



13th Conference on Advanced Building Skins

1-2 October 2018, Bern, Switzerland

10:00							
Opening: Andreas Hempel, International Academy of Architects; former President of the Association of German Architects							
A1 10:45 <i>Bellavista 2-3</i>	Forensic Engineering: Investigations of Building Skin Failures <i>Chair: Robert Bitterli, Ivy Group Consultants, United States</i>	B1 10:45 <i>Arena</i>	Biomimetics for Energy Efficient Building Envelopes <i>Chair: Estelle Cruz, CEEBIOS - French network of competences in biomimetics, France</i>	C1 10:45 <i>Bellavista 5</i>	Public Policies and Funding <i>Chair: Jörg Rügemer, University of Utah, Salt Lake City, United States</i>	D1 10:45 <i>Sopra Grande</i>	Optimierung der Gebäudehülle mit nachhaltigen Fassaden <i>Chair: Andreas Hempel, International Academy of Architects</i>
<p>Understanding building skins through failures: Trends in failure mechanisms and their costs <i>Lee Dunham and David Bates, OAC Services, Inc., United States</i></p> <p>Hospital building skin investigation and repairs <i>Robert Bitterli, Ivy Group Consultants, United States</i></p> <p>Stucco/wood skin investigation and repairs <i>Brett Newkirk, Alta Engineering, United States</i></p> <p>Low-rise skin investigation and repairs - Case Study <i>Rick Slider, Slider Engineering, United States</i></p> <p>Service life prediction models to predict building skin failures <i>Christopher White, National Institute of Standards and Technology, United States</i></p>		<p>Biomimicry: A source for advanced building skin design <i>Thomas Button, Passero Associates, Rochester, USA</i></p> <p>Environmental adaptation of buildings through morphological differentiation <i>Lidia Badarnah, University of the West of England, Bristol, United Kingdom</i></p> <p>Passive kinetic solar shading device for a responsive building envelope <i>Natasha Chayaamor-Heil, ENSAPLV, Paris, France</i></p> <p>Social wasp nests as source of bioinspired design of building skins <i>Anders Ohlsson, Umeå University, Sweden</i></p> <p>A taxonomy of biological envelopes to design adaptive building skins <i>Estelle Cruz, CEEBIOS - French network of competences in biomimetics, France</i></p>		<p>Funding of home-ownership for low-income demographics – the Field of Dreams EcoCommunity in Utah <i>Jörg Rügemer, University of Utah, Salt Lake City, United States</i></p> <p>The Swiss model of innovation support and funding <i>Andreas Eckmanns, Swiss Federal Office of Energy, Bern, Switzerland</i></p> <p>Cantonal building codes - Bridging the gap between policy and science <i>Christian Glauser, Canton of Bern, Switzerland</i></p> <p>Public research and technological innovation in building envelopes <i>Massimo Rossetti, Università Luav di Venezia, Italy</i></p>		<p>Nachhaltige Fassadensysteme für Nullenergiegebäude <i>Christoph Deimel, Deimel Oelschläger Architekten, Germany</i></p> <p>Optimierung der Gebäudehülle eines Bürogebäudes <i>Stefan van Velsen, 3-Plan Haustechnik AG, Schweiz</i></p> <p>BIM-Methode zur Fassadenoptimierung im Kontext des sommerlichen Wärmeschutzes <i>Johann Loux, Gruner Roschi AG, Köniz, Schweiz</i></p> <p>Abluftfassade für sommerlichen Wärmeschutz im vollverglasten Hochhaus <i>Michael Wengert, Pfeil & Koch, Stuttgart, Deutschland</i></p> <p>Hanfsteine: monolithische Bauweise für Langlebigkeit <i>Werner Schönthaler, Schönthaler OHG, Eysr, Italien</i></p> <p>Nichtmetallische wärmebrückenfreie Befestigung für Fassaden <i>Werner Venter, Schöck Bauteile, Baden-Baden, Germany</i></p> <p>Kurzpräsentation: Gewerkeübergreifende Fassadenvorfertigung im Holz-Systembau <i>Michael Kamenik, Cree GmbH, Dornbirn, Austria</i> <i>Alexander Hilbe, Rhomberg Bau GmbH, Bregenz, Austria</i></p>	
12:30		Lunch					

