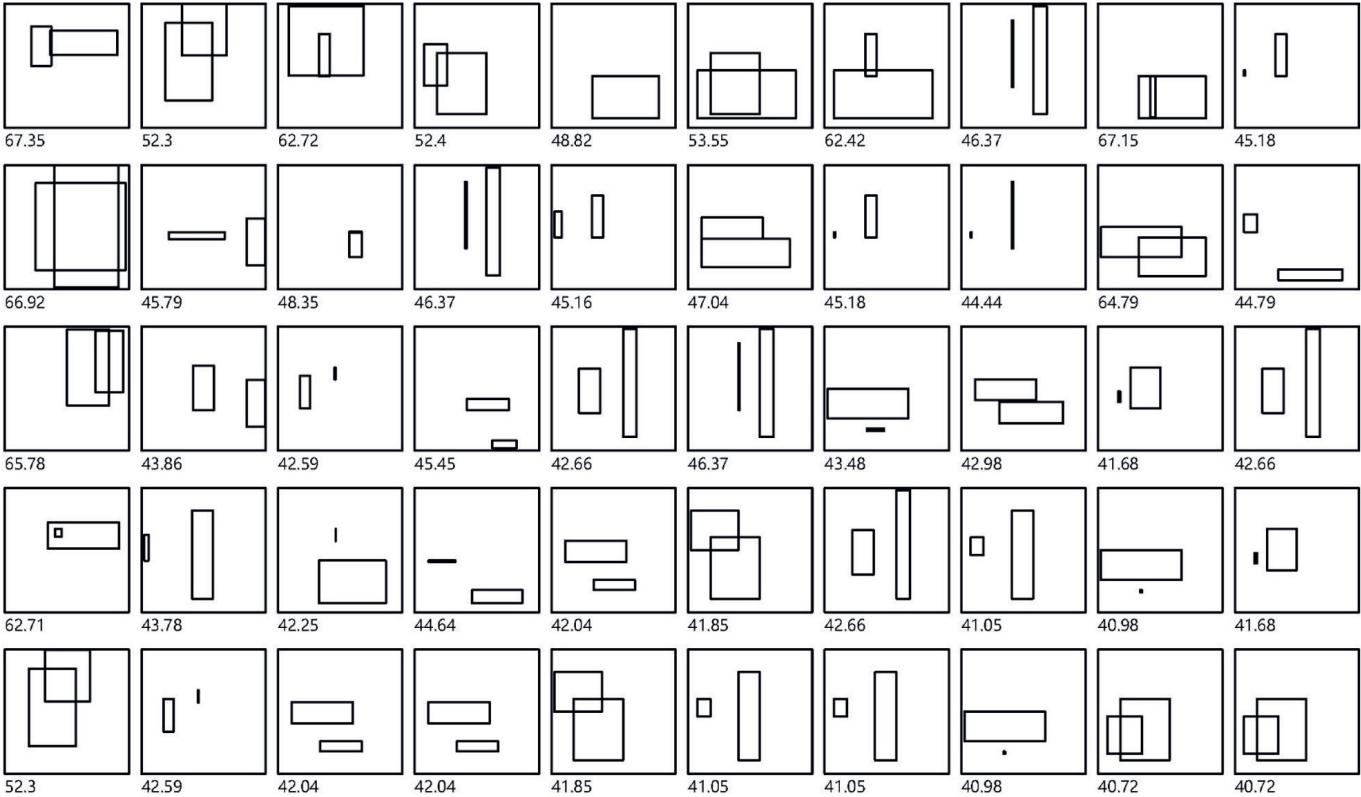


The concept of mass customization has already found its way into architecture. But where does the term come from, what are the basic requirements, and what are the challenges, especially in architecture? These questions are addressed in four chapters written by the two students Grossberger and Seifert, with the content based on the course *Mass Customization and individualized Architectural Production* at the Research Unit of Digital Architecture and Planning at the TU Wien. In a further chapter, Dr. Kulcke, who has already written several articles on the subject of design analysis, provides a deeper insight into design-related mass customization.



MASS CUSTOMIZATION AND INDIVIDUALIZED PRODUCTION

GROSSBERGER • SEIFERT • KULCKE



Wolfgang E. Lorenz, Gabriel Wurzer (eds)



Mass Customization and Individualized Architectural Production

A Companion Textbook

TU Wien

Institute of Architectural Sciences
Research Unit of Digital Architecture and Planning

2026 Vienna

Edited by

Wolfgang E. Lorenz
Gabriel Wurzer

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Mass Customization and individualized Architectural Production

Editorial

When discussing the subject of Mass Customization one might ask "why even bother with Mass Customization if we have LLM-driven ChatBots, Diffusion Model based image generation and the like, that can also approximate input-driven solutions for architecture, furniture and all sorts of products?" Is it still worth devoting an entire semester to the task of developing customizable products e.g., suitable for online configuration?

Being part of the seminar taught at the TU Vienna in the last years by Dr. Wolfgang E. Lorenz and PD Dr. Gabriel Wurzer, where I served as a guest lecturer on the specific subject of Gestalt analysis integration in online configuration systems, I am still convinced that the answer is yes. In regards to the idea of democratization of the design process it is even more so in the age of so-called AI, a term that nowadays refers to simulation of intelligent behavior through algorithms based on a neuronal network-like digital model. In my own doctoral thesis I stressed the importance of reflecting on responsibility concerning responsive systems – this responsibility lies first and foremost with the professionals that build and disseminate the system and its products to the public, even if the customers, as laymen, contribute by their choices to the final outcome of their specific instance derived by a filtering process out of the entire solutionspace deemed desirable and defined by the systems architects. This is still the case, even if the configuration is encapsulated in an LLM-based dialog system and steered by user prompts in text.

What does this imply for educating architects in academia? To assume responsibility in offering collaboration via digital configuration to end users, be it through old fashioned online configurators or systems driven by prompts to be processed by so-called AI, students have to be empowered to design solution spaces that integrate user choices while still securing desirable Gestalt outcomes in regards to professional design, construction and sustainable production as well as delivery. This empowerment of the future professional planners, enhancing and building up underlying competences in parametric as well as modular design, digital planning and customer communication is a task as up to date as ever and Wolfgang E. Lorenz and Gabriel Wurzer live up to it, as the collection of content brought forth by seminar and presented here, documenting their students efforts and their own well shows.

It is also great to see that their attitude of empowerment is displayed by this publication, which was used as an opportunity for two of their students to act as the main authors. I feel honored to be one of the invited international contributors thus guided by this highly engaged team.

Matthias Kulcke
is lecturer and researcher in interdisciplinary digital Gestalt analysis
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This textbook presents the outcomes of the course Mass Customization and Individualized Architectural Production.

The volume comprises five chapters. Four chapters were written by students of the course and summarize the content of the lectures, providing a structured introduction to key concepts and methods in mass customization and individualized architectural production.

The volume is complemented by a fifth chapter contributed by the invited researcher *Matthias Kulcke*, offering an additional research perspective on the topics covered in the course.

We hope that this publication will serve both as a companion to the course and as an accessible introduction for readers interested in individualized architectural production.

*Wolfgang E. Lorenz and Gabriel Wurzer
Vienna, June 2026*

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