

**NACC 2022, June 27-29, 2022, Salt Lake City, UT**

**36th INTERNATIONAL NUCLEAR  
AIR CLEANING CONFERENCE**

**June 27-29, 2022**

**SALT LAKE CITY SHERATON  
SALT LAKE CITY, UT**

**CONFERENCE WELCOME**

**DR. RONALD R. BELLAMY**

**CONFERENCE CHAIR**

Good morning and welcome to the 36th International Nuclear Air Cleaning Conference, sponsored by the International Society of Air Treatment Technologies. I am Ronald Bellamy, and as the President of ISNATT, I am pleased and honored to chair this conference, and I formally declare this conference to be in session. It is especially gratifying to see you all in person after the postponement of this Conference in 2020. An equally and a particularly warm welcome to those of you that are joining us virtually from around the world. The Air Cleaning Conferences were started over 74 years ago to review research activities at the national laboratories by the Atomic Energy Commission. These meetings/conferences have been held since 1948.

## **NACC 2022, June 27-29, 2022, Salt Lake City, UT**

Every conference has been an extremely useful and beneficial forum for air cleaning experts from around the world to establish contacts, to network, and to exchange ideas, information, and technology. I make this statement from personal knowledge and experience, since I attended my first Conference in 1974 in San Francisco. I am confident that this meeting will continue that outstanding tradition. We have seen a great response to this conference: the quality and quantity of technical presentations, exhibits, registrations both in person and virtual. We thank those of you from outside the United States for both traveling here and those participating via zoom. Please reach out to our attendees that are here in person from the UK, the Netherlands, and Korea during the conference.

ISNATT has a group of volunteer officers, which at present also include Dr. Charles Waggoner as Vice-President, Steve Cox as Treasurer, and Art Soma as Secretary. We have a Board of Directors that includes Eric Banks, Nicholas Zaremba, and Bob Jubin. I also need to acknowledge the extraordinary efforts of one individual who has stepped up and taken the lead on the technical aspects of the conference, and she is responsible for the technical success that I am sure this conference will experience. I refer to Jaime Rickert, now the announced Director of the Mississippi State University Institute for Clean Energy Technology. I ask that these individuals stand and that they be recognized with a round of applause.

At our ISNATT business meeting today, we will entertain a slate of officers for the next two years. This will be an important meeting as we ensure that our course forward will satisfy your interests and needs in terms of technical topics, location and structure of future meetings, and how else we can use the ISNATT resources to move forward on a path to improve the safe operation of nuclear facilities of all kinds. We welcome input on future conferences, in terms of in-person and virtual participation.

Please be sure that your electronic devices are silenced. You received a copy of a flash drive with the papers and presentations, for your reference both here at the conference, and in the future. This flash drive also contains previous conferences and attendees. Presentations not included on the flash drive will be provided on the ISNATT website.

## **NACC 2022, June 27-29, 2022, Salt Lake City, UT**

As I indicated, we have a number of attendees participating virtually. Thus, we will be on zoom for the entire conference. This makes it important to keep side bar discussions at a minimum. Virtual attendees can provide input and ask questions via the chat function, which we will continually monitor. Please be sure to identify yourself when at the microphone. We will also have a number of presentations virtually. Another initiative we are trying, since we will be on zoom, is to record the entire conference and post it on the ISNATT website. This will allow accurate transcription of all questions and answers, and discussions.

You are all well aware of the importance of self-reflection, critical thinking and continuous improvement. This philosophy is a cornerstone of nuclear safety worldwide. We want your feedback on these conferences, so please be sure to fill out a questionnaire feedback sheet to give us your thoughts, comments and suggestions for future conferences, particularly in terms of locations and technical topics to emphasize. Each and every comment will be reviewed and factored into future planning. The feedback form will also be on the website if you would like to use that avenue to provide feedback. And of course, please talk to any of the officers or members of the ISNATT Board at any time.

This conference is so much more than the formal presentations. Please take advantage of the many opportunities outside the formal sessions to interface with your colleagues. The breaks and meals for these conferences provide an excellent opportunity for this interface. Please also visit the exhibits located in the Lodge Lobby.

All of you have interfaced with our administrative staff. They are all volunteers and keep our administrative costs low. Please be sure to express your appreciation for their continued support for these conferences.

We are continuing the tradition for student attendance and participation. You may recall that we initiated scholarships to fund these students for their attendance and other expenses. Each scholarship is in honor of one of the founding fathers of nuclear air cleaning, who has made a significant contribution to past conferences. The first student scholarship this year is awarded to Gentry Berry, Mississippi State University. His scholarship is in honor of James, Jimmy, Edwards. Jimmy passed away on March 10, 2021. He worked for AAF, then founded Charcoal Service Corporation in 1977. He was very active in the ASME Committee on Nuclear Air and Gas Treatment, responsible for the first version of the code section on activated carbon. He also supported these conferences, and those of you with us four years ago remember his personal comments and

## **NACC 2022, June 27-29, 2022, Salt Lake City, UT**

reflections on his 60 years in the nuclear air cleaning area. Jimmy was known for his guitar and banjo playing, his singing of folk songs and sea chanties, all of which he did with great gusto but also did badly. He was barefoot a lot of the time, and some of us had the privilege to enjoy the blueberries he grew on his farm.