A2 14:00 Arena	Parametric Design and Digital Fabrication Chair: Rob Narracci, Pelli Clarke Pelli Architects, New Haven, United States	B2 14:00 Bellavista 2-3	Eco-materials for the Building Skin Chair: Mike Lawrence, University of Bath, United Kingdom	C2 14:00 Bellavista 5	Models, Policies and Products for Building Retrofit Chair: Roman Bolliger, econcept, Zürich, Switzerland	D2 14:00 Sopra Grande	Natural Ventilation and Thermal Behavior of the Building Envelope Chair: Theodore Sawruk, University of Hartford, United States
<p>Parametric design of a sustainable office tower <i>Rob Narracci, Pelli Clarke Pelli Architects, United States</i></p> <p>Loop, feedback, iterate: collaboration and modeling in advanced façade design <i>Kenn Clausen, 3XN architects, Copenhagen, Denmark</i></p> <p>Computational approaches to discrete continuities for supertall skyscrapers <i>Daniel Inocente, Skidmore, Owings & Merrill, New York, United States</i></p> <p>Uncanny enclosures: Parametric façade designs <i>Robert Perry, Gensler, San Francisco, United States</i></p> <p>Optioneering - Designing the building envelope <i>Stefano Rossi, Maffei Engineering, Switzerland</i></p> <p>Scan and make: how digital technologies can accelerate and improve overcladding <i>Christopher Jofeh, Arup, Cardiff, United Kingdom</i></p> <p>Brief presentations</p> <p>Parametrics as a conduit for integrated façade design <i>Yun Hsueh, Gensler, Shanghai, China</i></p> <p>A digital tool to support prefabricated façade design <i>Jacopo Montali, University of Cambridge, United Kingdom</i></p>	<p>Traditional and modern surfaces for wooden facades <i>Hansueli Schmid, Lignum, Zürich, Switzerland</i></p> <p>Producing solar control devices from waste materials <i>Oriol Pons, UPC, Barcelona, Spain</i></p> <p>Building envelope with low environmental impact <i>Mike Lawrence, University of Bath, United Kingdom</i></p> <p>Wood as eco-material for the building skin <i>Xaver Egger, Bochum University of Applied Sciences, Germany</i></p> <p>Brief presentations</p> <p>Recycled industrial waste for sustainable façade panels <i>Raúl Briones Llorente, Universidad de Burgos, Spain</i></p> <p>Properties of straw bale blocks for wall construction <i>Katrin Schollbach, Eindhoven University of Technology, Netherlands</i></p> <p>Bio-based recyclable, reshapable, repairable fiber-reinforced composites for window profiles <i>Arsenio Navarro, AIMPLAS, Paterna, Spain</i></p>	<p>Stakeholders' perceptions for participation in deep energy renovation <i>Georgios Pardalis, Linnaeus University, Växjö, Sweden</i></p> <p>Roof-top extensions: Business models and tools for decision-making <i>Stéphane Herbin, CTICM, Saint Aubin, France</i> <i>Olivier Dupont, CTMNC, Paris, France</i></p> <p>Economic opportunities and challenges for building renovation with pre-fabricated elements <i>Roman Bolliger, econcept, Zürich, Switzerland</i></p> <p>Evaluating market models for deep-energy renovation using SWOT and PEST Analysis <i>Brijesh Mainali, Linnaeus University, Växjö, Sweden</i></p> <p>Modular façade system with integrated equipment technology for energetic retrofiting <i>Verena Dannappel, RWTH Aachen University, Germany</i></p> <p>Brief presentation</p> <p>Prefabricated wooden modular elements for nZEB renovation <i>Peep Pihelo, Tallinn University of Technology, Estonia</i></p>	<p>Historically sustainable: natural ventilation in connecticut houses of the 1800s <i>Theodore Sawruk, University of Hartford, United States</i></p> <p>Reconstruction of the use of space of historical buildings from the thermal analysis of the building façade <i>Wolfgang Stumpf, Danube University Krems, Austria</i></p> <p>Air flow and the evolution of a subtropical passive house strategy <i>Corey Saft, University of Louisiana at Lafayette, United States</i></p> <p>Historically proven - Sustainably updated <i>Jason Hegenauer, University of Hartford, United States</i></p> <p>Brief presentation</p> <p>Wind-Catcher simulation analysis for natural ventilation in sustainable building design <i>Arash Zarmehr, University of Central Florida, Orlando, United States</i></p>				
<p>15:30 Coffee Break</p>							



