

Innovative Structures For 3D Paper Forming by using Folding Techniques

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Abstract

The three-dimensional composition using the method of folding paper is an art that has a privacy from the art of the two-dimensional flat formation, as it differs from it in adding the third dimension in the space. By specialists to create many formal patterns of an aesthetic nature, and the use of paper in artistic works is characterized by high potential in formation and ease of formation and artistic construction with the proposed design. Added to this is the light weight and resistance to the conditions it is exposed to, as well as the ease of use and employment of many visuals.

The research problem tends to study some of the shortcomings generated by the multiplicity of innovative structural and artistic methods of folding formation and placing them in the scientific context, while shedding light on the technical capabilities of paper formation and its classification in terms of the desired direction and appearance through the expressive, aesthetic and plastic values that the artist practiced.

The research aims to activate the role of folding forming methods in formulating the technical construction requirements for three-dimensional paper artifacts, and to identify the most important technical characteristics used in the procedures for forming flat individuals into three-dimensional shapes, in addition to revealing paper adaptation to implement artistic designs for organic shapes. The study tended to codify the methods of forming paper by folding in three-dimensional buildings, as well as the plastic elements, their impact on the construction of paper artifacts formed by folding, in addition to a technical analysis of models of innovative paper works using the folding method. The study reached a set of results, the most important of which is that the innovative case of paper formation requires a knowledge background and specific skills to form individuals and formation procedures, as it is linked to aesthetic, structural and functional goals and the ability to apply this understanding.

Keywords :

Innovative Structures -3D Paper Forming– Origami

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