

## Main Meeting: HVAC and Airborne Infectious Disease

### ASHRAE Baltimore January 6th Meeting:

Chapter News & Announcements:

5:45 PM

Main Presentation:

6:00 P.M. — 7:15 P.M.

#### HVAC and Airborne Infectious Disease

Concern regarding the risk of hospital acquired infections and the effect of the built environment on epidemics of drug-resistant diseases is increasing. The well-educated designer and owner needs to understand the mechanisms by which infectious disease is transmitted indoors, the extent to which HVAC system characteristics affect probability of infection, available means for controlling risk with demonstrated effectiveness. These topics are presented and discussed using the ASHRAE Board of Directors-approved Position Document Airborne Infectious Diseases as a framework. Pertinent scientific knowledge about modes of disease transmission is reviewed, its practical implications for control are discussed, and the three HVAC-related control methods identified by the Position Document: ventilation, particulate filtration, and ultraviolet germicidal irradiation, are presented and compared. General recommendations for reducing risk are provided and knowledge gaps that need to be filled are identified.

#### **Speaker: Dr. William Bahnfleth**

Dr. William Bahnfleth is a professor of architectural engineering at the Pennsylvania State University (Penn State) in University Park, where he has been employed since 1994. Previously, he was a Senior Consultant for ZBA, Inc. in Cincinnati, OH and a Principal Investigator at the U.S. Army Construction Engineering Research Laboratory in Champaign, IL. He holds BS, MS, and PhD degrees in Mechanical Engineering from the University of Illinois, where he also earned a bachelor of music degree in instrumental performance. He is a registered professional engineer. At Penn State, Dr. Bahnfleth teaches undergraduate courses in HVAC fundamentals, HVAC system design, and controls and graduate courses in chilled water systems, hot water and steam systems, and indoor air quality. His research interests cover a wide variety of indoor environmental control topics including chilled water pumping systems, stratified thermal energy storage, protection of building occupants from indoor bioaerosol releases, ultraviolet germicidal irradiation systems, and others. He is the author or co-author of more than 170 technical papers and articles and 14 books and book chapters. He consults on the design of chilled water thermal energy storage systems and has been involved in more than 20 projects world-wide.



**The January Meeting will take place virtually via GoToMeeting.  
A link will be sent to registrants before the meeting.**

*In alignment with the "Green Trends" of ASHRAE, we have eliminated the paper copies of the Membership Roster. An electronic copy is available, upon request.*

## 2021-2022 Chapter Leadership Roster

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### President's Pen

Happy New Year, Baltimore Chapter! I hope everyone had happy and healthy holidays. Our 71st annual Christmas Party was a great success. The oysters were bountiful, the lucky wheels were spinning away, and I know I enjoyed the addition of polenta, wine, and craft beer. Thank you to everyone who supported the event.

For our January meeting, we are very excited the host Dr. William Banfleth, a leader in our industry, professor at Penn. State University, and chair of the ASHRAE Epidemic Task Force. Unfortunately, we've had to make the decision to change the meeting to a virtual format. Given the unprecedented spike in COVID cases in our area, record hospitalizations, and the recommendation of the chair of the ASHRAE Epidemic Task Force, the choice was clear. Let's continue to hope that our efforts to weather this wave bring us that much closer to an end to this crisis! This month's presentation should help us all sharpen our tools when it comes to building infectious disease protection into our HVAC designs.

Now for a spotlight on our Student Activities Committee: Rob Broczkowski, Simona Tsvetkova, and Nick Spicher have been doing an excellent job staying engaged with local schools. As part of the Student Activities outreach with local high schools, the committee presented to students about the benefits of ASHRAE and engineering as a whole. To help prepare them for the future, an open discussion was held to give students the opportunity to ask questions about their academic and professional careers. Recent presentations included a November 17 virtual meeting with Owings Mills High and a November 23 classroom trip to Patapsco High. These connections with students early in their academic careers are essential for inspiring our future industry professionals. I know there will be several volunteer opportunities coming up with Engineer's Week and the Student Design Challenge, so please don't hesitate to reach out!

As for upcoming chapter events - Jon Olmstead, our refrigeration chair, has lined up an exciting event for February, which we hoping to announce shortly. We plan to return to the Engineers Club in March, when we will present some long-overdue awards to our members, and solicit submissions for this year's nominations and project submissions. Hope to see you for all of those and more!

Best wishes for the new year,



**Sam Philipp**  
ASHRAE Baltimore Chapter President, 2021-2022



**Meeting Schedule**

Please mark your calendar with the following dates for the 2021 through 2022 Baltimore Chapter meetings. A complete schedule indicating seminar, technical session and main meeting topics will be published in the coming month's Thermogram and is also available on the chapter website, [www.ashrae-balto.org](http://www.ashrae-balto.org).

