

**O 122. EVALUATION OF THE USE OF BIOMIMESIS IN BUILDING SHELL DESIGN
THROUGH EXAMPLES**

Emine Gündoğdu¹, H. Derya Arslan²

¹*Necmettin Erbakan University, Faculty of Engineering and Architecture, Department of Architecture,
Konya, Turkey*

²*Assoc. Prof. Dr., Necmettin Erbakan University, Faculty of Engineering and Architecture,
Department of Architecture, Konya, Turkey*

E-mail: mine.gndo@gmail.com, deryaarslan@erbakan.edu.tr

ABSTRACT: Mankind has tended to constantly regulate its environment in order to meet its needs and desires since its existence. For this, he benefited from the order of nature. The operation and sustainability of the cycle in nature has been an inspiration in the design, and sustainable/ ecological designs have begun to be made. In parallel with the development observed in ecological architecture, especially thanks to the recently developed technology, studies have started in terms of materials, processes and formations by going beyond formal and structural concerns. At this point, the science of biomimesis has come to the fore. Biomimesis is a new science that brings sustainable solutions in design by observing the formations, textures and strategies found in nature to the problems of humanity. Within the scope of the study, it was aimed to determine the use of biomimesis in shell design by associating it with nature in terms of sustainability. In this context, it has been evaluated through sample designs in accordance with determined biomimesis principles. As a result, example structures with biomimetic solutions show that a biomimetic approach based on nature is a very important source in designing structural shells for architects, producing versatile innovative ideas, and providing sustainable solutions to problems that may arise today and in the future.

Keywords: biomimesis, sustainability, ecological design, building shell design