

New in the *Construction and Design Manuals* series by DOM publishers:

Kostas Grigoriadis, Guan Lee

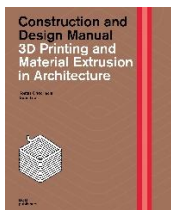
3D Printing and Material Extrusion in Architecture

3D printing as an additive production process is said to revolutionise architecture. This is not least due to the environmental advantages that this technology offers. It is not only plastic, concrete, or metal, but also natural resources such as clay that can be extruded in a liquid state and then hardened into its final form. This allows for the shaping of complex geometries, structures, surfaces and exactly fitting construction elements.

In the Design Manual *3D Printing and Material Extrusion in Architecture*, the architects and researchers Kostas Grigoriadis and Guan Lee, who both work at the Bartlett School of Architecture in London, take a look at the current state of affairs regarding 3D printing in architecture. They examine the possibilities and limitations of this innovative technology. With the help of detailed case studies of 3D printed buildings and building components from all over the world the authors inform the reader about the materials employed, how they can be used and combined with other construction materials, as well as the freedom granted to the designers that additive manufacturing provides.

In addition to the above, the focus is also on the environmental aspects of the method, the lifecycle of 3D printable materials, and the embodied energy of 3D printing compared to conventional building construction. The authors present the options and ecological advantages of this new construction technology, and show the possibilities that it provides when it comes to sustainability, low-emissions, and efficiency.

This title by Kostas Grigoriadis and Guan Lee presents a comprehensive, up-to-date overview of the implementation of 3D printing in architecture. The extensive image material shows already realised projects such as a clay building that uses the bare minimum of construction material, a decorative ceramic façade, or a pedestrian bridge made from four adaptable metal components. Detailed designs of various 3D printers, images on material studies and photos of individual production steps complete this current and practice-oriented textbook which is intended mainly for architects and construction specialists.



Kostas Grigoriadis, Guan Lee
3D Printing and Material Extrusion in Architecture
225 × 280 mm, 384 pages
approx. 650 images, hardcover with elastic strap
ISBN 978-3-86922-750-4 (English)
EUR 88.00
January 2024. DOM publishers, Berlin

The *Construction and Design Manuals* series by DOM publishers lists architectural handbooks that combine solid research with high aesthetic standards. These useful companions provide inspiration and valuable information for architects and their clients alike. Teachers and students of architecture will find them an easy-to-use learning tool. Internationally available. For further information please go to: www.dom-publishers.com