

# Newsletter



Air Infiltration and Ventilation Centre

## Foreword

Welcome to the March 2025 edition of the AIVC newsletter!

In this issue, we bring you the latest updates on AIVC's activities over the past six months, including highlights from recent events and newly released publications.

We'll take a look back at the AIVC 2024 Conference in Dublin, where over 180 participants from 26 countries gathered to exchange knowledge and innovations. Relive the event's highlights and key moments inside.

Looking ahead, mark your calendars for these major upcoming events:

- The AIVC International Workshop "Indoor Environmental Quality in Sustainable Buildings" on 1-2 April 2025 in Stuttgart, Germany
- The 45<sup>th</sup> AIVC/ASHRAE IEQ Conference "IEQ 2025: Rising to New Challenges – Connecting IEQ to a Sustainable Future" on 24-26 September, 2025 in Montreal

We hope you enjoy this edition and look forward to connecting with you at our future events. Stay engaged by visiting our [website](#), following us on [LinkedIn](#), and exploring our monthly publication, [Energy Efficiency and Indoor Climate in Buildings](#), to stay updated on our activities.

Arnold Janssens & Peter Wouters, Operating Agents, AIVC



# no 27

March 2025

## 24-26 September 2025 – 45<sup>th</sup> AIVC - ASHRAE IEQ conference in Montreal, Quebec, Canada

The joint 45<sup>th</sup> AIVC conference and ASHRAE 2025 IEQ conference "IEQ 2025: "Rising to New Challenges: Connecting IEQ to a Sustainable Future" will be held on September 24-26, 2025, in Montreal, Quebec together with the 13<sup>th</sup> TightVent and the 11<sup>th</sup> venticool conferences. The event will focus on the increasing understanding of how occupants respond to various indoor environmental factors while enhancing resilience in the face of a changing climate.

### Topics for Papers and Seminars

- Performance Metrics: For all aspects of IEQ
- Occupant Behavior: How behavior impacts IEQ and how IEQ impacts behavior - psychological dimensions of IEQ
- Smart Sensors, Data and Controls: Sensor properties, data management, cybersecurity, applications, commissioning, equivalence
- Resilience and IEQ: Responding to climate change and disasters
- Ventilation: Mechanical, passive, natural and hybrid systems
- Air Tightness: Trends, methods and impacts
- Thermal Comfort: Dynamic approaches, health impacts and trends acoustics/lighting, the visual/auditory aspect
- The Environment Around Us: Acoustics, lighting, glazing, interiors and impacts upon wellness
- Policy and Standards: Trends, impacts, implications
- HVAC and IEQ in a post-COVID world
- Ventilation and building decarbonization
- Lighting and Acoustics: How can the outside be brought inside or vice versa
- Lighting Performance and Metrics
- Noise: How the environmental impact can be mitigated
- IEQ in Indigenous Communities

For further information and updates please visit the [conference website](#).

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## Summaries from the 44<sup>th</sup> AIVC conference now available

On 9-10 October 2024, the AIVC – TightVent - venticool 2024 joint Conference "Retrofitting the Building Stock: Challenges and Opportunities for Indoor Environmental Quality", was organised by [INIVE](#) on behalf of the [AIVC](#), the Building and Ductwork Airtightness Platform ([TightVent Europe](#)) and the international platform for ventilative cooling ([venticool](#)). The [University of Galway](#), the [Maynooth University](#) and the Sustainable Energy Authority Of Ireland ([SEAI](#)) were also key organisers. This successful event brought together over 180 participants, including researchers, engineers, architects, policymakers, manufacturers, stakeholders, and international organizations from 26 countries.

The conference programme featured three parallel tracks with approximately 150 presentations across the key themes of Smart Ventilation, Indoor Air Quality (IAQ) and Health, Building & Ductwork Airtightness, and Ventilative and Resilient Cooling. A special session of "90-Second Industry Presentations", was organised to disseminate exclusive information from the event's sponsors to the conference participants, in addition to the conference exhibition.

Additionally, the conference provided a vital forum for discussions on current projects, including the [IEA EBC Annex 86](#), Energy Efficient Indoor Air Quality Management in Residential Buildings & [IEA EBC Annex 87](#), Energy and Indoor Environmental Quality Performance of Personalized Environmental Control Systems.

