## Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker</th>
</tr>
</thead>
</table>
| 13:00 – 13:05 | Introduction  
- Housekeeping  
- COVID-19 Response  
- ASHRAE HQ Resources  
- ASHRAE Learning Institute (ALI) | T. O Keeffe     |
| 13:05 – 13:45 | “REHVA COVID-19 guidance for HVAC systems operation and reduction of the spread of viral diseases in workplaces” | J. Kurnitski |
| 13:45 – 13:55 | Q&A | | |
| 13:55 – 14:00 | Closing Announcements  
- ASHRAE IAQ 2021 Conference  
- Technical Committees | T. O Keeffe |
Questions & Feedback

Questions

- Please use the ‘Questions’ tab to ask any questions related to today’s presentation.
- You may also use the ‘Chat’ function
- If you are having difficulty, you can send your questions during / after the seminar to: secretary@ashrae-ireland.org

Handouts

- Presentation material available in handouts tab
- Also on our website (Webinars Page)

Survey

- Would you like further information?
- How would you rate today’s presentation?
- Additional feedback / questions?
Our Response to COVID-19

- ASHRAE Ireland has formed a new **COVID-19 subcommittee** specifically focused on gathering and disseminating guidance for Ireland.
- Hosting this mini-series of **technical webinars** on the theme of tackling spread of airborne infectious diseases.
- Running a series of **short technical articles** from expert members of ASHRAE and invited speakers.
COVID-19 Technical Programme (DC)

This 8-part technical mini-series of technical webinars brings together a range of experts covering a breadth of topics in the context of COVID-19 and mitigation of spread of airborne infections in the built environment. Topics include: indoor air quality (IAQ), building monitoring, facility management, ventilation, filtration and air-cleaning. The webinars are free and open to all to attend.

Dr. Parag Rastogi (18th June)
Lead Building Physicist, Arbnco

Dr. John Gallagher (13th August)
Trinity College Dublin

Michael Curran (2nd July)
NUI Galway and CIBSE Ireland

Alan Sweeney (27th August)
European Clean Process Segment Manager, Camfil

Prof. Bill Bahnfleth (16th July)
PSU & Chair, Epidemic Task Force

Jarek Kurnitski (10th September)
Chair of REHVA Technical and Research Committee

Dr. Stephanie Taylor M.D. (30th July)
Harvard Medical School

Brendan Redington (TBC, 24th Sept)
HSE Estates Management
ASHRAE HQ Resources

- **Free Technical Resources (Regularly updated)**
  - [https://www.ashrae.org/covid19](https://www.ashrae.org/covid19)
  - Topics include: General guidance for HVACs, Building Re-opening; Filtration / Disinfection; Transportation.
  - Residential, Commercial, Healthcare, Schools and Universities.

- **ASHRAE Epidemic Task Force**
  - Over 100 expert members ([Roster](#))
  - Q&A: COVID-19@ashrae.org

- **Relevant Position Documents**
  - [ASHRAE Position Document on Infectious Aerosols](#)
  - [ASHRAE Position Document on Airborne Infectious Diseases](#)

- **ASHRAE Literature Access - [Link](#)**
  - ASHRAE Handbooks
  - Standards and Guidelines
  - ASHRAE technical journal articles and presentations

