



Programs Update

**ASHRAE Winter Meeting
Orlando**

February 1-5, 2020

Nick Gangemi, Program Chair

ASHRAE Winter Conference & AHR Expo

Orlando, FL | February 1 – 5, 2020

The 2020 ASHRAE **Winter** Conference will be held **in Orlando**, FL! The Technical Program along with Committee meetings, Registration, the Bookstore and Speakers Lounge will be at the Hilton Orlando and Orange County Convention Center.

The AHR Expo will take place at the Orange County Convention Center, Monday, Feb.3 – Wednesday, Feb. 5.

"The 2020 ASHRAE Winter Conference will feature a strong technical program including presentations and discussions on **best design practices and standards, incorporation of innovative technologies, and cutting edge approaches** applicable to a wide range of buildings-related engineers, architects, and professionals."

Conference Chair, Melanie Derby

The **2020 ASHRAE Winter Conference** technical program is comprised of **eight tracks**, selected to represent areas of focus common among ASHRAE membership.

1. HVAC&R Fundamentals and Applications
2. Systems and Equipment
3. Refrigeration and Refrigerants
4. Cutting Edge Approaches
5. High Efficiency Design and Operation
6. Big Data and Smart Controls
7. Ventilation, IAQ and Air Distribution Systems
8. Standards, Guidelines and Codes

Conference Meetings

(sponsored or co-sponsored by TC9.9)

- **February 2, 2020 ; 1:30 - 3:00**
- Conference Paper Session 8: Utilizing Waste Heat and Thermal Management
- Absorption Cooling for Data Centers Powered by Solid Oxide Fuel Cell Waste Heat (OR-20-Co24), Alejandro Lavernia, Maryam Asghari, Jacob Brouwer
- Study on a Cooling System with Power Usage Effectiveness of 1.02x for Server Rooms (OR-20-Co25), Naoki Aizawa

February 4, 2020 11:00AM – 12:30 PM

Seminar 55: The Future of Data Center Infrastructure Management Tools

- The State of Modern Data Center Infrastructure Management Tools, Christian Pastrana
- ASHRAE DCIM Compliance for IT Equipment, Dustin Demetriou
- Getting DCIM to Talk through Metrics: Bursting the Data Bubble, Mark Seymour

February 5, 2020 8:00AM – 9:30 AM

Seminar 63: Ventilation Effectiveness Metrics, Part 2: Equipment

- Ventilation Effectiveness Is Inappropriate for Data Centers, True or False?, Mark Seymour
- The Capture Index Cooling-Performance Metric for Data Centers, James VanGilder
- Air Distribution and Cooling in a Battery Storage Facility, Mike Koupriyanov

February 5, 2020 11:00AM – 12:30 PM

Seminar 70: Leveraging Computational Models to Make Smart Controls

- Data Center Controls Are Simple: Why Use Modeling?, Mark Seymour
- Applying Equation-Based Modeling for Energy Efficient Data Center Cooling Operation, Wangda Zuo
- Using a Physics-Based Model to Control Cooling Airflow in Data Centers, James VanGilder

- **Technical Paper Sessions-**
 - These sessions present papers on current applications or procedures, as well as papers resulting from research on fundamental concepts and basic theory.
- **Conference Paper Sessions-**
 - Papers on current applications or procedures, as well as papers reporting on research in process.
 - These papers differ from technical papers in that they are shorter in length and undergo a much less stringent peer review.

- **Panels-**
 - Panel discussions can feature a **broad range of subjects** and explore **different perspectives** on issues in the industry.
 - A panel may feature **discussions about integrated project delivery** among designers, builders and facility management professionals.
- **Forums-**
 - Forums are “off-the-record” discussions held to **promote a free exchange of ideas**.
 - Limited reporting to allow **individuals to speak confidentially** without concern of criticism.
 - There are **no papers** attached to these forums.

- **Debates-**

- Debates highlight **hot-button issues**
- Experts, either on **teams or as individuals**, present **different sides** of an issue in debate format.
- Each participant **presents evidence for or against** a specific statement or question

- **Seminars-**

- Seminars feature **presentations** on subjects of current interest.
- **Papers are not available** from the Society; however, seminar PowerPoint presentations with audio descriptions of the **presentations are posted online.**

- **Workshops-**
 - Workshops enable technical committees and other **ASHRAE committees** to provide a **series of short presentations** on a topic requiring specific expertise.
 - These short presentations are provided with an increased **emphasis on audience participation and training** in a specific set of skills.

