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Emerging smart ventilation strategies for energy efficient IAQ management

Introduction

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Smart ventilation definition

“Smart ventilation is a process to continually adjust the ventilation system in time, and optionally by location, to provide the desired IAQ benefits while minimizing energy consumption, utility bills and other non-IAQ costs (such as thermal discomfort or noise).(...)”

(Durier et al 2018, AIVC)



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IEA-EBC Annex 86 ST4

Ensuring performance of smart ventilation

- A4.1 Rating existing smart ventilation strategies
- A4.2 Quality control of implementation
- A4.3 Durability of smart ventilation systems and components
- A4.4 Occupant interaction



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What we want in this Annex 86

- Have a precise description of the SV strategies we are talking about
 - Work on good practice examples, in order to avoid generalization
 - Identify potential of energy saving and IAQ performances
- Collect knowledge from all involved partners about how ensuring performance of such smart ventilation strategies



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4 Presentations of the webinar

- 16:10 | Investigation of natural ventilation control with regard to indoor and outdoor environments: First results, **Evangelos BELIAS – EPFL, Switzerland**
- 16:30 | Implementation of a MPC for an all-air system in an educational building, **Bart Merema, KU Leuven – Belgium**
- 16:50 | Draft for a health related performance assessment framework for smart ventilation, **Klaas De Jonge – UGent, Belgium**
- 17:10 | Residential Applications of Smart Ventilation Controls, **Iain Walker – LBNL, USA**
- 17:30 | Questions and Answers, **Jakub Kolarik, Co-Leader of ST4, IEA EBC Annex 86 – DTU, Denmark**
- 17:45 | Closing & End of webinar

