

**THE RESEARCH & TECHNICAL ACTIVITIES  
REPORT  
Release 2**

**Michael R. Vaughn, P.E.**  
Senior Manager  
Research and Technical Services

FOR TC/TG/MTG/SSPC CHAIRS, VICE CHAIRS &  
RESEARCH SUBCOMMITTEE CHAIRS  
July 3, 2018

**2018 ANNUAL MEETINGS**

The annual meetings of the Research Administration Committee (RAC), Technical Activities Committee (TAC), Technology Council, and the Board were recently completed in Houston TX with the results below. This report also includes information for RAC's and TAC's upcoming fall meeting.

**NEW PROJECTS AWARDED**

The following 12 projects were approved for award as follows:

- **1579-RP**, *Testing and Evaluation of Ozone Removal Air Cleaning Devices for Improving IAQ*; Responsible Committee: **TC 2.3** (Gaseous Air Contaminants and Gas Contaminant Removal Equipment); Co-Sponsors: EHC, SSPC 62.1; Proposer: University of Texas-Austin; Duration: 18 months; Cost to ASHRAE: \$168,617
- **1707-RP**, *Annoyance Thresholds of Tones in Noise as Related to Building Services Equipment*; Responsible Committee: **TC 2.6** (Sound and Vibration); Co-Sponsors: TC 2.1 (Physiology and Human Environment); Proposer: Purdue University; Duration: 18 months; Cost to ASHRAE: \$136,552
- **1720-RP**, *Validation of Gas-phase Air-cleaner Performance Test Method (Standard 145.2) by Laboratory Testing of Commercially Available Filtration Devices (re-bid)*; Responsible Committee: **TC 2.3** (Gaseous Air Contaminants and Gas Contaminant Removal Equipment); Co-Sponsors: SSPC 145, and SSPC 62.1; Proposer: Owen Air Filtration Consulting, LLC; Duration: 24 months; Cost to ASHRAE: \$140,000
- **1769-RP**, *Experimental Evaluation of the Efficiency of Belt Drives for Fans*; Responsible Committee: **TC 5.1** (Fans); Co-Sponsors: None; Proposer: AMCA International, Inc. Duration: 24 months; Cost to ASHRAE: \$124,200
- **1778-RP**, *Heat and Moisture Load from Commercial Dishroom Appliances and Equipment*; Responsible Committee: **TC 5.10** (Kitchen Ventilation); Co-Sponsors: None; Proposer: Frontier Energy, Inc.; Duration: 18 months; Cost to ASHRAE: \$198,940
- **1794-RP**, *White Paper Investigation Relating to the use of Odorants in Flammable Refrigerants*; Responsible Committee: **TC 3.1** (Refrigerants and Secondary Coolants); Co-Sponsors: None; Proposer: Jensen Hughes, Inc.; Duration: 4 months; Cost to ASHRAE: \$35,000
- **1800-RP**, *Spray Evaporation of Enhanced Tube Bundles with Low GWP pure Refrigerants and Refrigerant/Miscible Oil Mixture*; Responsible Committee: **TC 1.3** (Liquid to Refrigerant Heat Exchangers); Co-Sponsors: None; Proposer: Auburn University; Duration: 30 months; Cost to ASHRAE: \$150,742
- **1801-RP**, *Standardizing and Utilizing ASHRAE Online BIM Data Exchange Protocols*; Responsible Committee: **TC 1.5** (Computer Applications); Co-Sponsors: MTG.BIM (Building Information Modeling), TC 7.1 (Integrated Building Design); Proposer: Hitchcock Consulting; Duration: 18 months; Cost to ASHRAE: \$105,000

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### NEW PROJECTS AWARDED – Continued:

