Facade Tectonics 2020 WORLD CONGRESS

Join the dialogue!

Face Time 2020: Better Buildings through Better Skins

AUGUST
5-27

WEDNESDAYS & THURSDAYS IN AUGUST

Virtual Paper Presentations + vExpo + Poster Gallery + Workshops

The 2020 World Congress will take place virtually! Each Wednesday in August, we will present plenaries, peer-reviewed papers and a limited number of breakout networking sessions; educational workshops will be held on Thursdays. Access to the vExpo and poster gallery will be open throughout both days. Registered attendees will be able to access the paper presentations on-demand through the end of the 2020.

Questions? **Check out our FAQ**.

PLEASE NOTE: All schedule times are shown in Eastern Daylight Time (UTC-4).

Facade Tectonics 2020 World Congress Speaker Program

Week 1 – Wednesday, August 5

11:00	**Plenary**				
11:30	**Session 1**	**FACADE <> MATERIAL**	**ENERGY <> SUSTAINABILITY**	**SAFETY <> STRUCTURE**	**EFN | SAFETY <> STRUCTURE**
		Reinforced Polymer Concrete Screen Walls: Merging Structural Integrity of Reinforced Masonry with Environmental & Aesthetic Benefits of Breeze Blocks Brock DeSmit / Belzberg Architects Hugo Balderas / Grupo Amina	**Passive House Facade Design and Construction: Performance-Based Criteria Allow Flexibility While Reducing Energy Consumption** Louis Koehl / Handel Architects	**From Design to Experiment: Proposed Design Procedures for Full-scale Structural Testing of Flat Cable-net Facades** E. Yagdir Celiker, MSc. / Istanbul Bilgi University Architecture, Istanbul Technical University School of Science Oguz C. Celik, PhD. / Istanbul Technical University Architecture	**Innovations with Glass** Jens Schneider / Technical University Darmstadt
		Terra Cotta Skins: An Expression of Climate Change Laura Garofalo / University at Buffalo	**The First Triple Certified Facade: Merging Sustainability and Building Well-Being** Stephen Katz / Gensler		**Fire Saftey Facades Design - A Case Study** Paolo Rigone / Polimi & UNICMI
			Put Your Sweater On! A Case for Low Performance Eric Haas / DSH Architecture		**Comparison Between Fire Safety Regulations for Facades** Bahadir Buluk / Facade Design Factory, Istanbul
12:30	**vExpo + Breakout Networking Sessions + Poster Gallery Presentations**				
1:15	**Session 2**	**FACADE <> MATERIAL**	**ENERGY <> SUSTAINABILITY**	**SAFETY <> STRUCTURE**	
