

# POWERSKIN 2022

December 8, 2022 09.00

RWTH Aachen Super C (Building 1040) 6. Floor  
Templergraben 57, 52062 Aachen



## ROOM 1 (FORD SAAL)

09.00—09.15

Welcome

09.15—10.00

**KEYNOTE**

Ingemar Vollenweider, Prof. Dipl. Arch. ETH / BSA / SIA

*Cofounder, jessenvollenweider & Lehrstuhl Städtebau, Technische Universität Dortmund***ENVELOPE SESSIONS**

10.00—10.15

Visions for a paradigm shift- based on the experience of Additive Manufacturing for façade applications

*Dr. Holger Strauss; Innobuild GmbH*

10.15—10.30

The Facade retrofit with an integrated, decentral closed adsorption cooling system for lightweight buildings - A design and energy opportunity for the renovation of Highrise buildings

*Andreas Greiner, Olaf Böckmann, Simon Weber; University of Stuttgart*

10.30—10.45

Renovating modern heritage - The upgraded facade of Commerzbank Düsseldorf

*Rouven S. Grom, Andreas W. Putz, Technical University of Munich*

10.45—10.55

Session Q&amp;A

10.55—11.10

Discussion round

11.10—11.20

Coffee break

11.20—11.35

Active, passive and cyber-physical adaptive façade strategies: a comparative analysis through case studies

*Jens Böke, Paul-Rouven Denz, Natchai Suwannapruk, Puttakhun Vongsingha; Priedemann Facade-Lab*

11.35—11.50

Scrolling Screen - A responsive building envelope for energetic renovations

*David Horvath, Angie Müller-Puch; Behnisch Architekten*

11.50—12.05

Earthen construction high-performance cavity wall envelopes

*Claudio Marini, Alessandro D'Ambrosio, Erolcan Erdogan; Büro Happold, UK*

12.05—12.15

Session Q&amp;A

12.15—12.30

Discussion round

12.30—13.30

LUNCH BREAK

13.30—13.45

6dTEX - Lightweight building components made of 3D textiles in combination with 3D printing

*Claudia Lüling, Gözdem Dittel, Sascha Biehl, Marina Chernyshova, Roxana Tennert; Frankfurt University of Applied Sciences*

13.45—14.00

Interactive Façade Impact Tool for Evolutionary Trade-off Analysis

*Jason Vollen, Xiaofei Shen, Maria Aiolova, Nick Novelli, Aman Singhvi; AECOM iLAB*

14.00—14.15

Generative Design as a technique for creating Energy-Efficient Building Envelopes

*Venus Kashyap, Bhavya Jain; Indira Gandhi Delhi Technical University for Women*

14.15—14.25

Session Q&amp;A

14.25—14.40

Discussion round

14.40—14.55

Coffee break

14.55—15.10

Adaptive Building Skins Inspired from Lizard in Hot Desert Climate of Egypt

*Mina Ishac; German University in Cairo*

15.10—15.25

Renovation potential based on semantic surface models derived from point clouds

*Edina Selimovic, Florian Noichl, Kasimir Forth, André Borrmann; Technical University of Munich*

15.25—15.40

Automated façade: review of key parameters required for personalised control strategies

*Pedro de la Barra, Alessandra Luna-Navarro, Ulrick Knaack, Claudio Vásquez, Alejandro Prieto; TU Delft*

15.40—15.45

Session Q&amp;A

15.45—16.00

Discussion round

16.00—16.10

Coffee break

**POP-UP CAMPUS SESSIONS**

16.10—16.25

Compliant Mechanisms, University of Stuttgart

16.25—16.40

Bauen mit Papier, Alexander Wolf, TU Darmstadt

16.40—16.55

Natural Building Lab, TU Berlin

16.55—17.05

Session Q&amp;A

17.05—17.20

Discussion round

17.20—17.30

Coffee break

17.30—17.40

Closing

17.40—18.45

**KEYNOTE**

Caro van den Veen

&amp;