- **1814-RP**, *Actual Energy Performance of Secondary Schools and Medium Offices Designed to Comply with ASHRAE Standard 90.1-2010*; Responsible Committee: **TC 2.8** (Building Environmental Impacts & Sustainability); Co-Sponsors: TC 7.6 (Building Energy Performance); Proposer: Seventhwave; Duration: 20 months; Cost to ASHRAE: \$144,288
- **1819-RP**, *CO<sub>2</sub> Demand Controlled Ventilation in Multiple Zone VAV Systems with Multiple Recirculation Paths*; Responsible Committee: **TC 4.3** (Ventilation Requirements and Infiltration); Co-Sponsors: None; Proposer: University of Alabama; Duration: 18 months; Cost to ASHRAE: \$96,149
- **1823-RP**, *Improved Exhaust-to-Intake Dilution (Concentration) Calculations*; Responsible Committee: **RBC** (Residential Building Committee); Co-Sponsors: None; Proposer: Ohio State University; Duration: 10 months; Cost to ASHRAE: \$49,011
- **1844-URP**, *Estimating Internal Moisture Generation Rates in New, Occupied Homes*; Responsible Committee: TC 1.12 (Moisture Management in Buildings); Co-Sponsors: None; Proposer: University Central Florida; Duration: 29 months; Cost to ASHRAE: \$142,378

### NEW RESEARCH GRANTS AWARDED

- **2018-2019 Innovative Research Grant (IRG)**  
RAC reviewed at this meeting a total of four full proposals for the 2018-2019 *Innovative Research Grant* and the grant was awarded to Dr. Craig Bradshaw from the Oklahoma State University. Dr. Bradshaw will use the IRG grant funds to further develop a *Novel Peristaltic Compressor for Air-Conditioning and Refrigeration Applications*. Potential funding from ASHRAE for this grant is \$125,000 spread over a three-year period.

To learn more about the IRG program, please go to the ASHRAE Research page [www.ashrae.org/research](http://www.ashrae.org/research)

### NEW PROJECTS LED BY OTHER NON-PROFITS THAT ARE CO-FUNDED BY ASHRAE

Two new projects, which are being led by other non-profits also focused on the built environment, were approved for ASHRAE co-funding at this meeting.

- **Co-RP 6**, *CO<sub>2</sub> and VOCs requirements for aircraft cabins based on cognitive performance, comfort responses and physiological changes depending on pressure level*.  
Responsible Organization: Fraunhofer IBP; Co-Sponsors: ASHRAE, LMU, DTU, Airbus, Boeing, Honeywell, NPL, Pall, UTRC, and with support of EASA.; Estimated Duration: 6 months; Cost to ASHRAE: \$180,000 (paid over 3 years) – Estimated Duration: 24 to 36 months
- **Co-RP-7**, *Assess Refrigerant Detector Characteristics for Use in HVACR Equipment..*  
Responsible Organization: AHRTI; Co-sponsor: ASHRAE; Cost to ASHRAE: \$23,000; Estimated Duration: 7 months

### PROJECTS THAT FAILED TO BE AWARDED

- **1740-TRP**, *Hydrogen Fluoride Capacity of Desiccants – (Re-bid)*;  
Responsible Committee: **TC 3.3** (Contaminant Control in Refrigerant Systems); Potential Co-Sponsors: TC 3.2, Refrigerant System Chemistry; Estimated Duration: 12 months; Cost to ASHRAE: \$120,000 – Status: No bids received again for project after second bid solicitation.
- **1790-RP**, *Water Solubility and the Distribution of Water between Vapor and Liquid Phases of Low GWP Refrigerants*; Responsible Committee: **TC 3.3** (Refrigerant Contaminant Control); Co-Sponsors: None; Estimated Duration: 12 months; Cost to ASHRAE: \$100,000 – Status: RAC did not approve the recommendation, instead the project will rebid with an expanded bidders list.

## PROJECTS STILL PENDING AWARD

- **1853-URP**, *Building on an Existing HUD Residential Ventilation Project: Brushless Permanent Magnet (BPM) Motor Change-outs, Pollutant Emissions Characterizations, and Testing Multi-zone Ventilation System Effectiveness*; Potential Responsible Committee: **TC 4.3** (Ventilation and Infiltration); Potential Co-Sponsors: TC 2.4, SSPC 62.2; Estimated Duration: 18 months; Cost to ASHRAE: \$199,064 – Status: A subcommittee of RAC members reviewed URP-1853 and decided to assign it to TC 4.3 for further review and a possible funding recommendation.

