



# Study of Parametric Architectural Functional Components for the Quality of the Residential Environment

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## Abstract

Architecture is the supply and creation of space for human needs. Parametric design is one of the most comprehensive approaches to the design world today. The combination of architecture with geometry can provide a solid form to the body. The purpose of the research is to meet the human needs using parametric architecture, changing architecture design methods to achieve housing, and enhancing the quality of residential buildings using aesthetic sense in parametric architecture.

The present study uses a descriptive survey method to deal with parametric approach in the building, while presenting an improvement in the quality of human environment in contemporary housing design. Accordingly, the result of this study is as follows: factor one: desirable housing and its relationship with the field (physical and visual), second factor: the human-made environment (the recognition of environmental capabilities for the realization of human needs in place), and third factor: parametric geometry in Housing (while being abstract, it is the most important language through which the architect creates special spatial qualities). As a result, considering the development of housing and achieving a comprehensive plan beyond the quality of space discussions that plays an important role in contemporary designs, the present study will provide a

suitable model for optimal housing in a human-oriented society.

**Keywords:** fractal, architectural design, parametric , spaces

## INTRODUCTION

Architecture is the supply and creation of space for human needs. Human attitudes to human needs, such as housing, in today's architecture can be responsive to the residential architecture, and human mentality toward the architecture design process can undergo significant changes. Accordingly, the need to create a new attitude in the design of home architecture for architects and users can be part of the imperatives governing human needs. Architecture, which is a container for human presence, can create multidimensional spaces in terms of changing human thinking and the human space model (home and housing) in the aftermath of history with the change of design and progress of technology. Parametric design is one of the most comprehensive approaches to the design world today.