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ADVANCED
BUILDING SKINS



energie schweiz
Unser Engagement: unsere Zukunft.

A3 16:00 Arena Additive Manufacturing and 3D Print of the Building Skin <i>Chair: Annie Shaw, Manchester School of Art, United Kingdom</i>	B3 16:00 Bellavista 2-3 Green Walls and Roofs <i>Chair: Rosemarie Stangl, University of Natural Resources and Life Sciences, Vienna, Austria</i>	C3 16:00 Bellavista 5 Retrofitting the Building Envelope <i>Chair: Tobias Henzler, University of Stuttgart, Germany</i>	D3 16:00 Sopra Grande Active Façades for Ventilation, Heating and Cooling <i>Chair: Fabian Ochs, University of Innsbruck, Austria</i>
<p>Re-fabrication of knitted textiles and its architectural potential <i>Annie Shaw, Manchester School of Art, United Kingdom</i></p> <p>Desert tectonics <i>Giulia Grassi, Politecnico di Milano, Italy</i></p> <p>Parametric modeling, rapid prototyping and 3D printing of an interactive façade <i>Abudaya Amal, Ministère de la Culture, Grenoble, France</i></p> <p>3D-printed active urban surfaces <i>Andrea Redi, AIR, Architecture Initiates Regeneration, Graz, Austria</i></p> <p>Water-driven breathing skin <i>Angelos Chronis, Institute of Advanced Architecture of Catalonia, Barcelona, Spain</i></p> <p>Brief presentation</p> <p>Performance of building envelopes with 3D/4D printed bio-reactive materials <i>Olga Beatrice Carcassi, 120g, Pisa, Italy</i></p>	<p>Benefits of Green Walls <i>Gary Grant, Green Infrastructure Consultancy, London, United Kingdom</i></p> <p>Green roofs for cooling in different climates <i>Pablo La Roche, Callison RTKL, Los Angeles, United States</i></p> <p>Vertical greenings as intelligent building envelopes <i>Bernhard Scharf, University of Natural Resources and Life Sciences, Vienna, Austria</i></p> <p>Green façade and air quality - Measurements and kinetic study <i>H.J.H. Brouwers, Eindhoven University of Technology, Netherlands</i></p> <p>Influence of green facades on building surface temperature in South Italy <i>Elvia Schettini, University of Bari, Italy</i></p> <p>Infill green wall as a heat sink for indoor thermal comfort <i>Yun-Shang Chiou, Taiwan University of Science and Technology, Taiwan</i></p> <p>Brief presentation</p> <p>Low-tech building with green walls <i>Gilbert Sommer, University of Innsbruck, Austria</i></p>	<p>Retrofitting the building envelope of SME industrial buildings: Risk analysis <i>Barbara Joseph, KU Leuven, Gent, Belgium</i></p> <p>Transformative modernization: Lessons learned from a renovation of a 1929 university building <i>David Cook, Grimshaw, New York, United States</i></p> <p>Energy-saving potential using adaptive building envelopes for building refurbishment <i>Tobias Henzler, University of Stuttgart, Germany</i></p> <p>Retrofitting the building envelope for enhanced seismic resistance and energy efficiency <i>Dionysios Bournas, Joint Research Centre, European Commission, Ispra, Italy</i></p> <p>Retrofitting of corrugated asbestos roofing panels with metal roofing systems <i>Michael Clark, RCI, Inc., Macon, United States</i></p> <p>Integrated smart envelope module for high-rise residential building retrofit <i>Brian Koh, Sun & Light Corp., Inc., Seoul, South Korea</i></p> <p>Brief presentation</p> <p>Retrofitting skylights: A study of thermal transference through large rooftop penetrations <i>Wahid Manawi, Amtech Solutions, Dallas, USA</i></p>	<p>Heating with a PV Façade in a Passive House <i>Georgios Dermentzis, University of Innsbruck, Austria</i></p> <p>Active roofs and façades technologies <i>Jakob Klint, Kuben Management, Copenhagen, Denmark</i></p> <p>Advanced daylighting systems and combined lighting and thermal simulation <i>David Geisler-Moroder, Bartenbach GmbH, Austria</i></p> <p>Solar thermal façade systems – An interdisciplinary approach <i>Paul Denz, Priedemann Façade-Lab, Berlin, Germany</i> <i>Christoph Maurer, Fraunhofer Institute for Solar Energy Systems, Freiburg, Germany</i></p> <p>Heating with façade-integrated heat pumps <i>Fabian Ochs, University of Innsbruck, Austria</i></p>
<p>17:30 End of Conference Day 1</p>			



