

Accepted Manuscript

Title: Investigation of the Relationships between Thermal Sensations of Local Body Areas and the Whole Body in an Indoor Built Environment

Authors: Joon-Ho Choi, Dongwoo Yeom



PII: S0378-7788(17)30440-1
DOI: <http://dx.doi.org/doi:10.1016/j.enbuild.2017.05.062>
Reference: ENB 7643

To appear in: *ENB*

Received date: 8-2-2017
Revised date: 28-4-2017
Accepted date: 24-5-2017

Please cite this article as: Joon-Ho Choi, Dongwoo Yeom, Investigation of the Relationships between Thermal Sensations of Local Body Areas and the Whole Body in an Indoor Built Environment, Energy and Buildings <http://dx.doi.org/10.1016/j.enbuild.2017.05.062>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Investigation of the Relationships between Thermal Sensations of Local Body Areas and the Whole Body in an Indoor Built Environment

Joon-Ho, Choi^{1*}, Dongwoo Yeom¹

¹ Building Science, School of Architecture, University of Southern California, Los Angeles, CA, U.S.A.

* Corresponding Author: Ph.D., Professor, School of Architecture, University of Southern California, CA, U.S. (joonhoch@usc.edu)

HIGHLIGHTS:

- The whole- and local-body thermal sensations demonstrated significant correlations overall.
- Sensations at the arm and forehead revealed the most significant correlation with the overall thermal sensation (OS).
- Males' local sensations demonstrated a stronger correlation with OS than Females' did.
- The higher BMI group's correlation with OS was more significant than that of the lower BMI.
- A combination of gender, BMI, forehead, arm, and back achieved 82.5% accuracy in estimating the OS.

ABSTRACT

This study investigated the relationship of thermal sensations of local body segments and the whole body for a better understanding of how to estimate the overall thermal perception, as a

Download English Version:

<https://daneshyari.com/en/article/4919111>

Download Persian Version:

<https://daneshyari.com/article/4919111>

[Daneshyari.com](https://daneshyari.com)