



POWERSKIN CONFERENCE

P R O G R A M **2021**

POWERSKIN C O N F E R E N C E

P R O G R A M

9th APRIL 2 0 2 1

09:00 - 10:00	STUDIO OPENING KEYNOTE FLORIAN NAGLER		
10:00 - 10:45	SESSION ENERGY #1	SESSION ENVELOPE #1	SESSION ENVIRONMENT #1
10:45 - 11:00	STUDIO DISCUSSION		
11:00 - 11:45	SESSION ENERGY #2	SESSION ENVELOPE #2	SESSION ENVIRONMENT #2
11:45 - 12:00	STUDIO DISCUSSION		
12:00 - 12:45	SESSION ENERGY #3	SESSION ENVELOPE #3	SESSION ENVIRONMENT #3
12:45 - 13:00	STUDIO DISCUSSION		
13:00 - 14:00	LUNCHBREAK		
14:00 - 14:45	SESSION ENERGY #4	SESSION ENVELOPE #4	SESSION ENVIRONMENT #4
14:45 - 15:00	STUDIO DISCUSSION		
15:00 - 15:45	SESSION ENERGY #5	SESSION ENVELOPE #5	SESSION ENVIRONMENT #5
15:45 - 16:00	STUDIO DISCUSSION		
16:00 - 16:45	SESSION ENERGY #6		SESSION ENVIRONMENT #6
16:45 - 17:00	STUDIO DISCUSSION		
17:00 - 17:45	STUDIO CLOSING KEYNOTE ALMUT GRÜNTUCH-ERNST		

ALL TIMES REFER TO CENTRAL EUROPEAN SUMMER TIME (CEST) - LAST UPDATE 01.04.2021

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SESSION ENERGY

09:00 - 10:00	STUDIO OPENING KEYNOTE FLORIAN NAGLER
SESSION ENERGY #1	
10:05 - 10:20	Internal shading systems analysis for high performance facades – “Do more with less” Alessandro Baldini, M.Sc. & Anna Ioannidou-Kati, M.Sc. (Eckersley O'Callaghan)
10:20 - 10:35	Holistic design explorations of building envelopes supported by machine learning Federico Bertagna, M.Sc.Eng. (ETH Zurich)
10:35 - 10:45	Questions & Answers
10:45 - 11:00	STUDIO DISCUSSION
SESSION ENERGY #2	
11:05 - 11:20	Effects of heat transfer systems on comfort and energy demand David Bewersdorff, M.Sc. (Technical University of Darmstadt)
11:20 - 11:35	Effect of energy management and influencing parameters in local PV use Lea Bogischef, M.Sc. (Technical University of Munich)
11:35 - 11:45	Questions & Answers
11:45 - 12:00	STUDIO DISCUSSION
SESSION ENERGY #3	
12:05 - 12:20	Simplicity and performance Area efficient super-insulating facades Dipl. Ing. David Schenke (Drees & Sommer Advanced Building Technology)
12:20 - 12:35	Robust renovation of buildings: Enhancing energy efficiency and flexibility Martin Gabriel, M.Sc. (Technical University of Munich)
12:35 - 12:45	Questions & Answers
12:45 - 13:00	STUDIO DISCUSSION
13:00 - 14:00	LUNCHBREAK
SESSION ENERGY #4	
14:05 - 14:20	Potential of Façade-Integrated PVT With Radiant Heating and Cooling Panel Supported by a Thermal Storage for Temperature Stability and Energy Efficiency Prof. Mohannad Bayoumi (King Abdulaziz University)
14:20 - 14:35	Photovoltaic warm facades with phase change materials in European climates Dipl.Ing. Christian Popp (Technical University of Dresden)
14:35 - 14:45	Questions & Answers
14:45 - 15:00	STUDIO DISCUSSION
SESSION ENERGY #5	
15:05 - 15:20	Design & Performance Assessment of an Optimized Ventilation Panel for Unitized Facades. Deepak Singh Dhami, M.Eng. (TH OWL University of Applied Sciences)
15:20 - 15:35	Effects of Phase Change Materials on Heat Flows Through Double Skin Façades Thomas Wüest, M.Sc. (Lucerne University of Applied Sciences and Arts)
15:35 - 15:45	Questions & Answers
15:45 - 16:00	STUDIO DISCUSSION
SESSION ENERGY #6	
16:05 - 16:20	Simple versus Complex: Comparing the accuracy of cooling energy demands for complex fenestration systems using BSDF and SHGC Christiane Wermke, M.Arch. Mag.Arch. B.A. M.Eng. (Graz University of Technology)
16:20 - 16:35	Design of Moveable Facade Elements for Energy Harvesting and Vibration Control of Super Slender Tall Buildings under Wind Excitation Yangwen Zhang, M.Sc. (Brandenburg University of Technology)
16:35 - 16:45	Questions & Answers
16:45 - 17:00	STUDIO DISCUSSION
17:00 - 17:45	STUDIO CLOSING KEYNOTE ALMUT GRÜNTUCH-ERNST