Conference Day 2 – 2nd October 2018

A4 8:30 Arena	The Impact of Climate Change on Building Envelope Design <i>Chair: Matthew Fineout, Smart Architecture, Pittsburgh, United States</i>	B4 8:30 Bellavista 2-3	Kinetic Architecture <i>Chair: Ahu Aydogan, City College of New York, United States</i>	C4 8:30 Sopra Grande	Integrating Solar Technologies into the Building Envelope <i>Chair: Michael Garisson, University of Texas at Austin, United States</i>	D4 8:30 Bellavista 5	Performance of the Building Envelope <i>Chair: Michael Pulaski, Thornton Tomasetti, Portland, United States</i>
<p>Urban climate - Impact on energy consumption and thermal comfort of buildings <i>Urs Grossenbacher, INES Energieplanung GmbH, Bern, Switzerland</i></p> <p>Climate change and its influence on glazed curtain wall design <i>Daniel Arzmann, Schüco International KG, Bielefeld, Germany</i></p> <p>Energy efficient geometries and their inherent complexities <i>Matthew Fineout, Smart Architecture, Pittsburgh, United States</i></p> <p>A 500,000m2 form-found, lightweight, long-span roof system <i>Zak Kostura, Kateri Knapp, Arup, New York, United States</i></p> <p>Brief presentation</p> <p>Early-stage environmental modeling: Tools and strategies for climate-based design <i>Barbara Gherri, Università di Parma, Italy</i></p>	<p>Dynamic architectural system to improve air quality and reduce energy consumption <i>Ahu Aydogan, Frank Melendez, City College of New York, United States</i></p> <p>An affective kinematic building façade system: Mood Swing <i>Joseph Kider, University of Central Florida, United States</i></p> <p>Impact of kinetic shading elements on noise levels in street canyons <i>Monika Rychtarikova, KU Leuven, Gent, Belgium</i></p> <p>Daylight performance of an adaptive shading system <i>Maria Matheou, University of Cyprus, Nicosia, Cyprus</i></p> <p>Brief presentations on Solar Shading Systems for Enhanced Daylight Control</p> <p>Combining solar control technologies for optimal performance <i>Wim Stevels, Eastman Chemical, Gent, Belgium</i></p> <p>Harvesting electrical energy from building façades using elastic instability <i>Jin Young Song, University of Buffalo, United States</i></p>	<p>Innovative construction technologies for the EXPO 2017 in Astana, Kazakhstan <i>Thomas Winterstetter, Werner Sobek, Stuttgart, Germany</i></p> <p>Best practices for the architectural design of BIPV <i>Dominique Deramaix, Bureau d'Architectes Format D2, Belgium</i></p> <p>Cost-effective, industrially produced PV façade system for retrofitting residential high-rise buildings <i>Andrea Schneider, Fraunhofer IEE, Kassel, Germany</i></p> <p>Comparison between PV integration on roofs and façades <i>Siu-Kit Lau, National University of Singapore</i></p> <p>Degrees of freedom in solar façade design <i>Jochen Weick, Avancis, Germany</i></p> <p>Brief presentations</p> <p>Functional, aesthetical and affordable BIPV <i>Matthias Schoft, Sunman, Waldkirch, Germany</i></p> <p>Development of BIPV courseware for students and professionals <i>Maria Hadjipanayi, University of Cyprus, Nicosia, Cyprus</i></p> <p>Customized, aesthetically appealing PV modules at reasonable price for the BIPV mass market <i>Nils Neugebohrn, DLR Institute of Networked Energy Systems, Germany</i></p> <p>Simulation and evaluation of BIPV design options <i>Huixuan Sun, Solar Energy Research Institute of Singapore</i></p> <p>Where can one billion PV modules be installed in Germany? <i>Claudio Ferrara, Fraunhofer Institute for Solar Energy Systems, Germany</i></p>	<p>Re-positioning for Passivhaus: High-rise office applications in urban areas <i>Michael Pulaski, Thornton Tomasetti, Portland, United States</i></p> <p>Interdisciplinary energy studies conducted on multilayer façade systems <i>Aulikki Sonntag, Drees & Sommer Schweiz AG, Basel, Switzerland</i></p> <p>Modeling of high-performance façades <i>Edmund Meyer, Stellenbosch University, South Africa</i></p> <p>Do energy-efficient buildings save energy from a net cumulative energy perspective? <i>Rahman Azari, Illinois Institute of Technology, Chicago, United States</i></p> <p>Brief presentations on Thermal and Acoustic Performance of Windows</p> <p>Room-side low emissive sputtered coatings to reduce thermal discomfort of windows <i>Anna Castaldo, ENEA, Portici, Italy</i></p> <p>Gluing glass into windows frames for improved performance <i>Flavien Sauser, Bern University of Applied Sciences, Biel, Switzerland</i></p>				
10:00	Coffee Break						

