



Indoor Air 2016 Ghent, Belgium July 3rd to 8th 2016

Indoor Air is the official conference of the International Society for Indoor Air Quality and Climate (ISIAQ). Indoor Air is the key conference in my field which brings together researchers from a wide range of fields to discuss indoor air science. More than 1000 scientists from around the world contributed long and short (each poster was preceded by a two minute presentation) oral presentations in a conference programme that spanned five days and had eight parallel sessions

My research evaluates the impact energy retrofitting has on indoor air quality in a residential setting particularly in low income homes. In most developed countries the population is known to spend more than 80% of their time indoors (Kleipeis et al. 2001), and a substantial percentage of this time at home; as a result exposure at home is likely to significantly influence human health. There is a need to recognise that retrofitting homes to a higher energy efficient standard has an impact on indoor air pollutants. Several studies have found that by increasing the air tightness in a dwelling causes a change in pollutants concentrations. This research overlaps with a number of areas of interest to The Aerosol Society such as airborne particles, occupational hygiene, and respiratory disease.

My 15 minute oral presentation was entitled "Indoor Air Quality, thermal comfort, and occupant behaviour in retrofitted energy efficient homes". The work presented in the conference was based on my pilot study. The objective of the pilot study was to evaluate the impact of an energy efficient retrofit on indoor air pollutant levels and occupant comfort in domestic dwellings. 15, 3 bed semi-detached homes, of cavity wall and hollow block construction types were recruited. 24 hour concentrations of the indoor air pollutants (IAP) CO, PM_{2.5}, NO₂, CO₂, TVOCs, BTEX, formaldehyde, dust mites, and thermal parameters such as temperature and humidity, were measured in the main living area and a bedroom. Radon and BTEX measurements were collected over a 3 month and 3 week period respectively. Airtightness testing and room air exchange rate measurements were also performed. I gave my presentation in a session chaired by xxx and attended by approximately 40 delegates. The other presentations in the session all focussed on retrofitting and renovation, with one study, from the University of Reading, having an interesting computational emphasis. Following my presentation, I received questions from five delegates on various details of my experimental procedure and my observations regarding occupant behaviour. During the conference, I attended a number of interesting sessions, including "ventilation rates in homes". I made contact with several international researchers in my field, including Severine Kirchner and Henrik Knudsen. Each day of the conference started and ended with plenary lectures by key speakers, and I particularly enjoyed the lecture given by Stylianos Kephapoulos on the implementation of safe, healthy, energy efficient and sustainable buildings in the European Union.

I would like to express my gratitude to the UK Aerosol Society, who enabled me to present my research at the Indoor Air 2016 conference. I was able to exchange ideas and share resources with other researchers; this has given me the opportunity to improve my own skills and knowledge of indoor air quality. These exchanges occurred both during conference sessions, and also during social events such as the conference dinner; this was held in the Castle in Ghent, and was an



enjoyable experience. I was also grateful to have the opportunity to explore Ghent, which is an extremely picturesque university city, and a very pleasant place to spend a week!

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