Technical Papers:

- Technical Papers are presented by authors at ASHRAE **Winter and Annual Conferences**.
- Technical Papers submitted for review must be both technically accurate and clearly written.
- Technical Papers undergo a **rigorous double-blind review** and must be **approved by three reviewers** knowledgeable in the subject matter.
- Technical Papers can be **up to 30 double-spaced manuscript** pages in length, including tables and charts, and a maximum of 12 figures (not counted in the page count).
- Accepted Technical Papers are **available as hard-copy preprints** in the bookstore during the conference.
- The Technical Papers must be presented at the conference in order to be **published in *ASHRAE Transactions***, where they will be included with questions and answers (if any).

Conference Papers:

- Conference Papers are **shorter than Technical Papers**, undergo a **less stringent review** and can be **prepared closer to the conferences**.
- Unlike Technical Papers, **abstracts** of Conference Papers are **submitted first** for review.
- Upon acceptance, papers are due three months after abstract acceptance, **undergo a single-blind review** (the author(s) names are included in the paper; however, reviewer's remain anonymous), and must be **approved by two reviewers**.
- Upon approval, papers are scheduled for oral presentation.
- Conference Papers can be **no more than 8 single-spaced pages** in length total (includes text, tables, figures, etc.).

Submitting a Seminar Proposal

There are six steps to submitting a seminar proposal:

1. **Program Track:** Select the track that your program best fits into
2. **Session Description:** Enter the title of the session. Also please provide a 100 word abstract. Please complete the rest of information, including TC sponsors (if any), estimate of the size of audience, etc.
3. **People:** Provide your name and contact information as the session organizer. Enter presenters by choosing the "Presenter" checkbox. You will need to enter the presentation title as well. Once a presenter has been entered, you will see the presentation title and presenter's name listed on the "People" step. Click on the icon in the abstract text column to submit the text. Click on the authors name to add co-authors and speaker bios.
4. **Objectives:** Please include six Learning Objectives for the entire session. The Learning Objectives should complete the statement, "After attending this session, the attendees will be able to..." All six Learning Objectives need to be addressed by the speakers. The Learning Objectives should use measurable verbs such as "Explain," "Describe," "Distinguish," "Design," "Apply," etc., such as the example below:
 1. Define Smart Grid functions, objectives and architecture
 2. Describe how the Smart Grid affects building operations
 3. Provide an overview of Smart Grid projects in North America
 4. Describe the federal policies and regulations promoting the Smart Grid
 5. Explain how building operators can obtain access to their energy use and usage profile information
 6. Describe how to use electricity use/profile information to reduce energy costs through features such as alerts, billing histories, graphs, usage histories for budgeting
5. **Method of Assessment:** Please include 10 questions and answers for the entire session based on the Learning Objectives and what will be covered within the speakers' presentations.
6. **Confirmation:** When you are happy with your submission, click the "Conclude Submission" button. Note that you will still be able to make changes to your abstract up until the submission deadline.

If you have already entered the titles of the presentations but not the text of the abstracts, you can do so by clicking the icon in the abstract text column on the "People" step.

ASHRAE Annual Meeting

Austin 6-27-20 to 7-1-20

The 2020 ASHRAE Annual Conference technical program is comprised of eight tracks as well as a mini-track, selected to represent areas of focus common among ASHRAE membership. The track focus areas include fundamentals and applications, HVAC&R systems and equipment, research summit, professional development and other specific topics including grid-interactive efficient built environment, multifamily and residential buildings, resilient buildings and communities, zero energy buildings, communities: opportunities and challenges and a building myths mini-track.

Fundamentals and Applications: Fundamentals are the foundation for understanding applications in engineering. Key components of ASHRAE fundamentals include thermodynamics, psychometrics, fluid and mass flow. This track provides opportunities for papers and presentations of varying levels across a large topic base. Concepts, design elements and shared experiences for theoretical and applied concepts of HVAC&R design are included. **Rupesh Iyengar**
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HVAC&R Systems and Equipment: HVAC&R Systems and Equipment are constantly evolving to address the changing requirements of the built environment. Papers and programs in this track will focus on the development of new systems and equipment, improvements to existing systems and equipment and the proper application and operation of systems and equipment.

