

1. Record Nr.	UNINA9910464738003321
Titolo	Made by robots : challenging architecture at the large scale // guest edited by Fabio Gramazio and Matthias Kohler
Pubbl/distr/stampa	London : , : John Wiley & Sons, , 2014 ©2014
ISBN	1-118-91895-9
Descrizione fisica	1 online resource (140 p.)
Collana	Architectural design
Disciplina	690
Soggetti	Architectural design - Technological innovations Architecture - Philosophy Architecture Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Cover; Title Page; CONTENTS; Copyright Page; EDITORIAL; ABOUT THE GUEST-EDITORS; SPOTLIGHT: VISUAL HIGHLIGHTS OF THE ISSUE; INTRODUCTION: AUTHORIZING ROBOTIC PROCESSES; Robots; Start, Crash, Reboot; Challenging Scale; Venturing Out of Bounds; Robotics Pioneers; Theory of Change - Change of Theory; Architecture in the Second Digital Age; Acknowledgement; Notes; INTEGRATING ROBOTIC FABRICATION IN THE DESIGN PROCESS; The Role of the Physical Model in Computational Design; The Design of the Robotic Process; The Integration of Computation and Fabrication Potentials of Robotic Technologies for Design PracticeNotes; NESTED VOIDS; SEQUENTIAL FRAMES; VERTICAL AVENUE; MESH TOWERS; BENT STRATIFICATIONS; UNDULATING TERRACES; MESH-MOULD: ROBOTICALLY FABRICATED SPATIAL MESHES AS REINFORCED CONCRETE FORMWORK; Conventional Construction Versus Robotic Fabrication; The Dilemma with Robots; Division of Mass and Information; Mesh-Mould Combined Formwork and Reinforcement System for Concrete; Potential for Design, Planning and Construction; Notes; ROBOTS AND ARCHITECTURE: EXPERIMENTS, FICTION, EPISTEMOLOGY; Robots and Fiction; Utopian Perspectives

From Fiction to ConversationNotes; ENTREPRENEURSHIP IN ARCHITECTURAL ROBOTICS: THE SIMULTANEITY OF CRAFT, ECONOMICS AND DESIGN; Startups; Recovering Lost Ground; Design and Production; Design and Build; Notes; ODICO FORMWORK ROBOTICS; Note; ROBOFOLD AND ROBOTS.IO; Variation as Standard; The Process; Robots to the Core; MACHINEOUS; ROB TECHNOLOGIES; Notes; GREYSHED; Notes; COMPUTATION OR REVOLUTION; The Market of Robotics; Specificity of Robots or Specificities of Architecture?; Artificial Intelligence and Computation as 'Communism of Genius' A Temporary Conclusion on Computational Literacy and PoliticsNotes; CHANGING BUILDING SITES: INDUSTRIALISATION AND AUTOMATION OF THE BUILDING PROCESS; The Establishment of Industrially Produced Elements and New Materials; Rationalisation and Industrialisation of the Building Process; Towards Automated Housing Prefabrication; Single-Task Construction Robots; Integrated Automated Construction Sites; Implementation at a Larger Scale?; Notes; IN-SITU FABRICATION: MOBILE ROBOTIC UNITS ON CONSTRUCTION SITES; ON-SITE MACHINES; BASIC RESEARCH; Mobile Robotic Unit; Handling Material Tolerances Human-Machine InteractionPositioning and Localisation Techniques; FIRST APPLICATION; FINDINGS AND POSSIBILITIES; Notes; TOWARDS ROBOTIC SWARM PRINTING; Material Tunability in Additive Fabrication; Cross-Platform Communication and Coordination in Additive Fabrication; Robotic Additive Fabrication Case Study: Print-in-Place; Robotic Additive Fabrication Case Study: Cable- Suspended 3D Printing; Robotic Additive Fabrication Case Study: Templated Swarm Printing; Towards Robotic Swarm Printing; Notes; MACHINES FOR RENT: EXPERIMENTS BY NEW-TERRITORIES; DARWINIAN STAR-GATE; Instructions
Precautions for use

Sommario/riassunto

In the next decade or so, the widespread adoption of robotics is set to transform the construction industry: building techniques will become increasingly automated both on- and off-site, dispensing with manual labour and enabling greater cost and operational efficiencies. What unique opportunities, however, does robotics afford beyond operational effectiveness explicitly for the practice of architecture? What is the potential for the serial production of non-standard elements as well as for varied construction processes? In order to scale up and advance the application of robotics, for both
