

عنوان مقاله:

Role of Environmental Simulation at the Early Stage of Design in Order to Achieve Outdoor Thermal Comfort: A Case Study of Ekbatan and Apadana Residential Complexes in Tehran, Iran

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خلاصه مقاله:

Outdoor environment and its requirement are one of the crucial issues of the designer especially in the residential complexes. early stage simulation is a method which is considered in many studies and projects to demonstrate and predict the environmental performance of the buildings. Therefore in this study to assess the importance of the early-stage environmental consideration through simulation method using both simulation tools and experimental measurement of the environmental parameters. Thus Envi-met 4 is used for simulation purposes and data logger (Lutron LM-8000) is used for frequent measurements. In order to show the accuracy of the simulated Tmrt, the measured data are put into the formula of the Tmrt and all of the calculations are done via Grasshopper parametric tool. Ekbatan residential complex is more prone to have a comfortable environment in comparison with the Apadana residential complex but the best happens in the simulated residential complex. The finding of this study demonstrates that if at the early stage of the design process, the environmental parameter takes into consideration, the final real output will be more satisfactory in terms of outdoor thermal comfort.

کلمات کلیدی:

environment, thermal comfort, early-stage simulation, Residential complex

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