		Process of Repair Evaluation: Case Studies of Translucent Silicone Coating Repairs Linda Fu / Marx|Okubo Christopher Morgan / BC&E Group	**Thermal Performance of Closed Cavity Facades: Performance Assessment of Closed Cavity Facade in California Climate** Andrea Zani, Carmelo Galante / Eckersley O'Callaghan	**Slipping through the Cracks: Case Study – High-rise Curtainwall Courthouse in the Midwest** Jason Siwek / Walter P Moore	
		Influence of Performance and Design of Structural Silicone Joints on the Resilience of Curtain Wall Units Exposed to Seismic Impacts Viviana Nardini, Florian Doebbel / Sika	**Performance of Compact, Closed Cavity, Double-skin Curtain Wall: Thermal and Energy Simulations to Assess the Risk of Condensation** Stéphane Hoffman / Morrison Hershfield	**Steel As A Curtain Wall Framing Material: New Forming Methods Advance Material's Use in Building Construction** Charles Knickerbocker, III / Allegion	
		Sustainable Silicon: Building Blocks for Carbon Neutrality Jon Kimberlain, Stanley Yee, Adrienne Bowman / DOW	**Carbon Lean Facades: Advancing New York City's Climate Mobilization Act and Zone Green Regulations through High-Performance Facades** Stefanie Schober, Emma Reif / Thornton Tomasetti	**Hurricane-Acoustic Glazing Barriers Using New Interlayer Technology** Stephen Bennison / Kuraray America	
2:15	**vExpo + Breakout Networking Sessions + Poster Gallery Presentations**				
3:00	**Session 3**	**FACADE <> MATERIAL**	**ENERGY <> SUSTAINABILITY**	**SAFETY <> STRUCTURE**	
		ETFE Canopy at the Australian Embassy in Jakarta: Case study on a lightweight structure using ETFE Bjorn Beckert / Fabritecture	**Architectural Shape Optimization: Low-Energy Typical Housing Typologies in Humid Temperate Climate** Patricia Camporeale	**Developments in Gridshell Design: A Look at Their Evolution** Cristobal Correa / Buro Happold	
		The Tectonics of Flimsiness: Celebrating the Insubstantial Timothy Brown / Clemson University	**Two Sides to Sustainability & High-Performance: City of Hope Administrative Office Building** Brian Fraumeni, Julia Ragragio-Ruiz / Gensler	**Integrating Structure and Cladding: Case Study of a Residential Building** Christian Stutzki, Jerome Engelking / Stutzki Engineering	
			Balancing Visual Comfort and Energy Efficiency: Integrating Environmental Performance and Aesthetics in an Office Building in South East Asia Berardo Matalucci, Edward Palka, Brad Groff, Jennifer Siqueira / SHoP Architects	**Academic Wood Tower Choreography: Design and Planning for the University of Toronto's First Mass Timber Building** John Peterson, Leland Dadson / MJMA	
4:00	**vExpo + Breakout Networking Sessions + Poster Gallery Presentations**				
5:00	**End of Day**				

