

**MODELLING FLOW AND HEAT TRANSFER AROUND A SEATED HUMAN  
BODY**

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## ABSTRACT

In order to obtain Modeling Flow and Heat Transfer Around a Seated Human Body, there are several factors and parameters that need to be studied as well as temperature around a room and wall temperature, relative humidity, air speed, radiation heat transfer coefficients for different body segment and some contaminants. Modeling Flow and Heat Transfer Around A Seated human Body is a research that needs to be carried out continuously due to the variable condition of air speed, temperature rises in the room that depending on weather and the different parameters gain, thus there would be various modeling flow and heat transfer around a seated human body. This particular research has simulate the use of k-s model for predicting flow and heat transfer throughout the channel acting as the room by using computational fluid dynamics as the medium. The main goal was to examine a manikin human body under various wind condition where manikin human body is placed under weak wind condition by velocity of 0.25 m/s. Next, the wind velocity is increased up to 4.5 m/s. The radiation heat transfer and convection flow around the human body are computed in detailed by computational fluid dynamics software. This research will cover the comparison between the numerical results and the experimental data. Moving towards of modeling flow and heat transfer around a seated human body, this particular research represents a detailed of the surface geometry which been created and analyzed by STAR-Design and STAR-CCM software thus will computed the radiation heat transfer coefficient and the natural convection flow around a manikin human body.

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