

Biological Simulation and its applications in the architectural shape and interior architecture

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Abstract:

Nature is the first instructor as it is an organized, self-adapted living being that is autocorrect itself. Nature has its own rules and principles to maintain the environmental system, it is considered the source of systems, materials, structures and science of beauty, nature potentials at many fields exceed human's potentials. Through it we can extract the suitable designing solutions for some problems in the right time as we can discover new directions to our already built environments. As the designing thought that is combining architecture engineering and biology science to achieve the whole unity between nature and building. Biomimetic which is the science of simulating nature is considered a flowing resource for vital mimicry for new energy with the goal of realizing sustainable designing technology, and also one of the sustainable, modern designing strategies, that depend on benefiting by solutions that are existing in nature, to fix the various kinds of design problems at different fields like architecture or interior architecture or furniture through new science that depends on the intersection of all various types of designing from architecture, civilized design and geometrical designs with basic science like biology, chemistry, and mathematics, with discovering the fields of cooperation and exchanging science that are inspired from nature mimicry.

The problem of the research is about;

The possibility of using the Biomimicry approach as a tool and strategy for sustainability while studying its applications in the fields of design and architecture. Its importance comes from the role of simulating the living natural systems in terms of form, composition, originality and ecosystems as one way of achieving sustainability. With the aim of achieving the concept of sustainability through the trend of simulation of nature as a tool to develop and modernize and to reach an innovative design thought which we can achieve a balanced and sustainable environment through the descriptive analytical approach to study nature as a tool and strategy to achieve sustainability in architecture and internal architecture, by finding solutions to design problems by simulating the natural world.

To reach some results that confirm the effectiveness of simulation of natural systems with the possibility of combining nature and technology and explore their potential in developing a more sustainable buildings.

Keywords:

Sustainable Architecture, Simulation, Nature Simulation, Biological simulation, Bio-architecture, Biomimicry, environmental studies.