Week 1 – Thursday, August 6

11:00	**vExpo + Poster Gallery Presentations**
2:00	**End of Day**

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Facade Tectonics 2020 World Congress Speaker Program

Week 2 – Wednesday, August 12

11:00	**Plenary**				
11:45	**Session 4**	**PROCESS <> DESIGN**	**INTEGRATION <> ADAPTATION**	**FACADE <> MATERIAL**	**EFN | ENERGY <> SUSTAINABILITY**
		Facade Mock-ups: Laboratory Testing of Glazing Systems as Part of a Quality Assurance Program Andy Lang / Morrison Hershfield	**Autonomous or Appropriate: New National Gallery and Woodland Chapel** Katrin Terstegen / CalPoly Pomona	**Lightweight Veneer in High-rise Unitized Facades: Design and Performance Considerations for Manufactured Alternatives to Natural Stone Veneer** Antonio Luz / Vidaris	**Shape Memory Alloy Activated Shading** Alberto Speroni / POLIMI
		Build Test Iterate Repeat: Constructing Low-Tech, Low-Cost Thermal Testing Strategies in Building Facades Elizabeth McCormick	**Thermoelectric Facades: Simulation of Heating and Cooling Potential for Novel Intelligent Facades** Ajla Aksamija, Zlatan Aksamija, Guy Vignaeu / University of Massachusetts Amherst	**Solid Surface Material for Facades: Innovative Uses and Technical Challenges** Christopher Payne / Gensler	**Window in Wall: Back to the Future** Thomas Auer / Transsolar, Technical University München
		Building Scale Mock-Up: Facade Optimization & Performance Verification through Consultant and Owner Partnership Michael Martinez, Asim Tahir / Atelier Ten			**Retroreflective Coatings for Window Blinds** Luca Papaiz / Pellini Industrie, glassAdvisor
12:45	**vExpo + Breakout Networking Sessions + Poster Gallery Presentations**				
1:30	**Session 5**	**PROCESS <> DESIGN**	**INTEGRATION <> ADAPTATION**	**ENERGY <> SUSTAINABILITY**	
		Realizing Bespoke Structural Glass Facades: The Denver Art Museum Welcome Center Ned Kirschbaum / Fentress Architects Peter Koukos / Harmon, Inc. Alfonso Lopez, PE / Sentech Architectural Systems, LLC.	**Predictive Modeling in an Automated Building Facade: Validation of Method in a Passively Conditioned Building Using a Test Cell** Troy Peters / Wentworth Institute of Technology	**Hydroformed Shading: A Calibrated Approach to Solar Control** Michelle Lee, Robert Matthew Noblett / Behnish Architekten	
		The Evolution of AEC Professional Silos: Project Team Advances the Project Delivery Process for California Hospital Reskin Project David Olsen, Megan Leon / Ratcliff Architects	**Breathing Lessons: Development of a Custom Motorized Facade** Xaver Nuiding, Thomas Lorenz, Alex Cox, Timo Bühlmeier / Permasteelisa North America	**An Energy-harvesting Building Façade for Building Information System** Qiliang Lin / Schüco USA, Columbia University	
		The Academy Museum of Motion Pictures, LA: Design & Engineering of the Iconic Spherical Shell Roman Schieber / Knippers Helbig	**Integrating Soft Robotics into Architectural Assemblies** Vera Parlac / New Jersey Institute of Technology	**Designing with Photovoltaics: BIPV** Wayne Walker, Julia Ragragio Ruiz / Gensler	
2:30	**vExpo + Breakout Networking Sessions + Poster Gallery Presentations**				
3:15	**Session 6**	**PROCESS <> DESIGN**	**INTEGRATION <> ADAPTATION**	**SAFETY <> STRUCTURE**	
		Facade Expansion Joint Systems: Integrating Expansion Joint Cover Systems into Facade Design Kevin Smith / Construction Specialities	**The Versatile Envelope Garden: A Communal Threshold for Urban Environments** Nathaniel Barlam / Virtual Construction Lab of Schüco	**Rammed Earth & Wildfire: Building Complexities in the Wildland Urban Interface** Brittany Dhawan	
		Detailing For Distance: The Vertical Split Mullion Connection Daniel Kelso	**Green Wall Rainscreen: Utilizing Established Cladding Technology to Build Vertical Garden Envelopes** Stephan Wurster / Pohl	**Fire Safety and Code Challenges for Mass Timber in Curtain Wall Systems: Negotiating Codes for a Sustainable Design** David Barber / Arup John Neary / HOK Mic Patterson / Facade Tectonics Institute	
		Geometric Patterns as Architectural Forms: A Case-Study in Development of a Taxonomy of Tilings Joshua Schultz, Neil Katz / Gonzaga University	**Growing Myceliated Facades: Manufacturing and Exposing Experimental Panels in a Facade Setting** Thibaut Houette, Brian Foresi / University of Akron	**The Big Issue Downunder: Combustible Composite Cladding** Juliet Landler / Arcadis Design & Consultancy	
4:15	**FTI Committee Meetings**				
5:15	**End of Day**				

