



Air Infiltration and Ventilation Centre

Smart ventilation in non-residential buildings How to assess? How to design?

Tuesday 12th December 2023

15:00-16:30 (Brussels, BE)

14:00-15:30 (London, UK)

16:00-17:30 (Athens, GR)

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Registration is required: A link to join the webinar will be included in the email confirmation

A smart ventilation system is able to continually adjust itself to provide the desired IAQ while minimizing energy use, utility bills, thermal discomfort and noise. A smart ventilation system is also responsive to e.g., occupancy, outdoor conditions, and can provide information about e.g., IAQ, energy use and the need for maintenance or repair.

For buildings such as schools, elderly care homes and office buildings, there is a need for a performance-based method that approaches the design of a smart ventilation system as a whole, assessing and optimizing the performance of the system during its whole life cycle.

This was the aim of the research project “[Towards Smart Ventilation in Mid-Sized Buildings](#)”, supported by the Flemish Agency for Innovation and Entrepreneurship (VLAIO). In this webinar, KU Leuven, Ghent University, University of Antwerp and Buildwise will present some results of this project. We will discuss an economic indicator to assess the performance of a smart ventilation system including energy use and costs induced by user satisfaction, IAQ, noise disturbance and sleep quality. A new metric to assess IAQ resilience of ventilation systems is also introduced. Moreover, a simulation method to optimize the design of the aerodynamic lay-out based on the economic indicator is presented. We finish the webinar with a discussion on measurements of and guidelines for filtration of supplied ventilation air.

This webinar is organised with the support of the Air Infiltration and Ventilation Centre (www.aivc.org) and facilitated by INIVE (www.inive.org).

Programme (Brussels time)

15:00	Welcome & Intro "Smart Ventilation in Non-Residential Buildings: How to Assess? How to Design" Hilde Breesch (KU Leuven, Belgium)	15:40	Simulation Based Design of Smart Ventilation Systems Zakarya Kabbara (University of Antwerp, Belgium)
15:10	An (Economic) Indicator for Assessment of Smart Ventilation Systems Klaas De Jonge (Ghent University, Belgium)	15:55	Improving the Supplied Ventilation Air Quality through Filtration Joris Van Herreweghe (Buildwise, Belgium)
15:25	Quantitative Assessment Framework of IAQ Resilience in Buildings Douaa Al-Assaad (KU Leuven, Belgium)	16:10	Questions and answers
		16:30	End of the webinar





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Cost and registration

Participation to the webinar is free but requires you to register for the event. The webinar will be limited to a maximum of 1000 persons. To register, please click on the “Register now” button above.

What is a webinar?

A webinar is a conference broadcasted on internet. To follow a webinar you must have a computer with a sound card and speakers or headphones. Once logged in the "webinar room", you will be able to see the slides of the presentation and to hear the panellists' comments. You will also be able to ask written questions to the speakers, and to answer on-line surveys.

Hardware, software

Our webinars are powered by WebEx. The only thing you need is a computer with a sound card and speakers. Before you can log in the "webinar room", WebEx will install the required application. If you are not a WebEx user, please visit: <https://help.webex.com/en-us/article/810y08/Join-a-webinar> to check the system requirements and be informed on how to join a webinar. Please also join the event at least 10 minutes in advance.

About AIVC

Created in 1979, the Air Infiltration and Ventilation Centre (www.aivc.org) is one of the projects/annexes running under the International Energy Agency's Energy in Buildings and Communities (IEA-EBC) Programme. With the support of its member countries as well as key experts and two associations (REHVA, IBPSA, ISIAQ), the AIVC offers industry and research organisations technical support aimed at better understanding the ventilation challenges and optimising energy efficient ventilation.

The AIVC activities are supported by the following countries: Australia, Belgium, China, Denmark, France, Italy, Ireland, Japan, Netherlands, New Zealand, Norway, Republic of Korea, Spain, Sweden, UK and USA.

About INIVE

INIVE (International Network for Information on Ventilation and Energy Performance) was created in 2001. The main reason for founding INIVE was to set up a worldwide acting network of excellence in knowledge gathering and dissemination. At present, INIVE has as member organisations Buildwise, CETIAT, Ghent University, IBP-Fraunhofer, KU Leuven.

INIVE is coordinating and/or facilitating various international projects, e.g. AIVC (www.aivc.org), TightVent Europe (www.tightvent.eu), venticool (<https://venticool.eu/>) and Dynastee (www.dynastee.info). INIVE has also coordinated the ASIEPI project dealing with the evaluation of the implementation and impact of the EU Energy Performance of Buildings Directive, the QUALICHECK project aiming towards improved compliance and quality of the works for better performing buildings, BUILD UP the European portal on Energy Efficiency and the EPBD feasibility study 19a.

