SYNAPSES: Insights Across the Disciplines
ISSN: 3060-4737 Volume 2, Issue 2 IF(Impact Factor) 10.92 / 2024

BIONICS IN ARCHITECTURE AND CONSTRUCTION

Sultonova Xilolaxon Orifjon qizi
Termez State University of engineering and Agrotechnology Architecture (by type)
2nd year student

Abstract

In conclusion, architecture and everything around us and events have something to do with nature. The harmonization of architecture with nature, on the other hand, reflects the pros and cons of buildings. Man has long intelligently and intuitively addressed the living nature in his architectural and construction activities, and nature has helped solve his various problems. The term "bionics" comes from the Greek word bios, which means "life." The word "nica" is derived from electronics and has opened up a direction in science as a new term. The main content of the article is to provide information on what bionics means for the origin and application of this science nowadays.

Keywords: Nature, bionics, buildings, buildings, construction.

Because architectural bionics is hypocritical (nature+architecture), two objects—nature and architecture—are modeled in practice. Therefore, the results of the model experiment are extrapolated to both natural and architectural objects. Extrapolating to nature is to develop an architectural-bionic realization of living nature on the one hand, and on the other hand for biologists, they will have to communicate with architects. **Theoretical basis for extrapolation is the necessary component** in highlighting the essence of the desired model experimentThe physical model in modeling is the relationship between a biological model and, on the other hand, a physical model on a specified object— architecture.

It is the theoretical basis for physical modelling and should be the theory of similarity This situation, which is connected to the construction of architectural shapes focuses on the theory of similarity to mechanical motion. The definition of similarity theory includes the restriction clauses on the quality uniformity of such systems "In order for physical processes to be similar to each other, they need to be in the same quality, and their criteria for the same name must be of the same value, and therefore sufficient." Galiles is the current founder of such a theory. Its main idea is to confirm the integrity of the geometric relationships

ISSN: 3060-4737 Volume 2, Issue 2 IF(Impact Factor) 10.92 / 2024

and physical properties of mechanical systems, which is valuable in architectural-constructive modelling and in theimplementation of the principle of "resistance in form " established by Italian engineer P.L. Nervi.

Architectural-bionic modeling plays a major role not only in physical properties but also in understanding the shape and its aesthetic properties with mechanical motion . For example, we have learned to small dimensions of a tree leaf or flower leaf , and in architecture they suddenly become very huge in the form of hundreds of intermediate closures. Therefore, the practice of modeling natural objects deviates from the relatively limited range of mechanical events in all situations and passes into the forms of a much abstract (abstract) theory of similarity. The concepts of isomorphism and gomomorphism, much more general,can be viewed not as the same, but as the formed, defined types of analogues that envisage similarity relationships. Isomorphism refers to the compatibility of single-dimensional (bilateral) interactions of such systems, although the concept of isomorphism is relative here, it is strict only for the elements and connections that were distinguished during the analysis. Gomomorphism, on the other hand, refers to situations of much less similarity to isomorphism compared to that of isomorphism. If photography and its negativity are a good example of isomorphism, then the place and its geographical map are considered examples of homomorphism. However, both isomorphism and homomorphism are based on one type of connection of things. Isomorphism is the basis for mathematical forms of various forms of nature—mechanical, electrical, thermodynamic, heat, and so on. However, the use of mathematical mathematics in architecture to shape models of living things is limited to the field of its objective laws in architecture. At the same time , it is important to remember that based on aesthetic relationships, the objective laws of life lie , so the use of mathematical models to transition from the scope of natura objects to the scope of physical models and then to architectural objects is very effective in all areas of architectural bionics.

The bionic experimental phase of modelling in architectural bionics, it is also possible to create functional, verb processes of living nature. While both aspects of modeling are dialectically opposite, they are based on the interaction of a function and structure that will still take its place. The resulting embryo was allowed to develop in nutreents and then inserted into her wowoe, where it implanted. Of course, it should strive for maximum reliability, otherwise the meaning of all architectural-bionic modelling will be lost and the subjective factor that raises the issue of the purpose of architectural and bionic research will have

ISSN: 3060-4737 Volume 2, Issue 2 IF(Impact Factor) 10.92 / 2024

priority. All this does not disentangle the likelihood of receiving negative conclusions and its benefits. A dialectical view of the interrelationship of functions and structures paves the way for the possibility of predicting the processes being modeled in both experimental and resulting modeling