



Robotic Landscapes

Designing the Unfinished

Edited by Ilmar Hurkxkens

Fujan Fahmi

Edited by Ammar Mirjan

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- The first book on the use of robotic technology in landscape design that introduces new, dynamic methods and previously inconceivable scenarios for implementation
- Demonstrates how digital design and robotic execution of landscape designs result in safe and resilient solutions in the age of climate change
- Presents alternatives to current natural-hazard-mitigation strategies that can be adapted to progressive changes in the terrain

The Department of Architecture at ETH Zurich has been researching the integration of robots into the architectural practice, both in design and the fabrication process, for some time. This book—created in collaboration with the chair of Christophe Giro, Gramazio Kohler Research, and Marco Hutter at ETH Zurich's Robotic Systems Lab—is the first to investigate the use of robot-based construction equipment for large-scale soil grading in landscape architecture. As landscapes are continuously changing due to ever-changing environmental conditions, the application of autonomous systems that respond to the environment rather than perform predefined and static earthwork is of particular interest in this field.

Robotic Landscapes sheds light on a series of groundbreaking experiments in an interdisciplinary collaboration of landscape design, environmental engineering, and robotics that aims to make landscape architecture sustainable and ecological in the long term.

Ilmar Hurkxkens is a researcher and lecturer with Gramazio Kohler Research at ETH Zurich's Department of Architecture. He is also co-founder of the design research laboratory LANDSKIP and of Ungenau Robotics. Prior to this he worked at Christophe Giro's Chair of Landscape Architecture.

Fujan Fahmi is an architect and urban planner and has been directing the interdisciplinary MØFA Studio in Zurich since 2017. Her work covers a wide range of interventions at the intersection of urban planning and landscape design. She also teaches in the Design Studio of ETH Zurich's Department of Architecture.

Ammar Mirjan is an architect working as a researcher with Gramazio Kohler Research at ETH Zurich's Department of Architecture. He focuses on constructive robotic assembly processes and their impact on the construction industry.