Ashu Gupta
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Research Summit: Active research, and the exchange of those research findings, are critical to the development of our HVAC&R industry and built environment. The 8th annual research summit invites researchers to share those results, including ASHRAE-sponsored research and research of interest to the ASHRAE community. Researchers are invited to present papers, extended abstracts, seminars, forums or participate in panel discussions. The Research Summit includes a partnership with ASHRAE's archival journal, Science and Technology for the Built Environment.

Kristen Cetin
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Professional Development: As members of a professional organization, we not only participate for the great value of technical exchange, but also the interpersonal exchange. We recognize that the single greatest strength of our organization is its membership. This track is designed to allow those professionals an opportunity to develop in the areas of presentation skills, leadership, team-building, understanding various business operations, interpersonal skills, etc. In short, the Professional Development Track will cover all aspects of business outside of engineering/technical applications and lends itself to interactive session types such as workshops and forums.

Devin Abellon
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Grid-Interactive Efficient Built Environment: This new track focuses on the effects of industry trends (grid-enabled buildings, demand response, decarbonization, etc.) on system, building and community design practices. Topics include smart building, grid-enabled equipment and appliance, and HVAC design and operation for load flexibility. Topic can also include energy storage (thermal, battery, building mass, etc.), energy recovery (from condenser water or air), time-of-day practices, utility programs, etc.

Vikrant C Aute
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Multifamily and Residential Buildings: Multifamily is one of the fast growth building sectors but has been underserved. Multifamily buildings present challenges and opportunities on energy codes requirements, energy efficiency opportunities, ventilation and air tightness balance, and equality to address low-income multifamily buildings. This track covers programs and papers on best practices, utility and above-code incentive programs, field studies, and codes and standards requirements. This track also welcomes programs and papers for single family housing and other residential buildings.

Sonya Pouncy
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Resilient Buildings and Communities: The cycle of building development, design and construction is moving more rapidly than ever. Key stakeholders in the design and construction process face new challenges of responding to a range of environmental, market and consumer-driven pressures. Increasingly, it is being recognized that “smart” buildings and integrated systems are central to successfully addressing challenges posed by climate change, natural disasters, accidents, disease, and terrorism. Papers and program in this track focus on innovation and exploration related to these challenges and best practices that enable adaptability, resilience and recovery of buildings and communities.

Christine Reinders-Caron
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Zero Energy Buildings and Communities: Opportunities and Challenges. To address the climate change challenges and carbon reduction needs, zero energy buildings and communities have proven concept in many cases. However these case studies remain a very minor portion of the building stock. This track provides an opportunity to address the challenges and demonstrate opportunities in a wide range of perspectives. Topics in this track includes integrated design approach, tools and resources to make it easier on zero energy design and operation, innovative and state-of-art technologies and strategies; balance between energy efficiency measures and on-site renewable generation, aggregated scale to achieve zero energy communities and campuses. This track will also cover the topics on policies and regulations, codes and standards and utility programs for adoption and scale up of zero energy buildings and communities.

Raul Simonetti
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9
Mini-
Track

Building Myths: It is often difficult to present or publish “negative” results where there was no successful outcome of an experiment or study. This often leads to people conducting similar experiments to discover what others knew but never published. This min-track is designated to share the lessons learned from these precious experiences. This mini-track will also identify and test unquestioned assumptions related to the built environment and its efficient operation.

Kimberly Pierson
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Important Dates:

Monday, August 12, 2019 Conference Paper Abstracts, Technical Papers and Paper Session Requests Due

Friday, August 30, 2019 Conference Paper Abstract Accept/Reject Notifications

Monday, December 2, 2019 Conference Papers Due - Submitted for Review (Includes Bio, Learning Objectives and Methods of Assessment)

Friday, December 20, 2019 Conference Paper Accept/Revise/Reject Notifications

Monday, January 13, 2020 Website Opens for Seminar, Workshop, Panel, Debate, Forum and Extended Abstract Proposals

Monday, January 13, 2020 Revised Conference Papers/Final Technical Papers Due

Monday, February 10, 2020 Program (Seminar, Forum, Workshop, Debate and Panel) and Extended Abstract Paper Due

Tuesday, February 18, 2020 Conference and Technical Paper Final Accept/Reject Notifications

Monday, March 2, 2020 Extended Abstracts Accept/Reject Notifications

Monday, March 16, 2020 Debate, Panel, Seminar, Forum, Workshop Accept/Reject Notifications

Friday, May 1, 2020 Upload of presentation open for review

Monday, June 1, 2020 Presentation submissions due

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