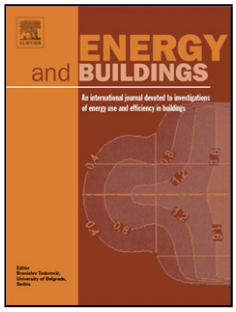

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Author: Harimi Djamila Chi Chu Ming Sivakumar Kumaresan

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A Generalized Thermal Perception Approach for Indoor Thermal Comfort Assessment in the Humid Tropics of Malaysia

Harimi Djamila[1], Chi Chu Ming[1], Sivakumar Kumaresan[1]

[1] Universiti Malaysia Sabah, School of Engineering and Information Technology

harimi1@yahoo.fr, Fax: +6088320348

Abstract

Thermal comfort is one of the many aspects that affect human well-being and productivity. There is an increasing interest in understanding occupants' requirements for maintaining the indoor comfort range while minimizing energy wastage. In this paper, a thermal perception map was developed for residential buildings in the humid tropics of Malaysia using logistic regression. Sharma and Ali's [1] concept was used for the elaboration of the thermal comfort map. This map helps in exploring the effect of climate changes on subjects' thermal perceptions at various indoor air temperatures. The thermal comfort map should be useful for researchers in order to accurately estimate the required energy for maintenance of comfortable temperature.

Keywords: Thermal Comfort, Energy Saving, Concept, Methodology, Humid Tropics.

1. Introduction

In the past few years several articles have been published regarding the global demand for energy. This body of literature has raised the issue of the increase in the emissions of carbon dioxide due to energy consumption. Consequently, the average global temperature in the global environment has elevated [2–5]. However, little is known about the impact of the