Małgorzata ROGINSKA-NIESLUCHOWSKA
Gdansk University of Technology
Faculty of Architecture, Department of Visual Arts
11/12 G. Narutowicza, 80-233 Gdansk
tel./ fax: 58 347 15 20 e-mail: maron@pg.gda.pl

COMPUTER SOFTWARE AND THE USE OF DAYLIGHT PARAMETERS IN DESIGNING GEOMETRIC FORM OF SUSTAINABLE ARCHITECTURE

Key words: *daylighting in architecture, computational methods of architectural designing*

The paper aims to stress the importance of computer software in creating environmentally friendly architecture. The author provides specific examples that relate to the use of daylight parameters and demonstrates how digital methods and tools can be used to analyze environmental conditions, and to optimize functional, economical and visual design solutions. The elaboration deals with the possibility of using BIM (Building information modeling) software in a design process involving the generation and management of digital representations of both physical and functional characteristics of a facility. Generative design methods use different parameters associated with daylight to serve as the basic criteria for determining the geometry of architectural forms and structures. Material characteristics and their visual effects may also be subordinated to the parameters of natural light impact.

The basic premise of this study is the development of digital methods and tools used in architectural design, in particular the potential of advanced parametric-algorithmic techniques for generating design solutions. These techniques allow for the adjustment of design to the specific input and output optimization parameters, and the incorporation of modern materials technology and day lighting systems. Modern computational design strategies have a great impact on the quality of contemporary architecture, and therefore should be incorporated in the teaching process.

Literature:

[1] http://www.autodesk.com/, http://www.autodesk.pl/,

[2] https://myarchicad.com/

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