- **ASHRAE Learning Institute (ALI) - [Link](#)**
  - Free Instructor-lead training courses.
  - Building Re-opening webinars for Europe (FREE)
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW! An Introduction to ASHRAE Existing Building Commissioning Process</td>
<td>10 Sep 2020</td>
</tr>
<tr>
<td>NEW! Humidity Control: Avoiding Five Common Design Problems</td>
<td>22 Sep 2020</td>
</tr>
<tr>
<td>High-Performance Building Design: Applications and Future Trends</td>
<td>23 Sep 2020</td>
</tr>
<tr>
<td>NEW! Advanced High-Performance Building Design: Key Concepts for Lifelong Building Sustainability</td>
<td>24 Sep 2020</td>
</tr>
<tr>
<td>NEW! Evaluating Your HVAC System’s Readiness to Mitigate the Spread of SARS-CoV-2</td>
<td>30 Sep 2020</td>
</tr>
<tr>
<td><strong>Variable Refrigerant Flow Systems: Design and Applications</strong></td>
<td>06 Oct 2020</td>
</tr>
<tr>
<td><strong>NEW! Health Impacts of Indoor Air Extraction, Ventilation, and Filtration – Same or Different?</strong></td>
<td>08 Oct 2020</td>
</tr>
<tr>
<td><strong>Updated! Fundamentals of Ultraviolet Germicidal Irradiation (UVGI) for Air and Surface Disinfection</strong></td>
<td>12 Oct 2020</td>
</tr>
<tr>
<td><strong>NEW! The Commissioning Process and Stakeholder Management</strong></td>
<td>13 Oct 2020</td>
</tr>
<tr>
<td><strong>NEW! Smart Grid Systems, Applications and Integration with the Built Environment</strong></td>
<td>14 Oct 2020</td>
</tr>
<tr>
<td><strong>NEW! Hospital HVAC – Infection Mitigation, Comfort, Performance</strong></td>
<td>20 Oct 2020</td>
</tr>
<tr>
<td><strong>Humidity Control II: Real-World Problems and Solutions</strong></td>
<td>22 Oct 2020</td>
</tr>
<tr>
<td><strong>Guideline 36: Best in Class HVAC Control Sequences</strong></td>
<td>09 Nov 2020</td>
</tr>
<tr>
<td><strong>Advanced Designs for Net Zero Buildings</strong></td>
<td>17 Nov 2020</td>
</tr>
<tr>
<td><strong>Updated! Laboratory Exhaust Stacks: Safe and Energy Efficient Design</strong></td>
<td>03 Dec 2020</td>
</tr>
<tr>
<td><strong>Updated! Successfully Managing the Risk of Legionellosis Using Standard 188-2018</strong></td>
<td>08 Dec 2020</td>
</tr>
<tr>
<td><strong>Avoiding IAQ Problems</strong></td>
<td>15 Dec 2020</td>
</tr>
</tbody>
</table>
New evidence on SARS-CoV-2 airborne transmission has made ventilation measures the most important engineering controls in the infection control. While physical distancing is important to avoid a close contact, the risk of an aerosol concentration and cross-infection from 1.5m onward from an infected person can be reduced with adequate ventilation and effective air distribution solutions. Three levels of guidance are discussed in the presentation: (1) how to operate HVAC and other building services in existing buildings right now during an epidemic; (2) how to conduct a risk assessment and assess the safety of different buildings and rooms; and (3) what would be more far-reaching actions to further reduce the spread of viral diseases in future in buildings with improved ventilation systems.

**About the Speaker: Jarek Kurnitski** is a Professor at Tallinn University of Technology, Estonia, and at Aalto University, Finland. As Chair of REHVA Technology and Research Committee he has been leading REHVA COVID-19 Task Force preparing European HVAC guidance for an epidemic situation.

He is the leader of Estonian Center of Excellence in Research ZEBE, Zero Energy and Resource Efficient Smart Buildings and Districts. He is internationally known for the preparation of technical definitions for nearly zero energy buildings through many activities in REHVA Technology and Research Committee and contributions to European standards.

He has been deeply involved in the work to improve the energy efficiency and indoor climate of the built environment in Estonia and Finland with major contribution in the development of energy calculation frames for present energy performance regulations
“REHVA COVID-19 guidance for HVAC systems operation and reduction of the spread of viral diseases in workplaces”

Mr. Jarek Kurnitski
Professor at Tallinn University of Technology
Closing Announcements
ASHRAE Announces IAQ 2020 New Conference Dates and Call for Papers

ASHRAE has announced that the IAQ 2020 Conference in Athens, Greece, will be postponed until September 13-15, 2021. A new call for papers also has been announced for the conference. The deadline for abstract submissions is December 21.