To capture the key discussions, trends, and conclusions from the event, three detailed summaries have been prepared, each focusing on a major theme of the conference. For further details, please find the full summaries at the links below:

- Summary of the [airtightness & ventilation systems' inspection presentations](#)
- Summary of the [resilient ventilative cooling presentations](#)
- Summary of the [Smart Ventilation, IAQ & Health presentations](#)

## 44<sup>th</sup> AIVC Conference, 2024: Best Paper, Best Poster & Student Competition Awards

Awards for the best paper, best poster, and student competition were presented during the closing session of the joint 44<sup>th</sup> AIVC – 12<sup>th</sup> TightVent – 10<sup>th</sup> venticool Conference, titled "Retrofitting the Building Stock: Challenges and Opportunities for Indoor Environmental Quality," held in Dublin, Ireland, on October 9-10, 2024.

### Best Paper Award

The best paper award jury, comprising Hilde Breesch (KU Leuven, BE), Benjamin Jones (UoN, UK), Valérie Leprince (Cerema, FR), and Iain Walker (LBNL, USA), shortlisted the following three papers for the award:

- [Assessing the level of adaptation to heat waves in Parisian housing](#), Letizia Roccamena, Jean-Marie Alessandrini, Pierrick Gervasi, Julien Guilhot & Georgios Kyriakodis (CSTB, FR), Simon Molesin (RIVP, FR), Maeva Sabre & Wenjuan Wei (CSTB, FR)
- [Effects of closed vertical void on natural ventilation in double-loaded apartment building](#), Tetsu Kubota, Hayato Shima, Hanief Sani & Nikhil Kumar (Hiroshima University, JP), Haruka Kitagawa (Shimizu Cooperation, JP), Takashi Asawa (Tokyo Institute of Technology, JP), Muhammad Nur Fajri Alfata (Ministry of Public Works and Housing, ID)
- [Breathing Better: Evaluating the Impact of Personalized Ventilation in Daycare Baby Beds](#), Hailin Zheng, Marcel Loomans, Shalika Walker, Zhijian Wang & Wim Zeiler (Eindhoven University of Technology, NL)

The best paper award was ultimately presented to Hailin Zheng (Eindhoven University of Technology, NL).

### Best Poster Award

The best poster award jury, consisting of Jaap Hogeling (REHVA) and Marie Coggins (University of Galway, IE), awarded the best poster prize to:

- [Determining the cause of mould in a refurbished 1930's apartment building](#), Gearóid Carvilla (TU Dublin, IE).

### Student Competition Award

The student competition award, recognizing

outstanding research based on a bachelor's or master's thesis, was evaluated by Arnold Janssens (Ghent University, BE) and James McGrath (Maynooth University, IE) and given to:

- [Proposal of a design method for radiant ceiling cooling system using CFD analysis](#), Rio Matsumoto, Jianan Liu & Yasuyuki Shiraishi (The University of Kitakyushu, JP), Fujio Tamura, Daiki Yamashina, Masahiro Yamamoto, Sae Senda (AXS Satow Inc., JP)
- [Exploring the use of TABS and Peak-Shift Control in Office Buildings](#), Honoka Kyojuka (The University of Kitakyushu, JP), Kiyoto Koga (TAKENAKA CORPORATION, JP), Yasuyuki Shiraishi (The University of Kitakyushu, JP), Arash Erfani & Dirk Saelens (KU Leuven, JP)

Note: Cited papers are available on [AIVC's AIRBASE](#)



Top: Best paper award, Hailin Zheng & Andrew Persily (right)

Bottom: Student competition awards, Rio Matsumoto, Honoka Kyojuka & Andrew Persily



## 1-2 April 2025 - AIVC 2025 Workshop, Stuttgart

The AIVC, in collaboration with [Fraunhofer IBP](#) in Germany, is pleased to invite you to the upcoming workshop "Indoor Environmental Quality in Sustainable Buildings", taking place on April 1-2, 2025, in Stuttgart, Germany.

The 1 ½ day workshop provides the opportunity to German researchers and engineers, as well as international experts, to present and discuss recent developments in relation to indoor environmental quality, ventilation, health and sustainability of the building stock.

