The PowerSkin conference series is a biennial event organised cooperatively between TU München, TU Darmstadt, and TU Delft, which is already in its fourth edition, having started in 2017. This coming edition of PowerSkin has also been supported and organised with the support of RWTH Aachen. The conference addresses the role of building skins in accomplishing a carbon-neutral building stock. Therefore, integrating the environmental dimension of material and construction into the design phase is increasingly essential. This is done primarily by considering the energy and emissions linked to the building fabric’s fabrication and its ability for reuse and recycling.

For this reason, the focus of the PowerSKIN Conference 2022 is the building fabric with its environmental potential to unlock. Therefore the theme is: "Build in stock – renovation strategies: inorganic, circular materials vs organic, compostable materials".

This theme is discussed through the following sub-themes:

1. Envelope: the building envelope as an interface for interacting between indoor and outdoor environments, new functionalities, technical developments and material properties.
2. Energy: new concepts, accomplished projects, and visions for the interaction between building structure, envelope and energy technologies.
3. Environment: Façades or elements of façades which aim to provide highly comfortable surroundings where environmental control strategies, energy generation and/or storage are an integrated part of an active skin.

This special issue of the Journal of Façade Design and Engineering dedicated to PowerSKIN 2022 showcases the conference’s most prominent and relevant papers, aiming to enhance their visibility for a larger audience.

Ulrich Knaack – Editor in Chief

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