

## Preface

The Computer-Aided Architectural Design Foundation was established in 1985, and ever since, has encouraged state-of-the-art research and practice of computing in architectural design through conferences and publications. Istanbul, the vibrant metropolis that lies between Asia and Europe, was the host of the 17th CAADFutures Conference.

For the designer in the multidisciplinary world of the 21st century, computation provides a powerful medium for the extension of understanding other disciplines. In accordance with this global change in the field of design, CAADFutures 2017 called for papers around the theme of “Future Trajectories of Computation in Design.” In fostering a multidisciplinary discourse for the future of computation in design, the conference aimed at not only gathering the latest research, design practice, and pedagogies but also revealing the possible phenomena, factors, and forces that will influence these trajectories in design with an exploratory perspective.

From the initial 184 abstracts received in the first stage of paper evaluations from 27 different countries, only 22 papers were selected for this book in a two-tier double-blind review process. Each paper was reviewed by at least three experts from an international committee of 80 experienced researchers. In the same process, 46 other papers were selected for publication in the conference proceedings and in Cumincad (cumincad.scix.net), where the abstracts of papers in this book are also indexed.

The papers in this book have been organized under five headings: (1) Modeling Urban Design, (2) Support Systems for Design Decisions, (3) Studying Design Behavior in Digital Environments, (4) Materials, Fabrication, Computation, and (5) Shape Studies. The first group provides examples of various applications of computation in the study of the urban environment. The second represents a broad range of studies in optimizing the creation and sustaining the built environment. The third comprises papers that describe research into individual or group design processes. The fourth group offers research into new ways of making, which incorporate materials and computational thinking. Finally, the fifth group includes research on mathematics of shapes in design. Contributors of the book are researchers from the fields of architecture, design, urban design, computer science, engineering, and other disciplines that address issues of computational design.

As editors of this volume, and organizers of the conference, we thank Professors Bauke de Vries and Tom Kvan, the chairs of the CAADFutures Foundation for their continuing support in the process of organizing the conference and the preparation of this book. Gabriela Celani, the chair of the 2015 conference, was extremely resourceful and helpful to us from the very beginning. We also thank all members of the Scientific Committee for their diligent reviews that paved the way to match the high academic standards CAADFutures conferences are known for. We are also grateful to each member of the conference Organizing Committee. Finally, the conference would not

have been possible without the support of Istanbul Technical University Rectorate, the Faculty of Architecture, and our generous sponsors.

It has been a great honor and pleasure to organize and host the CAAD Futures Conference in Istanbul. We hope that this great selection of papers is an indication of the contribution of the conference to the field and that you enjoy the book.

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Gülen Çağdaş  
Mine Özkar  
Leman Figen Gül  
Ethem Gürer



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