## POTENTIAL PROJECTS FOR BID IN FALL 2018

A portion of the following FOURTEEN tentative research projects (TRPs) are expected to be released for bid or re-bid this summer and fall:

### Approved Work Statement for bid by special solicitation in summer 2018

- **1848-TRP**, *Assessing the Impact and Value of ASHRAE's Standards and Technology*; Responsible Committee: MTG.IAST (Impact of ASHRAE Standards and Technology); Co-Sponsors: None; Status: **Ready to Bid** - Work with ASHRAE staff to develop RFP for project

### Approved Work Statements Available for possible Bid in fall 2018

- **1644-TRP-C**, *Smoke Control in Long Atria*; Responsible Committee: TC 5.6 (Control of Fire and Smoke); Co-Sponsors: None; Status: **Conditionally Accepted**. Work with Research Liaison (RL) to clear RAC's conditions so project can bid.
- **1683-TRP-R**, *Experimental Evaluation of the Two-Phase Pressure Drop and Flow Pattern in U-Bends with Ammonia*; Responsible Committee: TC 1.3 (Heat Transfer and Fluid Flow); Co-Sponsors: TC 8.4 (Air-to-Refrigerant Heat Transfer Equipment); Status: **Prepare to Rebid or Drop**. Work with Research Liaison (RL) to revise WS and expand recommended bidders list so project so can re-bid or drop topic and notify MORTS.
- **1740-TRP-R**, *Hydrogen Fluoride Capacity of Desiccants*; Responsible Committee: TC 3.3 (Refrigerant Contaminant Control); Co-Sponsors: TC 3.2 (Refrigerant System Chemistry); Status: **Prepare to Rebid for 3<sup>rd</sup> time or Drop**. Work with Research Liaison (RL) to revise WS and expand recommended bidders list so project so can re-bid or drop topic and notify MORTS.
- **1780-TRP**, *Test Method to Evaluate Cross-Contamination of Gaseous Contaminant within Total Energy Recovery Wheels*; Responsible Committee: **TC 9.10** (Laboratory Systems); Co-Sponsors: TC 2.3, TC 5.5, TC 9.6, and SSPC 62.1; Status: **Ready to Bid** - Work with ASHRAE staff to develop RFP for project
- **1784-TRP-C**, *Repeatability and Reproducibility Assessment of ASHRAE Standard 52.2 as Currently Amended*; Responsible Committee: TC 2.4 (Particulate Air Contaminants and Particulate Contaminant Removal Equipment); Co-Sponsors: SSPC 52.2; Status: **Ready to Bid** - Work with ASHRAE staff to develop RFP for project
- **1789-TRP**, *Optical and Thermal Performance of Hollow Glass Block Units*; Responsible Committee: TC 4.5 (Fenestration); Co-Sponsors: None; Status: **Ready to Bid** - Work with ASHRAE staff to develop RFP for project
- **1810-TRP**, *Development of Reference Building Information Model (BIM Test Cases for Improving Usage of Software Interoperability Schemas*; Responsible Committee: TC 1.5 (Computer Applications); Co-Sponsors: None; Status: **Ready to Bid** - Work with ASHRAE staff to develop RFP for project

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- **1816-TRP-C**, *Reporting the Energy use and Heat Gain from Imaging Equipment*; Responsible Committee: TC 9.6 (Healthcare Facilities); Co-Sponsors: TC 4.1 (Load Calculation and Data Procedures), and TC 4.7 (Energy Calculations); Status: **Conditionally Accepted**. Work with Research Liaison (RL) to clear RAC's conditions so project can bid.
- **1830-TRP**, *Experimental Characterization of Aircraft Bleed Air Particulate Contamination*; Responsible Committee: TC 9.3 (Transportation Air Conditioning); Co-Sponsors: SSPC 161; Status: **Ready to Bid** - Work with ASHRAE staff to develop RFP for project
- **1833-TRP-C**, *Literature Review for Evidence of the Basis for Specified Air Change Rates (ACR) for Cleanrooms, Laboratories, Laboratory Animal Facilities, Healthcare Facilities with Medium to High ACR*; Responsible Committee: MTG.ACR (Air Change Rates); Co-Sponsors: None; Status: **Conditionally Accepted**. Work with Research Liaison (RL) to clear RAC's conditions so project can bid.
- **1836-TRP-C**, *Developing a Standardized Categorization System for Energy Efficiency Measures*; Responsible Committee: TC 7.6 (Building Energy Performance); Co-Sponsors: bEQ, and SSPC 100; Status: **Conditionally Accepted**. Work with Research Liaison (RL) to clear RAC's conditions so project can bid.
- **1837-TRP**, *The Effects of Ventilation in Sleeping Environments*; Responsible Committee: TC 2.1 (Physiology and Human Environment); Co-Sponsors: None; Status: **Ready to Bid** - Work with ASHRAE staff to develop RFP for project
- **1847-TRP**, *Updating Climatic Design Information for 2021 ASHRAE Handbook, Standard 169, and the Handbook of Smoke Control Engineering*; Responsible Committee: TC 4.2 (Climatic Information); Co-Sponsors: TC 4.1 (Load Calculation Data and Procedures) and TC 5.6 (Control of Fire and Smoke); Status: **Ready to Bid**. Work with ASHRAE staff to develop RFP for project.

