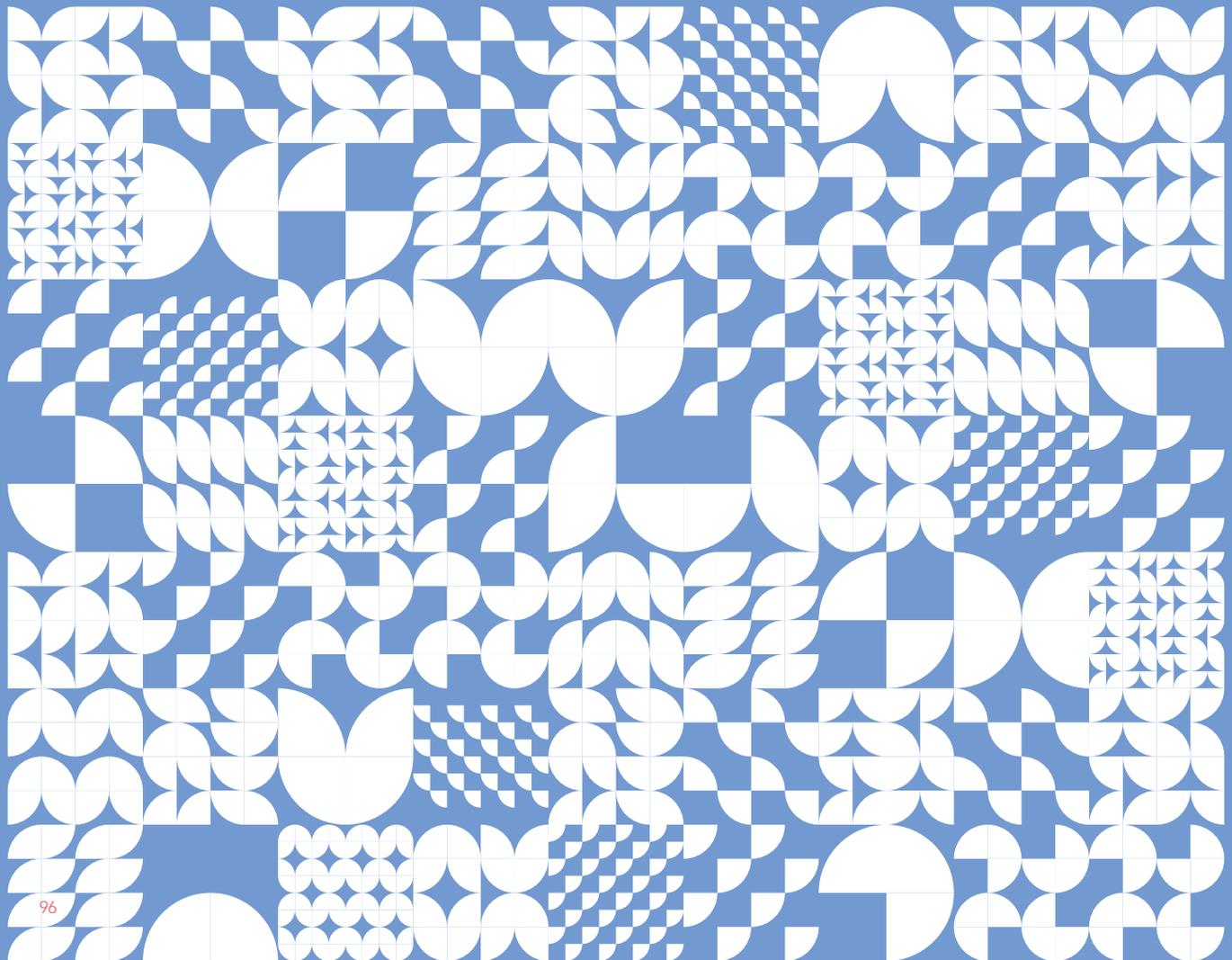# DT

DOSSIER TRANSLATIONS
Architecture and Technology

Guest editor: Mauricio Loyola

Introduction
Mauricio Loyola

When the use of digital technologies in architecture became popular at the beginning of the 90s, some people alerted about the risks of an excessive virtualization of the discipline and about the emergence of a 'cyberspace' detached from materiality, construction, mass, or gravity. A large number of digital images of intangible forms or spaces seemed to question the material character of architecture, which John Frazer (1995) straightforwardly called a new architecture that transcends physicality and achieves ephemeralization. In 1998, William Mitchell proposed the concept of 'antitectonics' to describe this new digital era characterized by the dematerialization of architecture; and by doing so, he not only gave a name to the manifest of virtuality, but also caused the delight of doomsters who saw their prediction confirmed.

The present decade seems to show a different spirit. The fascination with purely digital visual exuberance, which was characteristic of the beginning of the millennium, has given way to a reassessment of the material and the construction. The massification of CNC machinery in architecture schools and firms is the most evident symptom of an increasing interest on the impact that digital technologies may have on the material production of architecture. Digital technologies have acquired a corporeality that does not dispute, but strengthens, architecture´s material tradition. The omnipresent digital fabrication, robotic systems, simulation technologies, or the Internet of Things (IoT) intertwine the digital and the material to a point in which the efforts to distinguish them lose sense.

The dossier of this number of Materia Arquitectura questions the separation that traditionally has been made between 'the digital' and 'the material' as opposed phenomena or domains, and, conversely, invites to reflect upon digital technologies as enabling catalysts of the physical.

Natalie Haskell opens the dossier presenting the fundamental idea of reconnection between the digital and the material offered by recent technologies, through theoretical references and examples of projects of the last 15 years. In turn, Diego

Pinochet´s article contributes to a historical contextualization of the debate with an examination of the change of vision about digital technologies, from the cognitivist conception of the first CAD promoters in the 60s to contemporary materialistic trends. A deepening into the present situation is developed by Rivka Oxman, author of the concept 'new structuralism' (2010), through the proposal of a new conceptual model to understand the tectonic relationships of form, structure and material within a logic of fabrication technologies and robotics. The articles of Shelby Doyle and Sigrid Adriaenssens explore the interdependence of digital technologies with social and technical aspects of the discipline, respectively. Doyle discusses how an emergent tectonic culture represents an opportunity to deepen the social and political influences of architecture. Adriaenssens uses structural design to illustrate the way in which digital technologies offer an opportunity to revisit and reconsider fundamental notions of the discipline, such as the relationship between form and efficiency. Finally, Gabriela Celani characterizes the debate within the local Latin-American context by means of a review of the impact of digital technologies on the architectural production of our region.

All in all, the articles of the dossier give a transversal look at the concepts, methods, processes and techniques that the omnipresent digital means propose to the material production of architecture, and with that, they open up the question about forthcoming changes. m

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