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)
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

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
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