A5 10:45 Arena Double Skin and Cavity Façades to Reduce Building Energy Consumption <i>Chair: Bharat Patel, Harley Ellis Devereaux, Los Angeles, United States</i>	B5 10:45 Bellavista 2-3 Responsive and Adaptive Building Skins <i>Chair: Aletheia Ida, University of Arizona, Tucson, United States</i>	C5 10:45 Sopra Grande New Technologies and Products in BIPV <i>Chair: Dieter Moor, Ertex Solar, Austria</i>	D5 10:45 Bellavista 5 Models, Tools and Simulations for Sustainable Buildings <i>Chair: Fabian Ochs, University of Innsbruck, Austria</i>
<p>Façade design in foreign markets - First double skin façade in Vietnam <i>Urs Wedekind, gmp Architekten, Hamburg, Germany</i></p> <p>Heat recovery using an active double skin façade <i>Bharat Patel, Harley Ellis Devereaux, Los Angeles, United States</i></p> <p>The closed cavity façade - a new trend? <i>Valentin Balog, Drees & Sommer, Basel, Switzerland</i></p> <p>Closed cavity façades in the context of the entire building <i>Jürgen Schade, PORR Suisse, Zürich, Switzerland</i> <i>Andreas Schennach, PORR Suisse, Zürich, Switzerland</i></p> <p>Desiccant dehumidification or Air bleed dehumidification? Evaluation of two closed cavity façade systems <i>Haico Schepers, Arup, Sydney, Australia</i></p>	<p>Adaptive façade to improve a building's energy efficiency and economics: Aro Tower, New York <i>John Cetra, CetraRuddy Architecture, New York, United States</i> <i>Manan Raval, BuroHappold Engineering, New York, United States</i></p> <p>Relevance of adaptable façade systems: Evaluation through scenario planning <i>Charlotte Cambier, Vrije Universiteit Brussel, Belgium</i></p> <p>Machine learning for a gel-based evaporative-cooling membrane system prototype <i>Aletheia Ida, University of Arizona, Tucson, United States</i></p> <p>Façades of hospital buildings: Identifying functional requirements and design specifications <i>Viktoria Krastel, Technical University Munich, Germany</i></p> <p>Shading control of an adaptable ventilation mode double skin façade <i>Adrienn Gelesz, ABUD Ltd., Budapest, Hungary</i></p> <p>Parametric digital analysis for climate adapted building envelopes <i>Ralph Roesling, Roesling Nakamura Terada Architects, San Diego, United States</i></p>	<p>Innovative design solutions for BIPV <i>Hannah Bürckstümmer, Merck, Darmstadt, Germany</i></p> <p>Lightweight transparent