Organized by ASHRAE and the Air Infiltration and Ventilation Centre (AIVC), the theme of the conference, “Indoor Environmental Quality Performance Approaches,” focuses on the metrics, systems, sensors and norms necessary to implement performance approaches.

“Indoor Air Quality (IAQ) has been the core of ASHRAE’S IAQ series of conferences for the past 30 years," said Max Sherman, co-chair of IAQ 2020. "This conference has expanded from only covering indoor air quality concerns, to exploring indoor environmental quality which includes indoor air pollution, thermal conditions, acoustics and illumination and their interactions. The COVID19 crises has required us to hold IAQ2020 one year later but allowed us to expand the scope further to include IAQ in a post-COVID world."

In addition to the original conference topics, the conference steering committee is seeking papers related to the scientific challenges that the world faces following the COVID-19 pandemic.

Authors have the option to submit either a conference paper or an extended abstract and to state their preference for either an oral or poster presentation. Submissions are due December 21, 2020. If accepted, complete manuscript submissions are due April 19, 2021. For more information, visit ashrae.org/IAQ2020.

TOPICS:

- **Health and Well-being:** Appropriate technical and operational definitions
- **Performance Metrics:** For all aspects of IEQ
- **Interactions:** Interactions between IEQ parameters
- **Occupant Behavior:** How behavior impacts IEQ and how IEQ impacts behavior - psychological dimensions of IEQ
- **Smart Sensors and Big Data:** Sensor properties, data management, cybersecurity, applications
- **Smart Controls:** Equipment properties, 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
- **Policy and Standards:** Trends, impacts, implications
- **Role of ventilation and building airtightness in epidemic preparedness**
- **Filtration and disinfection options to control COVID19.**
- **Face-covering impacts on indoor air quality**
- **HVAC and IEQ in a post-COVID world**
Technical Committees
Technical Committees (cont.)

Full List - [https://www.ashrae.org/technical-resources/technical-committees/complete-list-of-tcs-with-home-pages](https://www.ashrae.org/technical-resources/technical-committees/complete-list-of-tcs-with-home-pages)

SECTION 1.0 FUNDAMENTALS AND GENERAL
SECTION 2.0 ENVIRONMENTAL QUALITY
SECTION 3.0 MATERIALS AND PROCESSES
SECTION 4.0 LOAD CALCULATIONS AND ENERGY REQUIREMENTS
SECTION 5.0 VENTILATION AND AIR DISTRIBUTION
SECTION 6.0 HEATING EQUIPMENT, HEATING & COOLING SYSTEMS AND APPLICATIONS
SECTION 7.0 BUILDING PERFORMANCE
SECTION 8.0 AIR-CONDITIONING & REFRIGERATION SYSTEM
SECTION 9.0 BUILDING APPLICATIONS
SECTION 10.0 REFRIGERATION SYSTEMS
SECTION MTG MULTIDISCIPLINARY TASK GROUPS
Technical Committees (cont.)

Ventilation Requirements and Infiltration
ASHRAE Technical Committee 4.3

Scope of TC 4.3

TC 4.3 is concerned with ventilation requirements and the analysis of infiltration, airflow around buildings, exhaust, and the re-entry of exhaust, including their integration interactions with indoor air quality and energy calculations for buildings and HVAC system design and operation performance and energy consumption.

Handbook

The ASHRAE Handbook is published via a series of four volumes, one of which is revised each year ensuring that no volume is older than four years. The Handbook can be purchased at the ASHRAE Bookstore by clicking on this link. TC 4.3’s chapters in the Handbook are:

Fundamentals Volume: Ventilation & Infiltration Chapter
This chapter addresses commercial and institutional buildings, where ventilation concerns usually dominate (though infiltration should not be ignored), and single- and multifamily residences, where infiltration and exhaust have always been considered most important but intentional ventilation has received increased attention in recent years. Basic concepts and terminology are presented in the chapter before more advanced analytical and design techniques are given. Ventilation of industrial buildings is covered in Chapter 32 of the 2019 ASHRAE Handbook—HVAC Applications. However, many of the fundamental ideas and terminology covered in this chapter can also be applied to industrial buildings.

