

PARAMETRIC DESIGN: REFERENTS, METHODS AND OPPORTUNITIES.

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The emergence of Building Information Modeling (BIM) has reached unprecedented relevance at the beginning of the XXI century within some academic and practicing architectural sectors. BIM tools are usually based on parametric design, a method that allows the design of element behavior through powerful linkage methods with changeable dimensions, which is enabling the use of complex geometries and the production of suggestive freeform projects.

This research theorizes that parametric design is not only a powerful tool and a product of digital intelligence, but that it's also an important "logic" found persistently within the history of architecture. A genealogy of over 40 selected projects dating from 1890 to 1980 show that parametric logics were used throughout their conception, design and construction. These projects are reconstructed digitally using current parametric platforms to unveil their basic parameters, tracing multiple relationships and sequences among innovative research agendas. Furthermore, important collaborations between their authors are revealed as a body of knowledge that still remains unknown to a vast architectural community.

The use of parametric logic is historically deeply interwoven into the interdisciplinary nature of innovative architectural practice, and current digital tools are continuing these logics, and are extrapolating them to unforeseen levels.

Keywords: Parametric Design, Associative Design, Digital Tools, Digital Architecture.