### **WORK STATEMENTS REVIEWED AND APPROVED OR RETURNED WITH COMMENTS**

A total of three work statements were submitted by the TCs for review at the RAC Annual meeting. None were approved as-is or rejected, but all were conditionally approved for bid. See below for the status of each project after this review.

#### Approved Work Statements:

- **1644-WS**, *Smoke Control in Long Atria*; Responsible Committee: TC 5.6 (Control of Fire and Smoke); Co-Sponsors: None; Estimated Duration: 15 months; Estimated Cost to ASHRAE: \$75,000; Status: **Conditionally Accepted**. Work with Research Liaison (RL) to clear RAC's conditions so project can bid.
- **1816-WS**, *Reporting the Energy use and Heat Gain from Imaging Equipment*; Responsible Committee: TC 9.6 (Healthcare Facilities); Co-Sponsors: TC 4.1 (Load Calculation and Data Procedures), and TC 4.7 (Energy Calculations); Estimated Duration: 18 months; Estimated Cost to ASHRAE: \$150,000; Status: **Conditionally Accepted**. Work with Research Liaison (RL) to clear RAC's conditions so project can bid.
- **1836-WS**, *Developing a Standardized Categorization System for Energy Efficiency Measures*; Responsible Committee: TC 7.6 (Building Energy Performance); Co-Sponsors: bEQ, and SSPC 100; Estimated Duration: 16 months; Estimated Cost to ASHRAE: \$80,000; Status: **Conditionally Accepted**. Work with Research Liaison (RL) to clear RAC's conditions so project can bid.

Work Statements Returned with Comments or Rejected: NONE

A revised work statement for any previously RAC Returned or Rejected projects can be submitted to the MORTS on or before **August 15, 2018** in order to be considered at RAC's fall meeting in September or October. If a work statement cannot be revised that quickly, the next scheduled deadline is **December 3, 2018** for RAC consideration in early January (New one time submission date on 12/3/18 this year is due to earlier start to ASHRAE Winter meeting this year due to Super Bowl being held in Atlanta in late January).

#### **WORK STATEMENTS PREVIOUSLY RETURNED TO TCs**

TC/TGs should work with their Research Liaison to respond to written comments on the work statement provided by RAC via letter and revise the work statement appropriately. You can find a copy of the last draft submitted to RAC along with RAC's comments by clicking on the links in the Society's Research Implementation Plan posted on the "Research" page of the ASHRAE website. Please note that topics will be dropped from this plan if the work statement is not approved for bid after four years on the plan. The current MS-Word forms can be found on the "Research" page at [www.ashrae.org/research](http://www.ashrae.org/research).

#### **REVIEW OF RESEARCH TOPIC ACCEPTANCE REQUESTS (RTARs)**

RAC reviewed a total of three RTARs at its Annual meeting and two were accepted as-is, and one was accepted with comments for inclusion in the Society's Research Implementation Plan and for further development into work statements. The following is a listing of all RTARs reviewed.

##### Approved RTARs:

- **1851-RTAR**, *Dielectric Properties of Lower GWP Refrigerants*; Responsible Committee: TC 3.1 (Refrigerants and Secondary Coolants); Co-Sponsors: None; Status: Accepted with Comments Proceed with the development of the project's work statement.
- **1852-RTAR**, *Develop Performance Metric, Criteria, and Process to Measure and Predict of Speech Privacy in High Performance Buildings*; Responsible Committee: TC 2.6 (Sound and Vibration); Co-Sponsors: TC 2.1 (Physiology and Human Environment), TC 4.4 (Building Materials and Building Envelope Performance), TC 9.6 (Healthcare Facilities); Status: Accept-as-Is. Work with Research Liaison (RL) to address RAC comments on RTAR before proceeding with the development of the project's work statement.