Facade Tectonics 2020 World Congress Speaker Program

Week 2 – Thursday, August 13

11:00 AM - 2:00 PM	**vExpo + Poster Gallery Presentations**		
12:00 PM - 2:00 PM	**WORKSHOP SESSION 2A**	**WORKSHOP SESSION 2B**	**WORKSHOP SESSION 2C**
	Advancements in Structural Glass & Glass Facades	**A Practical Guide to Delivering a High-Performance Envelope**	**Metal Facades: Material, Surface, Shape**
	Richard Kaire, PE, SE / Sentech Architectural Systems Ned Kirschbaum, FAIA, CCCA, LEED AP BD+C / Fentress Architects Michael Ludvik, PE / M. Ludvik Consulting Engineering Edward Peck, FAIA, LEED AP / Edward Peck Design	Helen Sanders, PhD / Technoform North America Stéphane Hoffman / Morrison Hershfield Steve Fronek / Wausau Window & Wall Systems Alejandra Menchaca, Ph.D., LEED AP, WELL AP / Thornton Thomasetti	Stephan Wurster / Christian Pohl GmbH
	This educational workshop will focus on recent advances in technology in the field of structural glass, as well as architectural design trends in the design of all glass facades.	**This educational workshop will provide practical guidance and hands-on exercises on how to specify fenestration systems effectively, how to manage thermal bridging on the envelope and how to assess thermal comfort next to the envelope to assess and optimize the comfort performance of your envelope design.**	**This educational workshop intends to provide the participants with a deepened understanding of all aspects of metal use as it relates to building envelopes.**
	Register Now >	***Register Now >***	***Register Now >***
	Using real design examples, the workshop will offer participants an opportunity to familiarize themselves with the latest advances in this rapidly changing field.	This workshop will provide a how-to guide for specifying fenestration and meeting more stringent U-Factor requirements as well as explain why consideration of U-Factor alone is not enough to deliver optimum performance in buildings. It will explain why the edge matters – both the frame and the glass edge – as well as how the details of the insulating glass edge can impact both thermal performance and long-term durability. Thermal bridging also plays a major role in reducing the expected thermal performance of façade systems. Key findings of the ASHRAE Research Report 1365 and how it addresses the analysis of the impact of thermal bridging will be presented. Finally, we will review how to assess occupant thermal comfort using ASHRAE Standard 55 methodology, using non-uniform mean radiant temperature created near the building envelope and the impact of direct solar radiation. Participants will have the ability to use on-line software tools to evaluate and compare how fenestration performance impacts occupant comfort.	This workshop will focus on the use of metal as a façade cladding material. The workshop will start off by covering a broad range of materials, such as aluminum stainless steel, as well as 'natural metals' like bronze and copper. In relation to those materials, he will take an in-depth look at surface finishing and panel shaping (2d and 3d). Wurster will then share the latest technological advancements in metal cladding, including digitally automated panel fabrication.
	Workshop Objectives: • Discuss recent advances in technology in the fields of structural glass systems and glass fabrication. • Discuss architectural design trends and modern facade design best practices. • Discuss the prevalent use of jumbo glass in architectural applications. • Review project applications that illustrate current design practices and construction techniques	**Workshop Objectives:** • Understand how to meet more stringent fenestration U-factor requirements, how to effectively specify, and why U-factor in isolation is not sufficient to deliver a high-performance fenestration system. • Explain why the edges of fenestration matters and know how to specify the edge of glass to ensure high thermal performance without sacrificing durability. • Understand the importance of thermal bridging and how to implement strategies and tools to calculate the effective thermal performance of façade systems using clear field U-values for assemblies and linear transmittances to account for the additional heat loss at interfaces. Be aware of available tools, and know how to select project specific assemblies to develop effective thermal performance values that can be incorporated into whole building energy models to more accurately assess the impact of façade systems on whole building energy consumption. Be able to explain the concept of temperature Index and how it can be used to assess the impact of thermal bridging on condensation risk. • Understand how to assess thermal and visual comfort next to the building envelope, and what strategies can be implemented in order to improve thermal and visual comfort.	**Workshop Objectives:** • Increase knowledge about all commonly used metals in facade design. • Explain digitally automated panel fabrication. • Explain the different ways metal can be formed. • Provide insights into the latest technological innovations.
2:00 PM	**End of Day**		

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Facade Tectonics 2020 World Congress Speaker Program

