Prof. George Havenith

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I am presently working at Loughborough University in the UK, where I have a Chair in Environmental Physiology and Ergonomics and am director of the environmental ergonomics research centre (www.lboro.ac.uk/eerc). I am also acting Dean of the Loughborough Design School.

My research covers three main topic areas, one being Human Thermal Physiology/Environmental Ergonomics, the second being Thermophysiological and Biophysical Modelling, and the third being heat and mass (vapour) transfer through clothing.

My special contribution to these fields is the multidisciplinary integration of physiology, physics and ergonomics. My work spans experimental studies, to the development of theoretical frameworks to explain observations, and subsequently to the final application of the knowledge in the field.
I am an editor of the 'European Journal of Applied Physiology', and on the editorial board of 'Ergonomics', 'Int. Journal of Occupational Safety and Ergonomics', 'Biometeorology' and 'Journal of Sports Engineering and Technology'. I advise a number of renowned international companies on thermal physiology and clothing science.

For the HEATSHIELD project, based on my expertise mentioned above, I am very interested in the areas of Modelling and heat stress indices (WP1), for which I recently produced an extended review that can be used in the project:
George Havenith, Dusan Fiala (2016) Thermal Indices and Thermophysiological Modeling for Heat Stress. Compr Physiol 2015, 6: 255-302. doi: 10.1002/cphy.c140051

Further I am interested in the physiological response of individuals to heat (WP2) for which my most representative paper (combined with modelling) would be:
Havenith, G., "An individual model of human thermoregulation for the simulation of heat stress response", Journal of Applied Physiology, 90: 1943-1954, 2001.

Given my interest in heat and mass transfer measurement in combination with physiology, I also have an interest in the development of the humanoid robot. We have three thermal manikins in our laboratory and have done extensive work using these. Hence being involved in a new prototype is of great interest. A relevant representative paper would be:
Havenith, G., Richards, M., Wang, X., Brode, P., Candas, V., den Hartog, E, Holmér, I., Kuklane, K., Meinander, H. and Nocker, W., (2008) "Apparent latent heat of evaporation from clothing: attenuation and "heat pipe" effects", J Appl Physiol, Jan 2008; 104: 142 - 149.,

My intention for my contribution to the project is to produce good quality research through the interaction with a world leading team, thereby maximising quality and impact. I think my background matches the requirements of several work packages and I thus look forward to our interaction.

As outputs I would hope for research papers and evidence of impact of our work.