##### RTARs Returned or Rejected with Comments:

- **1813-RTAR**, *Development of an Accuracy Test Method for Residential Attic Duct System Simulations in Whole-Building energy Simulation Programs*; Responsible Committee: TC 4.7 (Energy Calculations); Co-Sponsors: None; Status: Rejected

By rejecting these topics, RAC is strongly suggesting to the TCs that these particular topics be dropped from the TC research plan based on the information provided.

The current MS-Word form for RTARs can be found on the "Research" page at [www.ashrae.org/research](http://www.ashrae.org/research).

**New or revised work statements and RTARs need to be received by the Manager of Research and Technical Services (MORTS), Mike Vaughn, [morts@ashrae.net](mailto:morts@ashrae.net), no later than August 15, 2018 to be considered at RAC's fall meeting in either September or October. If RTARs cannot be revised that quickly, the next deadline for RAC consideration of RTARs is December 3, 2018 for RAC consideration in early January** (New one time submission date on 12/3/18 this year is due to earlier start to ASHRAE Winter meeting this year due to Super Bowl in Atlanta in late January).

**SOCIETY RESEARCH IMPLEMENTATION PLAN**

The Society Research Implementation Plan is now being updated following the annual meeting of RAC. New RTARs will be added and tentative research project RFPs will be added or dropped depending on their bid status. This change to the way the implementation plan is updated necessitated that time limits be placed on how long a topic can remain on the plan without being approved for bid. The summer updates to the plan should be in place by **August 1, 2018** or sooner. Please review the latest draft of the Implementation Plan posted on the ASHRAE “Research” page to see if any topics your TC is sponsoring are in danger of being dropped from the plan.

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**DEADLINES**

The following deadlines apply for the next several months. Please recognize they are not arbitrarily set, but are set to meet subsequent events. So if you miss them, your input may be delayed for six months or in some cases, for a year. All research submissions should be sent to the Manager of Research and Technical Services (MORTS), Mike Vaughn, (morts@ashrae.net).

- July 9, 2018** Final Conference Papers (Includes Bio, Learning Objectives and Methods of Assessment) due to Conferences & Exposition Committee (CEC) for final review for the 2019 winter meeting in Atlanta, GA.
- July 23, 2018** Conference and Technical Paper Final Accept/Reject Notifications for 2019 winter meeting in Atlanta, GA. sent by CEC.
- August 3, 2018** Submission deadline for program proposals (seminars and forums) for the 2019 winter meeting in Atlanta, GA. Conference Website: [www.ashrae.org/atlanta/](http://www.ashrae.org/atlanta/)
- August 6, 2018** Revised Conference Papers/Final Technical Papers for Atlanta Meeting Due
- August 15, 2018** New or revised Work Statements and RTARs are due to MORTS for RAC consideration at the 2018 Fall RAC meeting.
- August 20, 2018** Conference and Technical Paper Final Accept/Reject Notifications for Atlanta sent by ASHRAE
- August 21, 2018** Full Technical paper drafts and Conference paper abstracts are due for the 2019 Annual Meeting in Kansas City, MO. Conference Website: [www.ashrae.org/kansascity/](http://www.ashrae.org/kansascity/)
- August 30, 2018** TC/TG/TRG meeting minutes from the Houston meeting are posted on TC website and distributed to membership by this date.
- August 31, 2018** Acceptance Notifications for Kansas City Conference paper abstracts sent by ASHRAE
- September 1, 2018** Nominations for the 2018-2019 *George B. Hightower Technical Achievement Award* for TC volunteer efforts over the past four years, in areas except research and standards, are due to TAC section heads.
- September 1, 2018** Nominations for the 2018-2019 *Service to ASHRAE Research Award* for TC volunteer efforts in research over the past five years are due to the RAC research liaison.
- September 6, 2018** Seminar, Forum, Workshop Accept/Reject Notifications for 2019 winter meeting in Atlanta, GA sent by CEC.
- September 28, 2018** Conference Paper Abstracts Accept/Reject Notifications for 2019 annual meeting in Kansas City, MO sent by CEC.
- September 15, 2018** Conditionally approved tentative research projects that are approved for bid or re-bid must have all conditions satisfied with section Research Liaison and be in the hands of the MORTS by this date or sooner if they are to be eligible for possible bid in the fall 2017.
- October 1, 2018** Ideal submission date for Unsolicited Research Proposals in order to most likely obtain a funding decision on the proposal at the ASHRAE 2019 winter meeting in Atlanta.