Week 3 – Wednesday, August 19

11:00	**Plenary**				
11:30	**Session 7**	**GLASS <> MATERIAL**	**ENERGY <> SUSTAINABILITY**	**PROCESS <> DESIGN**	**EFN | PROCESS <> DESIGN**
		Thermal Glass Stress Analysis: Design Considerations Michael Elstner / Interpane	**A Light Mass Envelope Solution for Reducing Carbon Emissions – The CCAPP System** Brian Stern / Glumac Doug Bevier / Clark Pacific	**Execution Ways: Peeling back Layers from Geometrical and Structural Complexities in Facades** Viswanath Urala / Enclos	**Facade Design and Engineering for the Fourth Industrial Revolution** Mikkel K. Kragh / University of Southern Denmark
		Heat-Treated Glass: Designer's Guide to Navigating Industry Trends and Minimizing the Appearance of Optical Distortions in Exterior Heat-Treated Glass Reece Poth, Conner Claus / Simpson Gumpertz & Heger	**Carbon-Neutral High-Rise Envelope Nexus: Generative Design and Engineering for Extreme Subtropical Climates** Thomas Spiegelhalter / CND Projects LLC and Florida International University in Miami	**Façade with Innovation:** **Case Study of Super High-Rise Complex Unitized Facade** Hui Yu	**Prefab Facades - From Prototype to Product** Lisa Rammig / Eckersley O'Callaghan
		Feasibility of Measuring Stress in Glass with a Scalp Stephen Morse / Michigan Tech	**Transfer Topologies: Exploring the Union of Structural and Thermal Flows in Cellular Facades** Nada Tarkhan	**Translation from Concept to Construction: The Enclosure of Uber's Mission Bay HQ** Ryan Donaghy / SHoP Architects Matt Spahr / Heintges	**Digital Lifecycle of Building Envelopes** Daniel Arztmann / TH-OWL, Schüco International KG
12:30	**vExpo + Breakout Networking Sessions + Poster Gallery Presentations**				
1:15	**Session 8**	**GLASS <> MATERIAL**	**ENERGY <> SUSTAINABILITY**	**INTEGRATION <> ADAPTATION**	
		Specifying Electrochromic Glass Belinda Valenti, Justin Glover / STUDIOS Architecture	**End-of-Life Challenges in Facade Design: A Disassembly Framework for Assessing the Environmental Reclamation Potential of Facades** Rebecca Hartwell / University of Cambridge	**Carbon-Dioxide-Inhaling Facade:** **Design of a Bioreactor Facade to Produce Active Ingredients and High-Value Products** Timo Schmidt, Carmen Herrmann, Michael Lakatos / Hochschule Augsburg University of Applied Sciences	
		Determination of Interlayer Structural Properties for Use in Laminated Glass Design Stephen Bennison, Michael Haert, Sauerbrun Steven / Kuraray America	**Environmentally Responsible Wood Cladding: Aligning Building Envelope with Institutional Environmental Responsibility** Doug Bergert, Pratibha Chauhan / Perkins & Will	**The Butterfly: A Case Study in Performative Spectacle** Zhuoli Yang, Shinobu Homma / Revery Architecture	
		Prototyping with Ultra-Thin Glass Sophie Pennetier, Josephine Stoddard / Enclos	**Sustainable Materials: The Good, the Bad, and the Dangerous of Welding Stainless Steel** Michael Mulhern / Tripyramid	**Invert Auto-Shading:** **Daylighting Performance and Visual Comfort Analysis of Dynamic Thermostatic Bimetal Shading** Jae Yong Suk / University of Texas San Antonio Doris Sung / University of Southern California	
2:15	**vExpo + Breakout Networking Sessions + Poster Gallery Presentations**				
3:00	**Session 9**	**GLASS <> MATERIAL**	**ENERGY <> SUSTAINABILITY**	**EDUCATION <> FACADES**	
		Simplicity is Deceiving: Jumbo Glass at High-rise Podium Kerry Hegedus / NBBJ Giovanni De Mari / Eckersley O'Callaghan	**Effect of Thermal Bridging on Buildings' Energy Performance: Comparison of Area-Weighted vs. Additive Thermal Resistance in Facades** Mahsa Farid Mohajer, Ajla Aksamija / University of Massachusetts Amherst	**Systems Thinking: Teaching Facade Design in Professional Architecture Degree Programs** Gabrielle Brainard / Rensselaer Polytechic Institute	
		Seismic Design of Jumbo Glass Structures: **Inter Story Drift Analysis of Modern Facades** Richard Kaire, PE, SE, David Dunham, PE / Sentech Architectural Systems	**U-Factor Matters in Hot Climates: The case for Thermal Breaks and Warm-Edge Spacer** Helen Sanders / Technoform North America	**Facade Games:** **The Vertical Surface as Student Design Exercise** James Tice / University of Oregon	
				Mixed Reality in Facade Education: **Expanding the Application of Immersive Technologies** Phillip Anzalone, Amber Bartosh / New York City College of Technology (City Tech)	
4:00	**FTI Committee Meetings**				
5:00	**End of Day**				

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Facade Tectonics 2020 World Congress Speaker Program

