

# Considerations on Parametric Design and Generative Design

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Parameterize means to identify and describe quantitatively variable elements in the process. To each parameter is assigned one or more variable values, which have effects on the process output. The more parameters, the greater the number of possible solutions. In “conventional” design projects these values are defined and fixed in the early stages of the project, creating a single result and the use of the computer focuses on the visual and technical representation of this idea (CAD systems - Computer Aided Design). On the other hand, in parametric and generative design projects, the designer defines parameters but their values remain variable, dynamically imputed with the assistance of algorithms (AAD systems - Algorithm Aided Design).

Parametric design and generative design are often taken as synonymous and in bibliography, there is no clear division between practice, technique, methodology and theory. This work presents the main similarities and differences between parametric and generative design and shows a practical example of using algorithms aiding a surface design project, creating a pattern whose drawings were randomly generated in Processing.

## KEYWORDS

Parametric design, Generative design, Algorithm, Pattern design

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