

# WINDSOR 2014 CONFERENCE

---

## COUNTING THE COST OF COMFORT

### THE WORKSHOP PROGRAMME

#### **WORKSHOP 3: Overheating in Buildings**

**Invited Chair: Fergus Nicol**

11<sup>th</sup> April 2014: 16.30 – 18.30 – Greening Room (2 Hours)

While it is clear that humans are highly adaptable in terms of comfort temperature, and that this should be reflected in the development of guidelines and legislation for acceptable temperature bands in a given location, it is paramount to consider the physiological limits of high temperature. The results of even a relatively small increase in core temperature can result in delirium, convulsions and coma, and too high an exceedence of a safe core temperature can be fatal. (Epstein et al. 2004) An adaptive model of thermal comfort may project comfort at surprisingly high temperatures, but it is crucial to include in any model the limits of the physiological adaptability of the human body. Clearly, the point at which the body can no longer regulate a safe temperature should be the absolute limit in any situation, regardless of projected thermal comfort level at that temperature. As temperatures around the world break records, and growing numbers of heat waves are associated with power outages (eg, recently during the record Australian Summer temperatures) the basic assumptions about what are 'normal temperatures' as defined in Guidelines, how hot can it actually get and still be considered comfortable and how can discomfort be alleviated at high temperatures should all be opening discussed, and will be in relation to the presented 3 papers.