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- October 5, 2018** Completed TC/TG/TRG meeting room request form for 2019 Winter Conference in Atlanta due to Lizzy Seymour ([lseymour@ashrae.org](mailto:lseymour@ashrae.org)) at ASHRAE HQ. Subcommittee meeting rooms must be requested for each meeting or they will be dropped automatically. Requests for Remote Participation Meeting (RPM) capability must now be requested using this same form only if needed.
- October 5, 2018** Fall 2018 tentative research projects (TRPs) are released for bid.
- October 15, 2018** SY 19-20 *Innovative Research Grant* solicitation for pre-proposals announced through *RP Bidders* Listserv and Research page of ASHRAE website.
- November 30, 2018** Final Conference papers for Kansas City Annual meeting submitted for review to ASHRAE (Includes Bio, Learning Objectives and Methods of Assessment)
- November 30, 2018** TC/TG/MTG/TRG Chairs receive 2018-19 roster update web portal link information for roster update completion.
- December 1, 2018** Applications for the SY 19-20 *ASHRAE New Investigator Award* are due to MORTS.
- December 3, 2018** Nominations for the *ASHRAE Homer Addams Award*, which is given to graduate students assisting in current or recently completed ASHRAE sponsored research projects, are due to MORTS. Award includes \$5,000 honorium.
- December 3, 2018** Bids are due for all Tentative Research Projects (TRPs) released in fall 2018.
- December 3, 2018** New or revised Work Statements and RTARs are due to MORTS for RAC consideration at the 2019 winter meeting.
- December 3, 2018** Innovative Research Grant (IRG) Pre-proposals are due to MORTS for RAC consideration at the 2019 winter meeting.
- December 8, 2018** Final Conference papers for 2019 Annual meeting in Kansas City are due for review (includes BIO, Learning Objectives and Methods of Assessment) – requires approved abstract; Request for Conference Paper Session are also due now.
- December 14, 2018** TC/TG/TRG meeting agenda for the Atlanta meeting is posted to the TC website and distributed to membership by this date or sooner.
- January 2, 2019** Website Opens for Seminar, Forum and Paper Proposals for the 2019 Annual Meeting in Kansas City, MO.
- January 11, 2019** Conference Paper Accept/Revise/Reject Notifications for 2019 Annual meeting in Kansas City, MO sent by CEC.
- January 15, 2019  
Midnight** Online Roster update information for 2019-2020 TC/TG/MTG/TRG rosters must be complete and Section Head notified it is now ready for review.
- January 15, 2019  
Midnight** Contractor recommendations are due to MORTS for all TRPs that were bid in fall 2018 or before. Place the Proposal Evaluation Summary sheet in MORTS' lockbox outside ASHRAE Headquarters Room in Atlanta or e-mail MORTS at [morts@ashrae.net](mailto:morts@ashrae.net).

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- February 8, 2019**      Submission deadline for program proposals (seminars and forums) for the 2019 annual meeting in Kansas City, MO. Conference Website: [www.ashrae.org/houston/](http://www.ashrae.org/houston/) .
- February 19, 2019**      Conference & Technical Paper Final Accept/Reject Notifications for 2019 Annual meeting in Kansas City, MO sent by CEC.
- March 1, 2019**  
**(New Date)**      Applications for ASHRAE Graduate Student Grant in Aid program are due to MORTS.
- March 19, 2019**      Seminar, Forum, Workshop Accept/Reject Notifications sent by ASHRAE

**OTHER NEWS:**

**A. ANNOUNCEMENTS**

**1. TAC Members Volunteered to Help Review TC program submissions for Atlanta**

Ten members of TAC have volunteered to work with CEC track chairs to review TC program submissions for the upcoming winter meeting in Atlanta. It is hoped that by walking in the shoes of CEC members, TAC members will continue to gain a better understanding of the Program development process and its challenges so that they can better advise TCs in their section on how best to navigate this process effectively. CEC will also benefit from this effort by having a TAC member that can help to identify suitable technical experts to provide informal feedback on some program submissions.

**2. TAC Approved the formation of the following new Committees in Houston:**

- **Title: TC 2.10 (Resilience and Security) – NEW!**  
**Scope:** TC 2.10 Resilience and Security is concerned with fundamental scientific and engineering design principles for the resilience of the built environments subjected to extraordinary events including mitigating consequential damages, remediation, and recovery.  
  
