends and Minimizing the Appearance of Optical Distortions in Exterior Heat-Treated Glass</b> Reece Poth, Conner Claus / Simpson Gumpertz &amp; Heger</p>	<p><b>Carbon-Neutral High-Rise Envelope Nexus: Generative Design and Engineering for Extreme Subtropical Climates</b> Thomas Spiegelhalter / CND Projects LLC and Florida International University in Miami</p>	<p><b>VR For Daylight: Glare Analysis in a Virtual Environment</b> Caris Frazier-Baker, Sanjeev Tankha / Walter P Moore</p>	<p><b>Connections – Tolerance, Adjustability, Geometric Accuracy: Leveraging Physical Validation with Digital and Iterative Design</b> Jeff Montague / Radius Track</p>	<p><b>Facade Games: The Vertical Surface as Student Design Exercise</b> James Tice / University of Oregon</p>			
<p><b>Feasibility of Measuring Stress in Glass with a Scalp</b> Stephen Morse / Michigan Tech</p>		<p><b>Solar Reflection Mitigation: Glare from Reflective Glazing</b> Kais Al-Rawi / Walter P Moore</p>	<p><b>Managing Constraints: An Integrated Design to Construction Workflow</b> Vincent Ip / NBBJ</p>	<p><b>Mixed Reality in Facade Education: Expanding the Application of Immersive Technologies</b> Phillip Anzalone, Amber Bartosh / New York City College of Technology (City Tech)</p>			
10:15 Networking Break							
10:45 Session 2							
GLASS <> MATERIAL	ENERGY <> SUSTAINABILITY	LIGHT <> AIR	DESIGN <> DIGITAL	HERITAGE <> FACADES			
<p><b>Specifying Electrochromic Glass</b> Belinda Valenti, Justin Glover / STUDIOS Architecture</p>	<p><b>End-of-Life Challenges in Facade Design: A Disassembly Framework for Assessing the Environmental Reclamation Potential of Facades</b> Rebecca Hartwell / University of Cambridge</p>	<p><b>A Study on the Impact of Hospital Facade Opening Focusing Outdoor Exposure on Waiting Room Experience: Eye Hospital as Case Study</b> Iftekhar Rahman</p>	<p><b>Corrugated-geometry Copper and Glass Facade: From Concept to Construction</b> John Jackson, Marko Tomic / Simpson Gumpertz &amp; Heger</p>	<p><b>Optimized Adaptive Re-Use: Computational Workflows Towards Net-Zero Carbon Buildings</b> John Souleles, Matthew Parker / Dialog Design</p>			
<p><b>Determination of Interlayer Structural Properties for Use in Laminated Glass Design</b> Stephen Bennison, Haert Michael, Sauerbrun Steven / Kuraray America</p>	<p><b>Environmentally Responsible Wood Cladding: Aligning Building Envelope with Institutional Environmental Responsibility</b> Doug Bergert, Pratibha Chauhan / Perkins &amp; Will</p>	<p><b>Determining the Optimal Openings for Multi Skin Facade with External Ventilation</b> Peter Simmonds / Building and System Analytics</p>	<p><b>United States Olympic and Paralympic Museum: Use of 3D modeling for BIM, fabrication, and installation</b> Ilja Aljoskin, Neil Meredith, Lee Pepin / MG McGrath</p>	<p><b>Saving Face: Restoring Cast Iron Facades for a Modern World</b> Xsusha Flandro / CANY</p>			
<p><b>Prototyping with Ultra-Thin Glass</b> Sophie Penneret, Josephine Stoddard / Enclos</p>	<p><b>Sustainable Materials: The Good, the Bad, and the Dangerous of Welding Stainless Steel</b> Michael Mulhern / Tripyramid</p>	<p><b>Undulated Glass Self-shading: Optical Benefits of Façade Figuration</b> Nebojsa Jakica, Mikkel K. Kragh / University of Southern Denmark</p>	<p><b>Building by Numbers: Digital Process for Analysis and Documentation of Changi Jewel Grid Shell</b> Trevor Lewis</p>	<p><b>Reduce, Reuse, Reclad: Kintsukuroi and the Trace of Time in Architecture</b> Daniel Nauman, Jessica Santonastaso / Gensler</p>			
