

OSKAR VON MILLER FORUM

Press release

The Robotic Touch – How Robots change Architecture

A lecture by Matthias Kohler, Gramazio Kohler Research / ETH Zurich, on 19 April 2018, at 6:30 pm at the Oskar von Miller Forum

Architecture is changing. The rise of computational design, the advances in sensory and robotic control, the ability to integrate the knowledge of various disciplines into digital processes all help to advance architecture and construction. In this context, the industrial robotic arm is one of the universal tools of the digital era in architecture, a tool that makes the new design paradigms tangible. Having introduced the robotic arm to the field of architecture in 2005, Gramazio Kohler Research has been pioneering the field – going beyond a purely technological approach and working towards a digital building culture.

The lecture presents seminal projects such as the Programmed Wall, key concepts such as *digital materiality* and mind-boggling installations such as Rock Print at the First Chicago Architecture Biennale in 2015. From there the lecture exemplifies the translation of research into practice by presenting built projects such as the timber roof of the Arch_Tec_Lab at ETH Zurich with its expression of algorithmic details and the DFABHOUSE currently under construction.

About

Matthias Kohler is an architect with multi-disciplinary interests ranging from computational design and robotic fabrication to material innovation. In 2000, he founded the architecture practice Gramazio & Kohler in conjunction with his partner Fabio Gramazio, where numerous award-winning designs have been realised.

Current projects include the design of the Empa NEST research platform, a future living and working laboratory for sustainable building construction. Opening also the world's first architectural robotic laboratory at ETH Zurich, Gramazio & Kohler's research has been formative in the field of digital architecture, setting precedence and de facto creating a new research field merging advanced architectural design and additive fabrication processes through the customised use of industrial robots. This ranges from 1:1 prototype installations to the design of robotically fabricated high-rises. His recent research is outlined and theoretically framed in the book *The Robotic Touch: How Robots Change Architecture* (Park Books, 2014). From 2014 to 2017 Matthias Kohler was director of the new National Centre of Competence in Research (NCCR) Digital Fabrication at ETH Zurich.

Lecture in German