Fundamentals Volume: Airflow Around Buildings Chapter
This chapter provides basic information for evaluating wind-flow patterns, estimating wind pressures, and identifying problems caused by the effects of wind on intakes, exhausts, and equipment. In most cases, detailed solutions are addressed in other chapters of the HVAC Applications and HVAC Systems and Equipment volumes.

The ASHRAE Handbook – Fundamentals volume may be purchased from the on-line bookstore by clicking on the highlighted text.

Programs

Research

Standards

ASHRAE writes standards for the purpose of establishing consensus for: 1) methods of test for use in commerce and 2) performance criteria for use as facilitators with which to guide the industry. ASHRAE publishes the following three types of voluntary consensus standards: Method of Measurement or Test (MOT), Standard Design and Standard Practice. ASHRAE does not write rating standards unless a suitable rating standard will not otherwise be available. ASHRAE is accredited by the American National Standards Institute (ANSI) and follows ANSI’s requirements for due process and standards development. Standards may be purchased at the ASHRAE Bookstore.

ASHRAE Guideline 24: Ventilation and Indoor Air Quality In Low-Rise Residential Buildings
ASHRAE Guideline 28: Air Quality Within Commercial Aircraft
ANSI/ASHRAE Standard 62.1: Ventilation for Acceptable Indoor Air Quality

This TC is Cocognizant for the following standards:
ANSI/ASHRAE Standard 161: Air Quality Within Commercial Aircraft
ANSI/ASHRAE Standard 193: Method of Test for Determining the Airtightness of HVAC Equipment

Other Activities

FAQs
ASHRAE Ireland Board 2020/21

M. Geraghty, Entropic
President

K. Goodman, Jacobs
Vice-President

Vacant
Treasurer

D. Coakley, MERCE-UK
Secretary

<table>
<thead>
<tr>
<th>Committee</th>
<th>Function</th>
<th>Chair</th>
<th>Vice-Chair</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTTC*</td>
<td>Events, Talks, DLs</td>
<td>Tony O’Keeffe</td>
<td>Michael Dawkins</td>
</tr>
<tr>
<td>Electronic Communications*</td>
<td>PR, Website, Articles, Publications</td>
<td>Daniel Coakley</td>
<td>David Keogh</td>
</tr>
<tr>
<td>Membership Promotion*</td>
<td>Membership, Sponsors, Finance</td>
<td>Frank Caul</td>
<td></td>
</tr>
<tr>
<td>Student Activities*</td>
<td>Student Activities</td>
<td>Adam O’Donovan</td>
<td>Conor Deane</td>
</tr>
<tr>
<td>Young Engineers ASHRAE (YEA)*</td>
<td>Young Members</td>
<td>Conor Deane</td>
<td>Daniel Coakley</td>
</tr>
<tr>
<td>Grassroots Government Activities*</td>
<td>CIBSE, EI, IBPSA, IGBC, IRI, SEAI</td>
<td>Ken Goodman</td>
<td></td>
</tr>
<tr>
<td>Research Promotion*</td>
<td>Fundraising for RP campaign</td>
<td>Martin O’Brien</td>
<td></td>
</tr>
<tr>
<td>Nominating*</td>
<td>Succession Planning</td>
<td>Donal Finn</td>
<td></td>
</tr>
<tr>
<td>Clean Rooms</td>
<td></td>
<td>Seamus Kerr</td>
<td></td>
</tr>
<tr>
<td>Refrigeration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honors and Award</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Required ASHRAE Committees

http://ashrae-ireland.org/about/
Thanks to our sponsors & supporters

Supported By:
Contact:
Daniel Coakley (secretary@ashrae-ireland.org)
Web: http://ashrae-ireland.org/covid-19/