Week 3 – Thursday, August 20

11:00 AM - 2:00 PM	**vExpo + Poster Gallery Presentations**		
12:00 PM - 2:00 PM	**WORKSHOP SESSION 3A**	**WORKSHOP SESSION 3B**	**WORKSHOP SESSION 3C**
	Pursuing Adaptive Enclosures: Design for the Changing Climate Mike Huhtala, Architect / Simpson Gumpertz & Heger Shruti Kasarekar, LEED AP DD+C ASHRAE BEMP, BEAP / Atelier Ten **This educational workshop will explore practical thermal design concepts that can make or break energy efficiency, provide resiliency benefits and drastically affect human comfort and wellbeing.** ***Register Now >*** As the primary boundary separating interior and exterior spaces, building enclosures play a significant role in a building's overall efficiency and resiliency. High-efficiency buildings integrate space, facade, and internal systems to maximize energy savings and help make occupants comfortable, productive, and healthy. Facades designed for providing resiliency protect occupants during and after extreme events. Finally, third-party benchmark certifications rely on high-performing enclosures to achieve specified metrics for energy consumption and human comfort. We'll tackle facade design strategies to address each of these points. **Workshop Objectives:** • Recognize facade design impact on human comfort and whole-building energy performance. • Identify passive solutions to improve building energy performance. • Discuss challenges involved with balancing building performance, constructability, and architectural vision. • Identify drivers that affect the metrics for building performance assessment.	**Stainless Steel as a Building Material** Michael Mulhern and Jeffrey Anderson / TriPyramid Structures Franklin Lancaster, PE / Eckersley O'Callaghan **This educational workshop will combine an introduction to the new AISC codes for the use of stainless steel in buildings with presentations from both structural engineers and fabricators.** ***Register Now >*** The workshop will kick off with a discussion of what "stainless steel" means for the construction industry in 2020. Attendees will receive a hands-on presentation of a variety of materials types, production processes, and finishes. The sessions will tie the challenges of designing with stainless steels to the physical and technological challenges of fabricating stainless steels.The presenter will have an array of physical samples on-hand, ranging from super mirror polished sheet metal to laser fused heavy sections of duplex stainless steel. The goal is to create a working knowledge of the what and how of utilizing stainless steels in built environment. Attendees will also discuss new and improved codes and specifications, including AISC 370 ("Specification for Stainless Structural Steel Buildings," to be released in late 2020 -- like AISC 360 for carbon steel, this specification will provide designers with rules and guidance for the use of stainless steel for structural members in buildings) and AISC 305 ("Code of Standard Practice for Stainless Steel in Building," to be released in late 2020 – this will provide owners, contractors, and fabricators with guidance for the contractual issues specific to the inclusion of stainless steel in buildings.) Finally, the presenter will share advancements in the welding of high-strength stainless steel alloys and how these can safely be utilized in building components. **Workshop Objectives:** • To gain an understanding of how to effectively use stainless steel in the architectural realm: When is stainless steel the correct structural material? • To gain an understanding of the commonly used stainless steel alloys and how the choice of stainless steel alloys effects strength, corrosion resistance, weldability, fabrication, and affordability: What is the correct type of stainless steel? • To gain an understanding of how various surface finishes are applied to different stainless steels products and how the choice of finish effects corrosion resistance and affordability: What finish is appropriate? • To get an introduction to the new AISC "Specifications for Structural Stainless Steel Buildings" (AISC 370) and "Code of Standard Practice for Structural Stainless Steel Buildings" (AISC313): What code governs the use of structural stainless steel in buildings?	**Designing, Fabricating and Installing Structural Laminated Glass in Glass Railings** Vaughn Schauss / Kuraray Florian Doebbel / Sika Brian Clifford, CSI, CDT and Jose Quinones, CSI, CDT / C.R. Laurence **This educational workshop will focus on the design, fabrication and installation of laminated glass, with a particular focus on glass railing systems.** ***Register Now >*** The first hour will focus on the technical and structural properties of stiff, ionoplast interlayers, which are often specified for glass railing systems. The effective thickness method found in ASTM E1300 and Finite Element Modeling will be used to demonstrate the load resistance and deflection benefits associated with this interlayer when used in minimally supported glass railing systems. Presenters will also review fabrication guidelines and building code requirements for laminated glass railings will be reviewed. The second hour features two demonstrations on wet and dry-glazed installation methods. **Workshop Objectives:** • Learn about the structural benefits of stiff laminated glass interlayers used in minimally supported glass railing systems • Learn about different methods to determine the load resistance and deflection performance of structural laminates. • Learn about the compatibility of sealants used with laminated glass interlayers used in glass railings • Identify fabrication issues and building code requirements for glass railings • Witness two installation demonstrations on wet and dry-glazed systems
2:00 PM	**End of Day**		