Our second scholarship this year is presented to Titus Rogers, also from Mississippi State University. His scholarship is in honor of Curt Graves. Curt passed away November 7, 2021. Careerwise, Curt worked for almost 50 years for NUCON, primarily as International Sales Director. He traveled extensively and collected mementos from his trips. He was an avid photographer, and was the unofficial photographer for ISNATT. You will see examples of his pictures, and Curt, on the ISNATT website. He ably served as treasurer of ISNATT for many years, and was also an instructor at the Harvard University Inplace Filter Testing Workshop. It is interesting that he took over the responsibility for the activated carbon section of the ASME AG-1 Code from Jimmy Edwards, and guided us through revisions and updates. Curt could tell stories, and never hesitated to do so, particularly over a glass or two of his favorite libation. We were privileged to honor Curt last night at our opening reception, thanks to Dr. Lou Kovach and Eric Banks of NUCON, and I know that there were many glasses appropriately raised in his honor.

Both student recipients of these scholarships have posters that are being exhibited at this conference, and they will be on display this evening at our reception sponsored by the Mississippi State University Institute for Clean Energy Technology. Please attend and enjoy the hospitality, these two posters as well as all of the posters, and provide your input, comments and particularly your experiences. I know that the students here will be appreciative of what you, the recognized international experts in nuclear air cleaning, can provide them in terms of guidance in their work, as well as how they can shape their careers.

There are two other key colleagues in the nuclear air cleaning area that are no longer with us. Maynor, Dewey, Dykes, passed away on January 3, 2021. He was a regular attendee and was known for his dry sense of humor. He was also very active in the ASME Committee on Nuclear Air and Gas Treatment. What may not be well known is his involvement in the development of the International Space Station and its ventilation systems. I, and many others, regularly take the time to view the Space Station as it travels overhead, and the next time I see it I will think of Dewey.

## **NACC 2022, June 27-29, 2022, Salt Lake City, UT**

John Cherry passed away on May 14, 2022. John was the manager of the Camfil Farr facility in Washington, NC and later was the co-owner of Charcoal Service Corporation with Jimmy Edwards.

We have a very ambitious agenda, filled with exceptionally interesting and timely papers and discussions. We are privileged to have two keynote speakers this year, one this morning and the other tomorrow morning, both from the US Department of Energy. This morning we will hear from Garrett Smith, who directs the DOE's Division of Environmental Health, Safety and Security. His group is directly responsible for the DOE's nuclear air cleaning regulations, codes and standards. The keynote speech tomorrow morning will be given by Nicole Nelson-Jean, who directs the DOE's Environmental Management efforts. Her responsibilities include the oversight of the cleanup of contaminated sites nationwide, and research and development activities at the DOE facilities. It is an honor to have these two senior level DOE officials supporting this conference, as well as the other DOE staff and contractors in attendance and participating in this conference.

Additional papers this morning will focus on regulatory matters, codes and standards developments, and recent DOE air cleaning guidance.

Lunch is provided for all attendees next door in the Powder Mountain/Sundance rooms. You are welcome to sit outside and enjoy this beautiful Salt Lake City weather if you so desire. This afternoon's session will focus on HEPA filters, HEPA media, and HEPA filter performance. You will hear a discussion of the recent data generated by the Filter Test Facility, an analysis of this data, aging effects of HEPA filters, leading into some timely topics for discussion. I specifically refer to the future of the Filter Test Facility and the need for this additional testing of filters, and the service/shelf life of HEPA filters. We look forward to your opinions and input, and a lively discussion, on these topics.

Our formal agenda today ends with an ISNATT business meeting, followed by a poster session and reception sponsored by Mississippi State University in the Zion room. Please show your support for this function.

Tomorrow's breakfast will be provided for all attendees next door in the Powder Mountain/Sundance rooms, and at 8:30 we will kick off the second day of the conference with the keynote by Ms. Nicole Nelson-Jean. The morning's technical papers will focus on the development of innovative HEPA filters, and papers from our foreign participants from the UK, Australia, and the Netherlands.

## **NACC 2022, June 27-29, 2022, Salt Lake City, UT**

Lunch will be provided next door in the Powder Mountain/Sundance rooms, and all attendees and their significant others are invited to attend. Our luncheon speaker will be Dr. Keith Erekson, of the History Department of the Church of Jesus Christ Latter-Day Saints. It is appropriate as we are here in Salt Lake City to hear about the history of Mormonism, why the Church is here in Salt Lake City, and their available facilities. Temple Square dominates the City and you can't miss their beautiful structures. I encourage all of you to visit Temple Square during your time in Salt Lake City.

Additional papers tomorrow will cover mathematical analyses of filter media, and control room habitability testing philosophy both here in the US and in Korea.

Please plan on a full day Tuesday, concluding with time for any followup discussions, presentations of emergent issues, and any rebuttals. We will review the accomplishments of this conference, receive any last-minute thoughts you may have, and discuss plans for future conferences.

There are two collateral upcoming functions that fit nicely with the goals of this conference, and I want to mention them. First, the Harvard University TH Chan School of Public Health will offer its In-Place Filter Testing Workshop August 8-12, 2018, in Boston, MA. Last year this course was held on line, this year it returns to its in-person format. Many of the lecturers are here and look forward to your attendance at this course. More information is available at <https://ecpe.sph.harvard.edu>. Second, the Nuclear Heating, Ventilating, and Air Conditioning Utilities Group, NHUG, will hold a meeting August 17-19, in Washington, DC. You can get more information and register at their website, [NHUG.org](http://NHUG.org).

Questions and answers, and discussions, are a key part of the information exchange we hope, and expect, to achieve. Time will be allowed after each presentation for questions, and we can arrange for followup discussions if necessary. You are the key to a successful conference and we look forward to your active participation. Please remember that we are on camera real time as we include our offsite participants in this conference.

Before I introduce our keynote speaker, I will give you the opportunity for comments or issues from the floor that we can address at this time. And I say with great sincerity, thank you for your attendance.