Jaap Wiedenhoff

*BARCODE Architects**ABT*

18.45—

Drinks

## ROOM 2 (GENERALI SAAL)

09.00—09.15	Welcome*
09.15—10.00	<b>KEYNOTE</b> Ingemar Vollenweider, Prof. Dipl. Arch. ETH / BSA / SIA <i>Cofounder, jessenvollenweider &amp; Lehrstuhl Städtebau, Technische Universität Dortmund</i>
	<b>ENERGY SESSIONS</b> 10.00—10.15 Retrofit window films for energy-efficient building renovations <i>Stijn Kragt, Henk Sentjens, Albert Schenning, Tillmann Klein; TU Delft</i> 10.15—10.30 Determining the infiltration and exfiltration in Supertall and Mega Tall Buildings <i>Peter Simmonds, Duncan Phillips; ASHRAE</i> 10.30—10.45 FACA-DE-LIT: Facade optimisation for visual comfort by controlled daylight distribution in high-rise office buildings <i>Ir. Akash Changlani, Dr. Michela Turrin, Dr. Alejandro Prieto Hoces; TU Delft</i> 10.45—10.55 Session Q&A
10.55—11.10	Discussion round*
11.10—11.20	Coffee break
11.20—11.35	Photovoltaics Potential for Façade Renovations <i>Eleonora Nicoletti; University of the West of England</i>
11.35—11.50	Suntex: weaving solar energy into building skin <i>Pauline van Dongen, Ellen Britton, Anna Wetzel, Rogier Houtman, Ahmed Mohamed Ahmed, Stephanie Ramos; Pauline van Dongen Innovations BV</i>
11.50—12.05	The "invisible-solar-panel" - colored photovoltaic panels with high efficiency <i>Christof Erban, Heribert Ley; SUNOVATION Produktion GmbH</i>
12.05—12.15	Session Q&A
12.15—12.30	Discussion round*
12.30—13.30	Lunch break
	<b>ENVIRONMENT SESSIONS</b> 13.30—13.45 digital imperfection- from Digital Imperfection to Circular Perfection <i>Christian Schmitt, Federico Garrido, Rodrigo Brum; German University Cairo</i> 13.45—14.00 Establishing benchmarks for low-carbon, circular façade design on refurbishment projects <i>Melissa Tanuharja, Christina Koukelli, Laura Craft; Arup Deutschland GmbH</i> 14.00—14.15 Additively Fabricated Urban Multispecies Facades for Building Renovation <i>Iulia Larikova, Julia Fleckenstein, Ata Chokhachian, Thomas Auer, Wolfgang Weisser, Kathrin Dörfler; Technical University of Munich</i> 14.15—14.25 Session Q&A
14.25—14.40	Discussion round*
14.40—14.55	Coffee break
14.55—15.10	New methodological approach for the development of a sustainable façade product with a focus on embodied energy, resilience, and climate adaptability <i>Miren Juaristi, Ilaria Sebastiani, Stefano Avesani; Institute for Renewable Energy, EURAC Research</i>
15.10—15.25	Mapping and Evaluating Existing External Wall Finishing Material Stocks in Fatih, a district of Istanbul, in terms of Circularity <i>Sühan Artuğ; Istanbul Technical University</i>
15.25—15.40	Retrospective façade LCA assessment: Lessons learned from a case study building nearing practical completion <i>Montemayor Javier, Li Florence, McGilveray Hugh; Eckersley O'Callaghan</i>
15.40—15.45	Session Q&A
15.45—16.00	Discussion round*
16.00—16.10	Coffee break
	<b>POP-UP CAMPUS SESSIONS</b> 16.10—16.25 re-narrated, University of Wuppertal 16.25—16.40 Kappe+, UDK 16.40—16.55 Recode Wicker, KIT 16.55—17.05 Session Q&A
17.05—17.20	Discussion round*
17.20—17.30	Coffee break
17.30—17.40	Closing
17.40—18.45	<b>KEYNOTE</b> Caro van den Veen & Jaap Wiedenhoff <i>BARCODE Architects ABT</i>
18.45—	Drinks