

عنوان مقاله:

An analysis on the use of computer in parametric architecture for strategic planning in urban space design

محل انتشار:

هفدهمین کنفرانس بین المللی فناوری اطلاعات، کامپیوتر و مخابرات (سال: 1401)

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خلاصه مقاله:

After passing through the industrial period of the introduction of computers, changes and transformations took place in all fields. Naturally, architects are not exempt from this rule, and this presence led to computer-related currents in architecture, including parametric architecture. Urban issues are highly complex and a set of factors are effective in shaping the urban plan. Even considering one parameter, the designer's mind often does not have the ability to measure all the factors affecting that parameter at the same time. Parametric architecture in urban design is flexible and reversible, and if the parameters are checked according to the surrounding context, the obtained form will be harmonious or the existing context will be formed. During the next decades the construction will have to face many problems that never had inferred, it must reinvent itself to adapt to the new needs that it currently demands because it consumes too many energetic resources, it generates excess of CO<sub>2</sub> emissions, consumption of natural resources and every day the construction is more expensive. The United Nations ۲۰۳۰ Agenda announced the objectives for sustainable development, this to try to mitigate the effects of climate change; The Coronavirus pandemic made humanity reflect on the emergencies that we must face and left us reflecting that we are not prepared for an emergency or crisis; These are key points that we must address to develop the new architecture. If we analyze the history of architecture, we can see that technology and science has always been a catalyst for humanity and has generated great solutions to the problems that befall us, this should motivate us to use technology and software in our favor. Therefore, we must prepare and generate new solutions, innovations and technology that focus on solving the new needs that architecture demands. The question is: how we can solve these problems? The answer is through digital fabrication and parametric design. It is important to emphasize and make it clear, we cannot continue to build as we have been doing in the past century, our practices and approaches must change, and it is urgent to rethink the role of the architecture today.

کلمات کلیدی:

.Environment, digital fabrication, parametric design, computer design, crises

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