composite technology for BIPV architectural solutions <i>Jose Mari Vega de Seoane, Tecnalia R&I, Spain</i></p> <p>Efficient colored BIPV modules with anti-glare coating <i>Johannes Eisenlohr, Fraunhofer ISE, Germany</i></p> <p>New color game – digital ceramic print for architectural photovoltaics <i>Stephen Wittkopf, ÜserHuus, Hergiswil, Switzerland</i></p> <p>Beautiful Solar is not rocket science <i>Guust Verpaalen, Kameleon Solar, Netherlands</i></p> <p>Beyond BIPV: Multi-functional energy converters utilizing optical properties of nano-absorber PV <i>Kai Gehrke, DLR, Germany</i></p> <p>Brief presentations:</p> <p>Transforming glass bricks into a BIPV product <i>Hasan Baig, University of Exeter, United Kingdom</i></p> <p>Transparent PV panels based on luminescent solar concentrators for more efficient buildings <i>Daniele Testa, Eni SpA, Novara, Italy</i></p> <p>Solar active building envelope: Industrialization meets Architecture <i>Sjef De Bruijn, Ernst Schweizer AG, Switzerland</i></p> <p>Façade-integrated PVT with radiant cooling panels for increased energy and space efficiency <i>Mohannad Bayoumi, KAU, Jeddah, Saudi Arabia</i></p>	<p>Designing a solar shading system for a Curtain Wall façade <i>Sergey Akhpatelov, NWL Architects, Salt Lake City, USA</i></p> <p>Indications of glazing design to reduce downdraft in office buildings <i>Shan Shan Hou, Cardiff University, United Kingdom</i></p> <p>How to optimize heating and cooling loads, CO2 savings and comfort gain <i>Marc Bosmans, Eurima, Brussels, Belgium</i></p> <p>Building guidelines to provide as-designed solutions for energy-efficient envelopes <i>Benedetta Marradi, University of Pisa, Italy</i></p> <p>Thermal tuning of envelopes and its use as a parametric design tool <i>Jose Manuel Montes Donaire, AKT II Envelopes, London, UK</i></p> <p>Brief presentations:</p> <p>Experimental validation of a transient 3D thermal model <i>Jelle Langmans, Physibel, Gent, Belgium</i></p> <p>DIAL+ : A simulation tool dedicated to the new European daylighting standard <i>Bernard Paule, Estia SA, Lausanne, Switzerland</i></p> <p>Design and dimensioning of textile climate covers <i>Robert Roithmayr, Formfinder Software, Vienna, Austria</i></p> <p>Numerical model for solar buildings with PCM-enhanced envelopes <i>António Samagaio, University of Aveiro, Portugal</i></p>
12:30 Lunch			



