

WINDSOR 2014 CONFERENCE

COUNTING THE COST OF COMFORT

THE WORKSHOP PROGRAMME

WORKSHOP 4: Dynamic Thermal Environments: What are their underlying mechanisms? How can we create, control and evaluate them?

Invited Chair: Yingxin Zhu

11th April 2014: 16.30 – 18.30 – Sandby Room (2 Hours)

Although PMV has been widely used all over the world, it is developed based on the experiment in climate chamber with static and homogeneous thermal environment. In fact, the dynamic and inhomogeneous thermal environment is more universal. Many published investigations show that the human body has a wider acceptant temperature range in free-running buildings than that in air-conditioned buildings. Beside, people prefer more natural wind than mechanical wind in which occupants has better thermal comfort. Another finding is if the occupants have the ability to control the thermal environment, their thermal comfort will be improved and energy can be saving effectively. Some of these phenomena have been demonstrated in adaptive thermal comfort model, but what is the reason of these phenomena?

If dynamic thermal environment can help to improve indoor thermal environment and save energy, how should we create and control it, and how to evaluate the effect?