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Facade Tectonics 2020 World Congress Speaker Program

Week 4 – Wednesday, August 26

11:00	**Plenary**				
11:30	**Session 10**	**LIGHT <> AIR**	**DESIGN <> DIGITAL**	**HERITAGE <> FACADES**	**EFN | EDUCATION <> RESEARCH**
		Managing Solar Reflections from the Building Envelope: A Meta-Analysis of Case Studies Ryan Danks, Joel Good / RWDI	**Performance-based Facade Framework: Automated & Multi-Objective Simulation & Optimization Method** Mahsa Minaei / University of Massachusetts Amherst	**Optimized Adaptive Re-Use: Computational Workflows Towards Net-Zero Carbon Buildings** Matthew Parker / Dialog Design	**Modern Heritage and Facade Improvements** Uta Pottgiesser / TU Delft, TH-OWL
		VR For Daylight: Glare Analysis in a Virtual Environment Caris Frazier-Baker, Sanjeev Tankha / Walter P Moore	**Connections – Tolerance, Adjustability, Geometric Accuracy: Leveraging Physical Validation with Digital and Iterative Design** Jeff Montague / Radius Track	**Saving Face: Restoring Cast Iron Facades for a Modern World** Xsusha Flandro / CANY	**Active and Energy Autonomous Window** Annalisa Andaloro / Eurac Research
		Solar Reflection Mitigation: Glare from Reflective Glazing Kais Al-Rawi / Walter P Moore	**Managing Constraints: An Integrated Design to Construction Workflow** Vincent Ip / NBBJ	**Reduce, Reuse, Reclad: Kintsukuroi and the Trace of Time in Architecture** Daniel Nauman, Jessica Santonastaso / Gensler	**European Facade Networks** Ulrich Knaack / Technical University Delft
12:30	**vExpo + Breakout Networking Sessions + Poster Gallery Presentations**				
1:15	**Session 11**	**LIGHT <> AIR**	**DESIGN <> DIGITAL**	**HERITAGE <> FACADES**	**FACADE <> ACOUSTICS**
		A Study on the Impact of Hospital Facade Opening Focusing Outdoor Exposure on Waiting Room Experience: Eye Hospital as Case Study Iftekhar Rahman	**Corrugated-geometry Copper and Glass Facade: From Concept to Construction** John Jackson, Marko Tomsic / Simpson Gumpertz & Heger	**Preserving a Historic Facade: Repairs to Extend Cladding Life** Maria Mohammed, David Cocke, John Fidler / Structural Focus	**Influence of Facade Materials on the Acoustic Environment** Alvaro Balderrama / TH-OWL Daniel Arztmann / TH-OWL, Schüco International KG
		Determining the Optimal Openings for Multi Skin Facade with External Ventilation Peter Simmonds / Building and System Analytics	**United States Olympic and Paralympic Museum: Use of 3D modeling for BIM, fabrication, and installation** Ilja Aljoskin, Neil Meredith, Lee Pepin / MG McGrath	**Orientation Specific Solar Control: Four Postwar Louis Kahn Buildings Contrasted** Clifton Fordham / Temple University	
		Undulated Glass Self-shading: Optical Benefits of Façade Figuration Nebojsa Jakica, Mikkel K. Kragh / University of Southern Denmark	**Building by Numbers: Digital Process for Analysis and Documentation of Changi Jewel Grid Shell** Trevor Lewis		
2:15	**vExpo + Breakout Networking Sessions + Poster Gallery Presentations**				
3:00	**Session 12**	**LIGHT <> AIR**	**DESIGN <> DIGITAL**	**HERITAGE <> FACADES**	**GLASS <> MATERIAL**
		Circadian Daylight Performance of the Electrochromic Glazing: A workflow for Analysis of the EC Window Non-Visual Daylight Performance Ahoo Malekafzali / Sage Glass	**Ginza Six: A Noble Post-Metabolism Concept for Commercial Facade Design** Katsuhiko Muramoto, Junko Owada / Penn State	**Doubling Mies: Retrofitting Modernist Facades** Timothy Brown / Clemson University	**Glazing Design By ASTM E 1300: Maximum Surface Stress and Probability of Breakage** H. Scott Norville, Steven Morse, James Soules / Texas Tech University
		Shaping Skin: Aesthetics & Performance of Non-Planar Facades, and the Circadian Curtain Wall John Neary / HOK	**Nested Density: Proliferation of Projection Mapping in Urban Contexts** Wendy Cox / Norwich University	**Renewing Historic Facades: Restoring Character and Achieving High Performance** Christine Reynolds / Wiss, Janney, Elstner Associates (WJE)	**The Glass Failure Prediction Model: Using Commercial Finite Element Software to Extend the Applicability of ASTM E 1300** H. Scott Norville, James Soules, Stehen Morse / Texas Tech University
		Shade and Spectacle: Second Skins and Their Uses Warren Techentin / University of Southern California		**Air Spaces Changed Everything: Sometimes Materials Are Immaterial** Gerry Lang / architectsAlliance	**Duplex Stainless Steel Cladding: For Highly Corrosive Environments** James Halliday, Fred Deuschle / Rigidized Metals
4:00	**FTI Committee Meetings**				
5:00	**End of Day**				

