

WORKSHOP 2 PROPOSAL FOR 2012 NCEUB WINDSOR CONFERENCE

Title: Designing Comfortable Buildings

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Workshop description:

This workshop is about how people approach the challenge of designing buildings for comfort. Three different papers will inform the following discussions and provide lead ideas that can be developed and discussed during the session. After a century of handing over responsibility for the provision of comfort to models, machines and scientifically derived and assumption heavy formulae the challenge of re-empowering building designers to really understand how to provide low energy comfort in more passive buildings is a challenging one.

This workshop will start with a paper by de Dear and Candido discussing the fundamental question of An Adaptive Thermal Comfort Policy for a Geographically Dispersed Property Portfolio; Deciding When and Where to Air-Condition in a Warm Climate Zone. A core issue in this choice is when does natural convective cooling cease to be sufficient and the second paper by Indraganti is on the significance of air movement for thermal comfort in warm climates in the Indian context. Theoretical limits are all very well but what about the reality of designing for comfort in the context of real buildings. Stevenson, Carmona-Andreu and Handcock present a paper on comfort in the context of the usability barriers in low carbon housing in the UK.

The main focus of the workshop will be to try and map out key factors that designers can consider when designing for comfortable buildings – and this theme will be pursued throughout the hour and a half with a range of means. This is a very complex subject and its outputs should blend nicely into the more detailed discussion in the Saturday workshop on controls including the man-environment interactions through controls at room level or workstation level over thermal environment (heating, cooling) and indoor air quality (ventilation). Think: operable windows, clothing protocols, thermostats, ceiling fans, personal ventilation systems, and so forth.

The difference with this workshop will be that it deals with the building and micro, meso and macro-climate level considerations rather than the workstation level. The issues thrown up in the papers will provide a rich source of information on which to build an innovative discussion on the topic – What role does thermal history play in achieving comfort? How important is the ability to move in designing buildings? How can spatial planning be used to optimized the comfort experience over time? What are the larger issues around constraint and control in the comfort equations ? How do designers build in the very different comfort aspirations of people in different locations, societies and climates ? Is it better to heat and cool the person or the building ? etc.

Workshop format & program

This workshop will combine thought capture exercises with paper presentations and wide ranging discussions in which all will be expected to contribute.