TG2 HVAC Security requested and was approved to become TC 2.10. Jason DeGraw is chair of this committee.
- **Title: MTG – HWBE (Health and Wellness in the Built Environment) – NEW!**  
**Scope:** MTG.HWBE will coordinate TC/TG/TRG technical activities related to enhanced health and wellness of the occupants in the built environment. The focus of the MTG will be to help to foster and expand internal and external organizational partnerships in this subject area, particularly with organizations developing green building rating systems (e.g., ASHRAE BEQ, LEED; WELL, Living Building Challenge; RESET, etc.) government agencies and research institutes. The objective of this coordination is to strengthen and improve the development and utility of these green building rating systems, to increase ASHRAE’s knowledge and expertise in this emerging field, and to become more effective in disseminating the results of research and practice in this field to ASHRAE members and others.

*MTG.HWBE will bring together expertise from various ASHRAE groups (TC 1.12, TC 2.1, STD 55, EHC, STD 189, SSPC 62.1, SSPC 62.2 and others) and from other non-ASHRAE organizations (AIA, CDC, Google, GSA, Harvard CCHGE, IAQA, IEQ-GA, ILFI, ISHRAE, IWBI, NIBS, USGBC,) to work in close collaboration to achieve the following objectives:*

- ✓ aggregate existing and newly issued scholarly and non-scholarly literature related to enhanced health and wellness in the built environment;
- ✓ ensure that research results and other developments are integrated into existing ASHRAE publications such as handbooks, guidelines, guides and standards;
- ✓ develop and maintain technical online resources on ASHRAE’s website regarding enhanced health and wellness in the built environment;
- ✓ provide opportunities for new, potentially co-funded, research and development on how to measure the tangible effects of the built environment on the enhanced health and wellness of the building’s occupants; and
- ✓ Communicate the tangible and non-tangible benefits of applying building enhanced health and wellness criteria and requirements to ASHRAE’s current design, construction and operational and maintenance practices.

Other TCs GPCs, and SPCs may also now wish to participate in this MTG with a Voting Representative and Alternate(s) given its scope and charge.

If your committee wishes to join MTG.HWBE, please contact the ASHRAE Manager of Research and Technical Services, Mike Vaughn, at [MORTS@ashrae.net](mailto:MORTS@ashrae.net) as soon as possible.

### **3. TAC Approved the Following TC Title and Scope Changes in Houston**

Title: TC 4.7, Energy Calculations

Scope: Technical Committee 4.7 is concerned with identifying, evaluating, developing, and recommending procedures for calculating energy performance of ~~buildings~~ the built environment.

Title: TC 5.11, Humidifying Equipment

Scope: TC 5.11 is concerned with equipment for raising the humidity of air in residential ~~and~~, commercial, and industrial spaces; its application and control; ~~and~~ effect of humidity on structures, content, processes, materials, and occupants; and testing and standards defining environmental and physiological requirements.

For more information on TCs or MTGs, please go to the MTG section on the following web page: <http://www.ashrae.org/tcs>.

#### **Other Potential TC title and Scope Changes Still under Consideration by TAC & TCs**

- TC 9.8 (Large Building Air-Conditioning Applications) proposed scope change
- TC 7.6 ( Building Energy Performance) proposed title change
- MTG.OBB's request to become a TC
- Potential merger of TC 6.10 (Fuels & Combustion) with a group proposing a new TG on Biomass

### **4. Provisional Corresponding Member (PCM) Process**

The process for adding new PCMs to TC rosters and notifying all affected parties (chair, staff, etc.) has now been automated through the ASHRAE website. Potential new TC members now just need to click on the **JOIN A TC** button at the top of the TC page ([www.ashrae.org/tcs](http://www.ashrae.org/tcs)) on the ASHRAE website to get started.

### **5. Coming Soon! 18-19 Society Year TC Email Position Aliases**

Due to a large number of emergency roster and management team changes during the Houston meeting, the 18-19 position alias document is not yet available. The deadline for emergency changes is July 8th. We expect to have all requested changes updated and the alias list available for distribution by July 28, 2018. The Email Alias list will be accessible on the TC webpage under the heading Procedures, Forms & Information for TCs/TGs/MTGs and TRGs. The list includes name and position e-mail aliases for all required TC positions for all TCs plus position e-mail aliases for most standing committees and ASHRAE staff liaisons.