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Facade Tectonics 2020 World Congress Speaker Program

Week 4 – Thursday, August 27

11:00 AM - 2:00 PM	**vExpo + Poster Gallery Presentations**	
12:00 PM - 2:00 PM	**WORKSHOP SESSION 1A**	**WORKSHOP SESSION 1B**
	Deep Dive: A New Breeze Block with A Self-Supporting Structural System Brock DeSmit, RA and Jessica Hong / Belzberg Architects Becher Neme, AIA / Neme Design Studio Hugo Balderas / Grupo Anima **This educational workshop will use the award-winning "Apertures" project by Belzberg Architects as a case study.** ***Register Now >*** Joined by this project's Architect, Façade Engineer, General Contractor and Fabricator, attendees will dive deep into the process of designing and constructing the project's custom masonry façade. Apertures is a six-story commercial building in Mexico City that achieves supple forms, transparency, and seismic resilience in the earthquake-prone area. This workshop will cover working across borders between Southern California and Mexico to complete studies of block geometry, optimization of material mix, casting techniques to maximize variation while minimizing the number of molds, simplification of metal fabrication and detail connections, reducing steel quantities, structural options, refinement of installation sequence, seismic testing, and workflow of digital tools used by different team members throughout the process. **Workshop Objectives:** • Learn the genesis of the project's architectural design, factors which influenced its evolution, and key tools utilized for controlling the façade's components. • Learn the logic and key decisions behind the project's structural design and the seismic testing undergone to validate the system's performance. • Learn the importance of collaborating with fabricators and installers through full-scale mock-ups and the positive influence mock-ups had on the design.	**Acoustic Damping Through Glazing** Julia Schimmelpenningh / Eastman **This educational workshop will cover the basics of acoustics as they relate to glazing.** ***Register Now >*** Eastman Chemical Company's Architectural Industry Technical Manager will discuss the paradigm shift from glass being the weak acoustic link to a stronger one, given the differences and advancements in new engineered acoustic interlayers. This workshop will be given as an open presentation, with questions answered and specific examples given throughout. **Workshop Objectives:** • Learn why paying attention to noise is important. • Understand the basics of acoustics and how glazing can impact it. • Provide an overview of testing and calculation methods. • Increase awareness of contemporary acoustic glazing design.
2:00 PM	**End of Day**	

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