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SESSION ENVELOPE

09:00 - 10:00	STUDIO OPENING KEYNOTE FLORIAN NAGLER
SESSION ENVELOPE #1	
10:05 - 10:20	Smart Textile Sun-Shading - Development of Functional ADAPTEX Prototypes Dipl. Ing. Paul-Rouven Denz (Priedemann Facade-Lab GmbH)
10:20 - 10:35	Additive Manufacturing of Thermally Enhanced Lightweight Concrete Wall Elements with Closed Cellular Structures Gido Dielemans, M.Sc. (Technical University of Munich)
10:35 - 10:45	Questions & Answers
10:45 - 11:00	STUDIO DISCUSSION
SESSION ENVELOPE #2	
11:05 - 11:20	PAOSS - Pneumatically Actuated Origami Sun Shading Christina Eisenbarth, M.Sc. (University of Stuttgart)
11:20 - 11:35	Responsive Skins: Complexity vs. Simplicity Dr. Alessandro Premier (University of Auckland)
11:35 - 11:45	Questions & Answers
11:45 - 12:00	STUDIO DISCUSSION
SESSION ENVELOPE #3	
12:05 - 12:20	Comparison of health effects caused by fire and noise on the façade considering the years of life lost Daniel Herzog, M.Sc. (Technical University of Munich)
12:20 - 12:35	Use of vacuum glass (VG) in the implementation of transparent and translucent exterior wall systems with very high thermal insulation V. Prof. Luis Ocantó (Dortmund University of Applied Sciences and Arts)
12:35 - 12:45	Questions & Answers
12:45 - 13:00	STUDIO DISCUSSION
13:00 - 14:00	LUNCHBREAK
SESSION ENVELOPE #4	
14:05 - 14:20	Ge3TEX – Multifunctional monomaterials made from foamed glas-, basalt- or PET- based 3d textiles Prof. Dipl. Ing. Claudia Lüling (FFin Frankfurter Forschungsinstitut)
14:20 - 14:35	3D Printed Future Facade – Experimental Testing of a 3D-Printed Building Envelope Dr. Ing. Moritz Mungenast (Technical University of Munich)
14:35 - 14:45	Questions & Answers
14:45 - 15:00	STUDIO DISCUSSION
SESSION ENVELOPE #5	
15:05 - 15:20	Evaluating the real performance of brick masonry with dynamic U-Values Dr. Ing. Sabine Kühnast
15:20 - 15:35	Skin Metrics: The Wicked Problem of Façade System Assessment Keith Boswell (Skidmore, Owings & Merrill)
15:35 - 15:45	Questions & Answers
15:45 - 16:00	STUDIO DISCUSSION

The conference continues with the sessions **Energy** and **Environment**.

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SESSION ENVIRONMENT

09:00 - 10:00	STUDIO OPENING KEYNOTE FLORIAN NAGLER
SESSION ENVIRONMENT #1	
10:05 - 10:20	A full performance paper house Alexander Wolf, M.A. (Technical University of Darmstadt)
10:20 - 10:35	Mono-Material Wood Wall: Digital Fabrication of Performative Wood Envelopes Oliver Bucklin, M.Arch. (University of Stuttgart)
10:35 - 10:45	Questions & Answers
10:45 - 11:00	STUDIO DISCUSSION
SESSION ENVIRONMENT #2	
11:05 - 11:20	A definition of essential characteristics for a method to measure circularity potential in architectural design Charlotte Heesbeen, M.Sc. (Delft University of Technology) & Magdalena Zabek, M.Sc. (RWTH Aachen University)
11:20 - 11:35	Design model for dry-stacked and demountable masonry blocks Dr. Galen Gael Chew Ngapeya (Université du Luxembourg)
11:35 - 11:45	Questions & Answers
11:45 - 12:00	STUDIO DISCUSSION
SESSION ENVIRONMENT #3	
12:05 - 12:20	State of the art and potentials of additive manufactured earth (AME) Jan Mehnert, M.Sc. (Technical University of Braunschweig)
12:20 - 12:35	Multi-criteria design and decision support for solar and green envelopes Elisabeth Fassbender, M.Sc. (Technical University of Munich)
12:35 - 12:45	Questions & Answers
12:45 - 13:00	STUDIO DISCUSSION
13:00 - 14:00	LUNCHBREAK
SESSION ENVIRONMENT #4	
14:05 - 14:20	Study on the interaction of room design, material, ventilation and user behavior towards a robust building operation Tilman Jarmer Architekt M.A. (TUM), Dipl.-Ing. (FH) (Technical University of Munich)
14:20 - 14:35	Eco-construction for Sustainable Development: Concept of a Material and Component Bank Laddu Bhagya Jayasinghe, PhD (Université du Luxembourg)
14:35 - 14:45	Questions & Answers
14:45 - 15:00	STUDIO DISCUSSION
SESSION ENVIRONMENT #5	
15:05 - 15:20	Sustainability in façade design: approaches and outlooks from design practitioners Alejandro Prieto, PhD (Delft University of Technology)
15:20 - 15:35	Fibrous Interfaces for Indoor Temperature Modulation Based on Phase Change Materials Dipl. Ing. Iva Rešetar, M.A. (Humboldt-Universität zu Berlin) & Prof. Dipl. Ing. Christiane Sauer (Kunsthochschule Berlin Weißensee)
15:35 - 15:45	Questions & Answers
15:45 - 16:00	STUDIO DISCUSSION
SESSION ENVIRONMENT #6	
16:05 - 16:20	Exploring the possibility of using bioreceptive concrete in building façades Max Veeger, M.Sc. (Delft University of Technology)
16:20 - 16:35	Carbon conscious! The Impact of Embodied Emissions on Design Decisions for Building Envelopes Tania Cortés Vargas (Eckersley O'Callaghan Engineers)
16:35 - 16:45	Questions & Answers
16:45 - 17:00	STUDIO DISCUSSION
17:00 - 17:45	STUDIO CLOSING KEYNOTE ALMUT GRÜNTUCH-ERNST

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