This workshop is part of AIVC's annual international workshop series, organised by AIVC in collaboration with national research centers or energy authorities. These workshops also target regional issues in relation to ventilation and infiltration, as part of a process of knowledge generation.

Key themes to be covered include:

- Status of implementation of EPBD recast
- IAQ in relation to health
- IEQ in sustainable buildings
- Case studies in schools & care facilities
- Demand and personal control, user interaction

Participation in the workshop is free of charge, but registration is required. Participation is only available in person.

For further details on the programme and event logistics, please visit the event's [webpage](#).

## 16-17 May 2025 - "14<sup>th</sup> International BUILDAIR Symposium" in Hannover, Germany

The 14<sup>th</sup> International Buildair Symposium: "Airtight Buildings, Thermography and Ventilation Systems in Practice" will take place on May 16 and 17, 2025 in Hanover, Germany.

The event will offer a unique opportunity to find out about the latest developments and best practices, to highlight particular challenges in airtightness testing and to exchange experiences across national borders.

The conference programme will include lectures and short presentations followed by questions and discussion time, brief presentations of exhibitors / products (90 seconds) and panel discussions.

The conference is organised by the Energie- und Umweltzentrum am Deister (e.u.[z.], [www.e-u-z.de](http://www.e-u-z.de)), 2025 in close cooperation with the AIVC, INIVE and TightVent.

The conference programme leaflet is available [here](#).

For more information please click [here](#).

## Feedback from AIVC Webinars – September 2024 to March 2015

During the period September 2024 to March 2025, the AIVC organised five webinars:

### 5 December 2024: Personalized Environmental Control System (PECS) in Action: Insights from Case Studies

- 124 participants
- Organizer: AIVC & IEA-EBC Annex 87
- Recordings & Slides available [here](#)

### 9 December 2024: Building Airtightness Impact on Energy Performance (EP) Calculations

- 93 participants
- Organizer: AIVC & TightVent
- Recordings & Slides available [here](#)

### 13 December 2024: Building and ductwork airtightness trends and regulations in China, Japan and New Zealand

- 51 participants
- Organizer: AIVC & TightVent
- Recordings & Slides available [here](#)

### 21 February 2025: Energy Performance of Gas Phase Air Cleaning

- 78 participants
- Organizer: AIVC & IEA-EBC Annex 78
- Recordings & Slides available [here](#)

### 17 March 2025: Recent standards and guidelines on CO<sub>2</sub> application and interpretation

- 248 participants
- Organizer: AIVC
- Recordings & Slides available [here](#)

The full collection of past events' recordings and slides can be found [here](#). Check them out and subscribe to our [YouTube channel](#) to receive our latest video updates!

## AIVC's new publications

The AIVC is pleased to announce the release of 3 new AIVC publications!

AIVC's Ventilation Information Paper no 45.13: [Trends in building and ductwork airtightness in Germany](#) (November 2024).

This paper summarises current knowledge on trends in building and ductwork airtightness in Germany.

AIVC's Ventilation Information Paper no 48.2: [Trends in building ventilation requirements and inspection in France](#) (November 2024).

This paper summarises current knowledge on trends in building ventilation requirements and inspection in France.

AIVC's Ventilation Information Paper no 48.3: [Trends in building ventilation requirements and inspection in Ireland](#) (January 2025).

This paper summarises current knowledge on trends in building ventilation requirements and inspection in Ireland.

All documents are freely accessible on the [AIVC website](#).



## REHVA Journal's February 2025 Edition Features Papers from the AIVC 2024 Conference

The February 2025 REHVA Journal is out, featuring the theme "IEQ at 44<sup>th</sup> AIVC Conference, Model IEQ Regulation for EPBD 2024." This issue highlights key papers from the 44<sup>th</sup> AIVC Conference in Dublin, focusing on retrofitting buildings and improving indoor environmental quality. Featured articles include:

- Advances in performance evaluation of residential ventilation systems, A. Janssens (Op. Agent AIVC, Ghent University, BE)
- State-of-the art on the use of performance-based approaches for residential ventilation in 2024, G. Guyot, V. Leprince & B. Poirier (Cerema, FR), J. Kolarik (DTU, DK)
- How a harm budget can be used to regulate IAQ in Dwellings, B. Jones (University of Nottingham, UK), G. Morantes (University of Nottingham, UK), C. Molina (PUC, Chile), M. Sherman (University of Nottingham, UK)
- Balanced Ventilation is Energy Efficient and Healthy, P. Jacobs, W. Kornaat & W. Borsboom (TNO, NL)
- Adaptive comfort technology for temperature control in balanced ventilation systems, B. Cremers (Zehnder Group Zwolle, NL)
- IAQ in Children Daycare Centers with Baby Beds, H. Zheng & M. Loomans (Eindhoven University of Technology, NL), S. Walker (Kropman Installatietechniek, NL), T. Van Hooff (Eindhoven University of Technology, NL), W. Zeiler (Kropman Installatietechniek/Eindhoven University of Technology, NL)
- The Influence of Outdoor Conditions on IAQ in Norwegian Schools, A. Gani Alam & I. Ørbek Eide (NTNU, NO), C. Eskedal (N3 Norge AS, NO), K. Gustavsen & K. Hart (Norwegian Asthma and Allergy Association, NO), G. Cao (NTNU, NO)
- Ventilative cooling in buildings – standardisation perspective and corresponding workshop at AIVC 2024 conference, C. Plesner (VELUX A/S, DK), J. Roth (WindowMaster International A/S, DK)

You can read and freely download the full issue [here](#).

## AIVC • List of board members

Australia: Riccardo Paolini, University of New South Wales

Belgium: Hilde Breesch, KU Leuven • Lula Timmerman, FPS Public Health

Canada: Liang (Grace) Zhou, National Research Council Canada • Iain Macdonald, National Research Council Canada

Denmark: Bjarne Olesen, Technical University of Denmark • Alireza Afshari, Aalborg University Copenhagen

France: Laure Mouradian, CETIAT • Gaëlle Guyot, CEREMA

Italy: Michele Zinzi, Enea • Marco Simonetti, Politecnico di Torino

Ireland: James McGrath, Maynooth University • Marie Coggins, NUI Galway

Japan: Takao Sawachi, Building Research Institute • Yoshihiko Akamine, NILIM

Netherlands: Wouter Borsboom, TNO

New Zealand: Manfred Plagmann, BRANZ • Yu Wang, BRANZ

Norway: Kari Thunshelle, SINTEF Byggeforsk

Republic of Korea: Yun Gyu Lee, Korea Institute of Construction Technology • Dong Hwa Kang, University of Seoul

Spain: Pilar Linares Alemparte, The Eduardo Torroja Institute for Construction Science - CSIC • Sonia García Ortega, The Eduardo Torroja Institute for Construction Science - CSIC

Sweden: Jan-Olof Dalenbäck, Chalmers University of Technology

UK: Benjamin Jones, University of Nottingham • Maria Kolokotroni, Brunel University London

USA: Andrew Persily, NIST • Iain Walker, LBNL

### Operating agent

INIVE vzw, [www.inive.org](http://www.inive.org), [info@aivc.org](mailto:info@aivc.org)

Arnold Janssens and Peter Wouters, operating agents • Maria Kapsalaki, senior consultant

### AIVC board guests

Willem de Gids • Laszlo Fulop • Zoltan Magyar • Max Sherman • Hiroshi Yoshino • Nemalen Chetty

### Representatives of organisations

Meli Stylianou, IEA EBC, [www.iea-ebc.org](http://www.iea-ebc.org)

Pawel Wargocki, IEA EBC Annex 78, <https://annex78.iea-ebc.org/>

Peter Holzer, IEA EBC Annex 80, <http://annex80.iea-ebc.org/>

Jelle Laverge, IEA EBC Annex86, <https://annex86.iea-ebc.org/>

Carsten Rode, IEA EBC Annex 68, <https://www.iea-ebc-annex68.org/>

Simon Jones, AIVC Industry Advisory Committee chair

Jaap Hogeling, REHVA, [www.rehva.eu](http://www.rehva.eu)

Donald Weekes, IEQ-GA, <https://ieq-ga.net/>

Alireza Afshari, IBPSA, [www.ibpsa.org](http://www.ibpsa.org)

Jianshun "Jensen" Zhang, IJV, <https://www.tandfonline.com/loi/tjov20>

Wenjuan Wei, ISIAQ, <https://www.isiaq.org/>