

OPTIMIZATION OF THERMAL COMFORT IN OFFICE BUILDINGS USING NON-TRADITIONAL OPTIMIZATION TECHNIQUES

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ABSTRACT

Due to the difficulty of controlling the indoor thermal environment, it is important to provide thermal comfortable conditions which meet occupants' expectation. In order to realize the long-term thermal comfort in indoor environment, the microclimate in Karunya university campus in Coimbatore, Tamilnadu, India is measured through year. PMV model is applied to calibrate the climate parameters and environment elements. The results obtained are optimized using ten different nontraditional optimization models and compared to find which method is suitable in terms of number trials and minimum time taken. ASHRAE standards are verified.

KEYWORDS: Indoor Thermal Comfort, Hot-Humid Regions, Nontraditional Optimization Techniques