

Indoor Air 2016, Ghent (BE), July 3-8, 2016

Session proposal

Title: Changing the game in the management of Indoor Air Quality –
Real time monitoring for improved health, comfort and energy efficiency

Conveners: Claude Iroulart¹, Andreas Schütze², Eberhard Seitz^{3*}

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- * Session Chair – Dr. Eberhard Seitz

Format: Invited Symposium

Session aim: The symposium aims at increasing the awareness of novel low-cost sensor solutions for Indoor Air Quality, especially for Volatile Organic Compounds (VOCs), to provide ubiquitous sensor systems as key components for demand controlled ventilation. The session will discuss key contaminants relevant for indoor air quality assessment, e.g. CO₂, VOCs and particulate matter, and solutions to their reduction to achieve healthy buildings. Special emphasis is placed on new developments for VOC sensors developed within two current European projects and their impact on indoor air quality monitoring and improvement to achieve healthy and green buildings with greatly reduced energy consumption.

Summary: The proposed session is composed of six short presentations from highly recognized scientists in Indoor Air Quality and leading industrial players in the field of sensor systems as well as integrated building technologies. The session will start with a brief introduction concerning indoor pollution and its impact on health and comfort. Then, two current EU funded projects – IAQSense and SENSIndoor – will present recent developments in low cost sensors systems for selective VOC monitoring in indoor environments, their performance and interfacing with building control systems as well as their potential for monitoring and control. The final presentation will provide an outlook on integrated solutions for building management but also sensor-based control for small integrated ventilation systems as well as future requirements.

The table below gives an overview over the presentations; all speakers have confirmed their participation in the planned session. After each presentation a discussion is planned to allow for questions and comments from the audience. The conveners will jointly prepare the position paper to be included in the proceedings.

Timing	Title	Speaker
10' 5' discussion	Indoor air quality: Sense or not?	Sévérine Kirchner Centre Scientifique et Technique du Bâtiment (CSTB), France
10' 5' discussion	IAQSense – Real-time Monitoring of Indoor Air? With the innovative Spectrometer on Chip	Claude Iroulart Efficiencie Marketing, France
10' 5' discussion	Integrated microsensor system with selective pre-concentration for ubiquitous IAQ monitoring	Andreas Schütze Saarland University, Germany
10' 5' discussion	Sensor systems integration and available interfacing	Thorsten Conrad 3S GmbH, Germany
10' 5' discussion	How to use and optimize the data coming from a new IAQ sensor	Rafael C. Socorro Hernández ACCIONA Infraestructuras S.A., Spain Franck Alessi CEA-INES, France
10' 5' discussion	Integrated ventilation solutions for future demands – an outlook	Mats Sándor, Systemair AB, Sweden