

Enhancement of Visual Comfort Using Parametric Double Skin Façade

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Abstract : Parametric design is an icon of the modern architectural that facilitate taking complex design decisions counting on altering various design parameters. Double skin facades are one of the parametric applications for using parametric designs. This paper opts to enhance different daylight parameters of a selected case study office building in Cairo using parametric double skin facade. First, the design and optimization process executed utilizing Grasshopper parametric design software which is a plugin in rhino. The daylighting performance of the base case building model was compared with the one used the double façade showing an enhancement in daylighting performance indicators like glare and task illuminance in the modified model, execution drawings are made for the optimized design to be executed through Revit, followed by computerized digital fabrication stages of the designed model with various scales to reach the final design decisions using Simplify 3D for mock-up digital fabrication

Keywords : parametric design, double skin facades, digital fabrication, grasshopper, simplify 3D

Conference Title : ICPDA 2023 : International Conference on Parametric Design and Analysis

Conference Location : Bali, Indonesia

Conference Dates : January 09-10, 2023