A6 14:00 Arena	Advanced Building Skin Design <i>Chair: Anders Nereim, School of the Arts Institute of Chicago, United States</i>	B6 14:00 Bellavista 2-3	Aerogel Insulation Materials for the Building Envelope <i>Chair: Jannis Wernery, Empa, Switzerland</i>	C6 14:00 Bellavista 5	Optimizing BIPV Design: Models, Tests and Simulation <i>Chair: Pierluigi Bonomo, SUPSI, Switzerland</i>	D6 14:00 Sopra Grande	Dynamic Glazing for Sustainable Building Skins <i>Chair: Christopher Meek, University of Washington, Seattle, USA</i>
<p>Demystifying high-performing building enclosures <i>Mark Lee and Anne Schwab, GBBN Architects, Cincinnati, United States</i></p> <p>Advanced façade engineering for high-rise buildings and free-form cold-bent façades <i>Benjamin Beer, Meinhardt Façade Technology, Dubai, United Arab Emirates</i></p> <p>Optimized design and control of cost-effective climate façades for high-rise buildings <i>Leo Bakker, TNO, Delft, Netherlands</i></p> <p>Merging aesthetics and energy performance <i>David Frey, Woods Bagot Architects, San Francisco, United States</i></p> <p>An integrated design approach of high-performance façades <i>Giovanni Betti, Henn Architekten, Berlin, Germany</i></p> <p>Skin design for absorbing and reusing rainwater <i>Anders Nereim, School of the Arts Institute of Chicago, United States</i></p> <p>Brief presentations</p> <p>Thermal bridging solutions for the building skin <i>Rob Haley, Armadillo, USA</i></p>	<p>Past, present & future of aerogels and advanced porous materials <i>Michael O'Connor, AdvaPor, Strasbourg, France</i></p> <p>Miscellaneous aerogel systems for application in building envelopes <i>Bjorn Petter Jelle, SINTEF & NTNU, Norway</i></p> <p>Aerobrick: an aerogel-filled insulating brick <i>Jannis Wernery, Empa, Switzerland</i></p> <p>Experimental and numerical study on the performance of various filled hollow bricks <i>Marina Stipetic, University of Stuttgart, Germany</i></p> <p>Thermal performances of an innovative superinsulating material based on silica aerogel <i>Kévin Nocentini, Mines Paristech, Sophia Antipolis, France</i></p> <p>Interior aerogel-based coating for energy retrofit <i>Stefano Fantucci, Politecnico di Torino, Italy</i></p> <p>Aerogel manufacturing scalability for the construction sector <i>Jorge Corker, Instituto Pedro Nunes, Portugal</i></p> <p>Brief presentation on New Materials for the Building Skin</p> <p>Interior sun protection for thermal energy production <i>Thomas Friedrich, Innogration GmbH, Germany</i></p>	<p>BIPV curtain wall model for building energy simulations <i>Juliana Gonçalves, KU Leuven, Energyville, Belgium</i></p> <p>Shading device with extensible louvres for BIPV and daylight control <i>Emanuele Piccoli, Politecnico di Milano, Italy</i></p> <p>Decorated BIPV modules: Cost and power loss analysis <i>Christoph Kutter, Fraunhofer ISES, Freiburg, Germany</i></p> <p>BIM-based approach for solar building envelope design <i>Pierluigi Bonomo, SUPSI, Switzerland</i></p> <p>BIM-based design and simulation of BIPV systems <i>Philippe Alamy, CADCAMation, Switzerland</i></p> <p>Brief presentations</p> <p>Impact of partial shading on the energy yield of façade-integrated PV <i>Konstantinos Spiliotis, KU Leuven/EnergyVille, Belgium</i></p> <p>Design strategies of PCM integration in BIPV façades <i>Jakub Curpek, Slovak University of Technology in Bratislava, Slovakia</i></p>	<p>Fluid flow glazing façades – Potential for the building envelope <i>Daniel Pfanner, Frankfurt University of Applied Sciences, Germany</i></p> <p>Improving building performance through the use of dynamic façade technology <i>Eloïse Sok, Saint-Gobain, Courbevoie, France</i></p> <p>Dynamic glass with liquid crystal windows <i>Martin Zitto, Merck KGaA, Darmstadt, Germany</i></p> <p>Performance of a whole-building electrochromic window retrofit in a commercial office building <i>Christopher Meek, University of Washington, Seattle, USA</i></p> <p>Glass façade elements with inner circulating fluids <i>Jochen Stopper, Technische Universität München, Germany</i></p> <p>Brief presentations on Glass for Advanced Building Skins</p> <p>Modeling 6-pane transparent façade system to optimize daylight and thermal performance <i>Boštjan Černe, Trimo, Slovenia</i></p> <p>Fully glazed façade conception for a villa with special and large-sized glass panels <i>Stéphane Paris, Biff SA, Lausanne, Switzerland</i></p> <p>Thermal shock in glasses: Building physics analyses <i>Luciano Laffranchini, Ai Engineering, Torino, Italy</i></p>				