August 12, 13, & 14, 2021	Chapters Regional Conference	State College, PA
Thursday, September 2, 2021	12:00PM—Main Meeting: Chilled Water Piping Design 05:30PM—Summer Social at Tiki Lee's Dock Bar	Virtual—Go To Meeting Sparrows Point, MD
Monday, September 27, 2021	9th Annual Rockfish Tournament	Happy Harbor Marina
Thursday, October 7, 2021	Main Meeting: Impacts of Climate Change and Urbanization on Future Building Performance Tech Session: Bipolar Ionization	ESB
Thursday, November 4, 2021	Main Meeting: Building Electrification 101: Impacts on HVAC Systems	Union Craft Brewing
<i>Research Promotion Night</i> Friday, December 3, 2021	71st Annual Christmas Party	Timonium Fairgrounds, 4H Building
Thursday, January 6, 2022	Main Meeting: HVAC and Airborne Infectious Diseases	Virtual - Go To Meeting
Thursday, February 3, 2022	Refrigeration Tour	TBD
Thursday, March 3, 2022	Main Meeting: TBD Tech Session: TBD	ESB
Thursday, April 7, 2022 <i>Former Presidents' Night</i> <i>Research Promotion</i>	Main Meeting: TBD Tech Session: TBD	ESB
Thursday, May 5, 2022 <i>Student Night</i>	Main Meeting: TBD Tech Session: TBD	ESB
TBD	10th Annual RP Fishing Tournament	TBD
Friday, June 3, 2022	64th Annual Golf Outing	Turf Valley Country Club, Ellicott City, MD

January Meeting Schedule: 5:45 - 6:00 pm: Chapter Announcements

6:00 - 7:15 pm: Main Speaker

Cost: \$10 for Virtual Attendance



## 2022 ASHRAE Winter Conference and AHR Expo



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### Registration is open for the 2022 ASHRAE Winter Conference & AHR Expo in Las Vegas!

The 2022 ASHRAE Winter Conference technical program includes tracks on what ASHRAE is most known for – fundamentals and applications, systems and equipment, refrigerants and refrigeration – and tracks on industry trends in energy system integration to buildings, indoor environmental quality, and building resiliency.

The 2022 Winter Conference will take place virtually and in person at Caesars Palace in Las Vegas, January 29- February 2. The AHR Expo is at the Las Vegas Convention Center, January 31 – February 2.

When you register for the ASHRAE Conference, your ASHRAE badge will give you access to the AHR Expo.

For more information and registration, visit:  
<https://www.ashrae.org/conferences/2022-winter-conference-las-vegas>  
and  
<https://www.ahrexpo.com/>



The ASHRAE Baltimore Chapter is pleased to continue our local representative directory, BALMER, which is similar to the old MEMRA directory!

## Baltimore Area List of Mechanical Equipment Representatives

In a world that is becoming ever more virtual and remote, the ASHRAE Baltimore Chapter has put together a resource for our members to identify and connect with local representatives. All HVAC & plumbing related businesses are welcome to be listed in the new directory, which will be posted on the Chapter's website for use by local engineers, contractors, and owners.

### Additional Information:

1. In order to have your company represented in the BALMER directory, send an email to [ashtech@ashrae-balto.org](mailto:ashtech@ashrae-balto.org) with the subject "BALMER Directory." We will then gather the required information for the directory (Company Name, Company Website, Representative Contact Information, Manufacturer Product Type, etc).
2. The cost per firm to be listed in the BALMER directory will be \$250 / year. Payments can be made via check to "ASHRAE Baltimore Chapter" or via credit card (applicable fees will apply).

# 2021-2022 Scholarship

**Multiple Winners:**  
**\$750-\$1500**



**Applications Accepted  
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# **Evaluation Criteria:**

1. ASHRAE field of training.
2. Applicant is in an accredited course in a recognized college (or program pre-approved by ASHRAE Board).
3. Applicant is matriculating for a degree in an ASHRAE related engineering field.
4. Applicant is residing in, or moving to the Baltimore Chapter assigned area (permanent resident).
5. Applicant is working in the Heating, Ventilating, Air Conditioning, and Refrigeration(HVAC&R) field.
6. Applicant is the son or daughter of a Baltimore chapter member, living or deceased.
7. Applicant has high scholastic standing or average from previous year.
8. Financial need.
9. Veteran with an Honorable Discharge or member of United States Armed Services.
10. Applicant is a member of the BIPOC community.

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