



**BAU ONLINE**

**January 13–15, 2021**

Digital Platform for Architecture,  
Materials and Systems

## **Digital transformation**

*Moderation: Katja Reich, Chief Editor DBZ*  
In Kooperation mit *Bauwelt, DBZ und BundesBauBlatt*

### **Digital Construction Hybrids – Stepping Into the Future**

*(Talk given in English, with German subtitles)*

Dr. Russel Loveridge, National Centre of Competence in Research (NCCR) Digital Fabrication

Innovation and new technologies are progressively impacting architecture and construction. The digitisation of the design and planning stages are now well established in practice, and increasingly advanced tools and digitally driven machines are being used in pre-fabrication and on the construction site. The Swiss National Centre of Competence in Research Digital Fabrication (NCCR DFAB) is a research consortium set up in Switzerland to investigate and innovate digital fabrication in the domains of Architecture, Engineering and Construction (AEC). This presentation will showcase innovations being researched at the NCCR DFAB to explain our approach of step-by-step integration of new technologies within existing workforces. By engaging traditional human expertise and combining it with advancements of technologies, materials, and processes we aim to motivate construction into a collaborative hybrid future.

### **Use of AI in the creation of object-based real-world models**

*(Talk given in English, with German subtitles)*

Dr. Ilka May, LocLab Consulting GmbH

The value of digital twins has now been recognized in many industrial sectors. In addition to visualization, the areas of application in facilities management and process optimization are constantly increasing. The presentation offers inspiring examples and ideas for the use of game technology in the construction and operation of buildings and facilities.

### **Rethinking design and construction**

*(Talk given in German, with English subtitles)*

Patrick Lüth, Snøhetta

Snøhetta's working methods practice a simultaneous exploration of traditional handicraft and cutting edge digital technology – a complementary relationship that drives the creative process. These advantages of a seamless transition from digital to analog medias cannot yet be fully exploited in the construction process. However, digitization makes it necessary to also handle the overall process more flexibly.

## **Digital process chains in timber construction**

*(Talk given in German, with English subtitles)*

Boris Peter, Knippers Helbig – Advanced Engineering

Digital process chains cannot be fully standardized, rather planning teams need freedom to shape the processes. Boris Peter will show, based on project references, as the multistorey timber construction 'The Cradle' in Düsseldorf and the new 'Elephant World' in Stuttgart with its freeform timber structure how digitization can be used continuously in practice from design to manufacturing phases.

## **Panel discussion**