HS24 SEMINAR WEEK

Center for Augmented Computational Design in Architecture, Engineering and Construction

Swiss National Science Foundation

ERNE wir bauen vorwärts

TU Delft

Prof. Dillenburger, Digital Building Technologies
Location: ETH Zurich, HIT F12 & Immersive Design Lab
Dates: 21-25 October 2024
Cost framework: A
Participants: 10-20 Students
Contact: Anton Savov, asavov@ethz.ch

POP UP

Prof. Dillenburger, Digital Building Technologies

HS24 SEMINAR WEEK

TOP-UP

During this seminar week, we will create and computationally explore design variations for modular timber residential rooftop extensions.

In response to the global housing crisis and the need for sustainable urban densification, the Architecture, Engineering, and Construction (AEC) sector must develop agile solutions. Traditional methods are too slow to deliver customized homes that are well-integrated with the existing city fabric.

Are you curious about the design flexibility of a kit-of-parts? Interested in modular construction's potential to deliver a distinguished architectural expression? If so, this seminar week is for you!

We will work with over a thousand existing buildings from the Swiss Dwellings Dataset and a pre-designed kit-of-parts for cross-laminated timber (CLT) prefabrication. A suite of generative design tools developed in the 7DayHouse research project will help us create top-up residential unit designs with this kit. We will start by exploring this system's design potential, then develop new modules that extend the kit-of-parts and embody a strong and distinctive design expression guided by insights from ERNE AG Holzbau.

This seminar week is offered by the Chair of Digital Building Technologies in collaboration with the Chair of Innovative and Industrial Construction at TU Delft and ERNE AG Holzbau and is affiliated with Design++. Basic Rhino/Grasshopper knowledge is recommended but not required.

Digital Building Technologies, ETH Zurich
Prof. Benjamin Dillenburger, Anton Savov, Hang Zhang, Jiaqian Wu
Innovative and Industrial Construction, TU Delft
Prof. Daniel Hall, Jianpeng Cao
ERNE AG Holzbau
Thomas Wehrle, Moritz Begle

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