

Impact of Popular Passive Physiological Diversity Drivers on Thermo-Physiology

Authors : Ilango Thiagalingam, Erwann Yvin, Gabriel Crehan, Roch El Khoury

Abstract : An experimental investigation is carried out in order to evaluate the relevance of a customization approach of the passive thermal mannikin. The promise of this approach consists in the following assumption: physiological differences lead to distinct thermo-physiological responses that explain a part of the thermal appraisal differences between people. Categorizing people and developing an appropriate thermal mannikin for each group would help to reduce the actual dispersion on the subjective thermal comfort perception. The present investigation indicates that popular passive physiological diversity drivers such as sex, age and BMI are not the correct parameters to consider. Indeed, very little or no discriminated global thermo-physiological responses arise from the physiological classification of the population using these parameters.

Keywords : thermal comfort, thermo-physiology, customization, thermal mannikin

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