12:00 Lunch Break							
1:30 Session 3							
GLASS <> MATERIAL	ENERGY <> SUSTAINABILITY	LIGHT <> AIR	DESIGN <> DIGITAL	HERITAGE <> FACADES			
<p><b>Simplicity is Deceiving: Jumbo Glass at High-rise Podium</b> Kerry Hegedus, Giovanni De Mari / NBBJ</p>	<p><b>Air Spaces Changed Everything: Sometimes Materials Are Immaterial</b> Gerry Lang / architectsAlliance</p>	<p><b>Circadian Daylight Performance of the Electrochromic Glazing: A workflow for Analysis of the EC Window Non-Visual Daylight Performance</b> Ahoo Malekafzali / Sage Glass</p>	<p><b>Ginza Six: A Noble Post-Metabolism Concept for Commercial Facade Design</b> Katsuhiko Muramoto, Junko Owada / Penn State</p>	<p><b>Preserving a Historic Facade: Repairs to Extend Cladding Life</b> Maria Mohammed, David Cocke, John Fidler / Structural Focus</p>			
<p><b>Design of Double Curved Self Spanning Horizontal Laminated Glass: How to Validate and Design Large Format Double Curved Self Spanning Glass</b> Beres Dowdle / Surface Design</p>	<p><b>Effect of Thermal Bridging on Buildings' Energy Performance: Comparison of Area-Weighted vs. Additive Thermal Resistance in Facades</b> Mahsa Farid Mohajer, Ajla Aksamija / University of Massachusetts Amherst</p>	<p><b>Shaping Skin: Aesthetics &amp; Performance of Non-Planar Facades, and the Circadian Curtain Wall</b> John Neary / HOK</p>	<p><b>Nested Density: Proliferation of Projection Mapping in Urban Contexts</b> Wendy Cox / Norwich University</p>	<p><b>Orientation Specific Solar Control: Four Postwar Louis Kahn Buildings Contrasted</b> Clifton Fordham / Temple University</p>			
<p><b>Seismic Design of Jumbo Glass Structures: Inter Story Drift Analysis of Modern Facades</b> Richard Kaire, PE, SE / Sentech Architectural Systems</p>	<p><b>U-Factor Matters in Hot Climates: The case for Thermal Breaks and Warm-Edge Spacer</b> Helen Sanders / Technoform North America</p>	<p><b>Shade and Spectacle: Second Skins and Their Uses</b> Warren Techentin / University of Southern California</p>					
2:45 Networking Break							
3:15 Session 4							
GLASS <> MATERIAL	FACADE <> ACOUSTICS		HERITAGE <> FACADES				
<p><b>Glazing Design By ASTM E 1300: Maximum Surface Stress and Probability of Breakage</b> H. Scott Norville, Steven Morse, James Soules / Texas Tech University</p>			<p><b>Influence of Facade Materials on the Acoustic Environment</b> Alvaro Balderrama / TH-OWL Daniel Arzmann / TH-OWL, Schüco International KG</p>				
<p><b>The Glass Failure Prediction Model: Using Commercial Finite Element Software to Extend the Applicability of ASTM E 1300</b> H. Scott Norville, James Soules, Stehen Morse / Texas Tech University</p>				<p><b>Doubling Mies: Retrofitting Modernist Facades</b> Timothy Brown / Clemson University</p>			
				<p><b>Renewing Historic Facades: Restoring Character and Achieving High Performance</b> Christine Reynolds / Wiss, Janney, Elstner Associates (WJE)</p>			
4:30 Plenary – Special Guest from the City of LA + Closing Presentation by Mic Patterson							