15:30 Coffee Break



A7 16:00 Arena	Design Methods for Sustainable, High-performance Building Façades <i>Chair: Robert Holton, Louisiana State University, United States</i>	B7 16:00 Bellavista 2-3	New Forms of Concrete for Advanced Building Envelopes <i>Chair: Francisco Gomes, The University of Texas at Austin, United States</i>	C7 16:00 Bellavista 5	Façade Integrated Day- and LED-Lighting Based on Micro-Optical Components <i>Chair: Jan de Boer, Fraunhofer Institute for Building Physics, Germany</i>	D7 16:00 Sopra Grande	Architectural Membranes for High-performance Building Skins <i>Chair: Carl Maywald, Vector Foiltec GmbH, Bremen, Germany</i>
<p>Façade design of the first triple-certified green building in China <i>Stephen Katz, Gensler, Chicago, United States</i></p> <p>Thermal skin design for extreme cold climate <i>Joe Ferraro, Ferraro Choi & Associates, United States</i></p> <p>Development of a flexible unitised façade <i>Willi Richard Brombacher, Wrbi, Nuremberg, Germany</i></p> <p>Digital workflows for specialty Curtain Wall Systems <i>Kais Al-Rawi, Walter P Moore, Los Angeles, USA</i></p> <p>Stainless steel structural lattice enclosure: Sustainable building skins for coastal environments <i>Robert Holton, Louisiana State University, United States</i></p>	<p>Carbon-reinforcements for slender architectural facades <i>Christian Kulas, solidian GmbH, Albstadt, Germany</i></p> <p>Façades made of concrete – new technologies and concepts <i>Florian Mähl, osd, Frankfurt, Germany</i></p> <p>High-performance low-mass concrete masonry walls <i>Francisco Gomes, University of Texas at Austin, United States</i></p> <p>Lichen growth on concrete elements for sustainable facade design <i>Jean D'Ursel, Technical University of Denmark</i></p>	<p>Architectural integration concepts <i>Matthias Kraemer, SSP AG, Germany</i></p> <p>Optical microstructures for daylight redirection and efficient LED-based planar light guides <i>Michael Jakobowsky, RIF e.V., Dortmund, Germany</i></p> <p>Production of façade integrated optical films and panels <i>Mike Bülters, Temicon GmbH, Germany</i></p> <p>Controlled light distribution by large-scale micro-structured plastic sheets <i>Michael Hof, Jungbecker GmbH, Germany</i></p> <p>A construction kit for façade integration and integrated use with electric lighting <i>Francesco Sasso, Green Building R&D GmbH, Germany</i></p> <p>Lab measurements and field testing of integrated systems <i>Jan de Boer, Fraunhofer Institute for Building Physics, Germany</i></p> <p>Brief presentation</p> <p>Color temperature controlled LED system for enhanced daylighting - Effects on productivity and energy conservation in office buildings <i>Masayuki Ichinose, Tokyo Metropolitan University, Japan</i></p>	<p>Coating of ETFE – Solar shading for architectural applications <i>Carl Maywald, Vector Foiltec GmbH, Bremen, Germany</i></p> <p>Double-skin façade with ETFE membrane for energy saving and acoustic protection <i>Petr Franta, Petr Franta Architects, Prague, Czech Republic</i></p> <p>How to master Transmission <i>Bernd Eckenroth, Nowofol, Siegsdorf, Germany</i></p> <p>EPS composites for ultra lightweight long-span structures <i>Shinya Okuda, National University of Singapore</i></p> <p>Reflection membrane as full climate building envelope <i>Rainer Blum, Formfinder Software, Vienna, Austria</i></p> <p>Fluoropolymer films for building applications <i>Sebastian Zehentmaier, Dyneon GmbH, Germany</i></p> <p>Brief presentation</p> <p>Dynamic regenerative integrated polymeric skins design <i>Aletheia Ida, University of Arizona, Tucson, United States</i></p>				
<p>17:30 End of the Conference</p>							

The conference will be held in English. Session D1 will be held in German.

Conference venue

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