**B. REMINDERS & REQUESTS**

**1. 18-19 Roster Access & Distribution**

By now, each TC, TG and MTG chair should have received a PDF of their new 2018-2019 roster from their Section Head or staff for distribution to the committee. In addition, each member can view all of the rosters of their committees on the ASHRAE Website. Log-in to the ASHRAE website at <http://www.ashrae.org/myactivecommittees>, (if you have not logged in lately, you might need to set up a new username and password). Click on the "blue" "roster" text on the right side of the committee page to reveal the roster in various file formats. Make sure everyone on your committee also knows how to access the roster online

**2. Option for TC Subcommittee Meetings via Conference Calls and Web Meetings**

More and more TCs are taking advantage of a new Society service that allows TCs to hold subcommittee meetings by phone and/or web. Many TCs are finding this to be a more efficient way for them to conduct subcommittee business and it also allows TC members that can't travel to meetings on a regular basis a way to still contribute to the TC. Such a change can also eliminate potential conflicts with the TC's program sessions at Society meetings. Please pass your conference call/web meeting/webinar requests on to the Senior Manager of Research and Technical Services, Mike Vaughn, at [mvaughn@ashrae.org](mailto:mvaughn@ashrae.org) or [MORTS@ashrae.net](mailto:MORTS@ashrae.net).

**3. CEC Standing Request for Program Track Suggestions for Future Society Meetings**

The Conferences and Expositions Committee (CEC) oversees ASHRAE's annual and winter conferences and other specialty conferences and expositions globally. The CEC continually works to improve the conference experience for all attendees. To help keep a "pulse" on the technical issues facing professionals in the HVAC&R marketplace, and to create meetings that reach all of ASHRAE's constituencies, the CEC seeks ideas for tracks for the 2020 winter meeting in Orlando, FL and annual and winter conferences beyond as well as topics for specialty conferences from TC members.

Please submit your suggestions to ASHRAE Staff member Tony Giometti ([Giometti@ashrae.org](mailto:Giometti@ashrae.org)).

Program Focus at Atlanta Winter Conference – January 12 –16, 2019

- **Track 1. 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.  
**Track Chair:** Joseph Firrantello
- **Track 2. HVAC&R Fundamentals and Applications:** Fundamentals are the foundation for understanding applications in engineering. Key components of ASHRAE fundamentals include thermodynamics, psychrometrics, 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.  
**Track Chair:** Rick Hermans
- **Track 3. Refrigeration:** Refrigeration is a critical element of modern life, from preserving food and medicine to maintaining comfort. With significant changes on the horizon for refrigerant regulations, along with new applications for refrigeration systems being frequently applied, there is more need than ever to understand both the fundamental and advanced concepts and issues related to refrigeration. Papers and programs in this track will focus on refrigerants, refrigerant regulation, refrigeration cycles, and refrigeration applications.  
**Track Chair:** Leticia De Oliveira Neves

- **Track 4. Construction, Operation, and Maintenance of High Performance Systems:** The design of high performance buildings and systems has become an increasingly important focus of those in the construction industry. While designing high performance facilities is important, there have been numerous cases where a building with high performance design objectives have failed to achieve targeted performance. Ultimately, construction, commissioning, operation, and maintenance of facilities is critical to meeting targeted performance levels. Papers and programs in this track will focus on meeting high performance design goals through construction and operation phases of a project.  
**Track Chair:** Sonya Pouncy
- **Track 5. Common System Issues and Misapplications:** With the number of possible system and equipment options and combinations available, along with increasingly capable and complex automation systems, it is no surprise that issues are frequently encountered with HVAC&R systems. While some of these issues may be unique, many have been experienced previously. Papers and programs in this track will focus on issues or misapplications that are frequently observed, and opportunities to avoid these issues in the future.  
**Track Chair:** Lee Riback
- **Track 6. The Convergence of Comfort, Indoor Air Quality, and Energy Efficiency:** With the importance placed on optimizing comfort, indoor air quality, and energy efficiency, there are often trade-offs that must be made. Improvements in one of these areas may necessitate compromise in others. Additionally, there are numerous other codes and standards that create similar challenges in optimizing systems. Papers and programs in this track will focus on strategies to limit required compromises, and on finding the best set of design criteria for each building or system.  
**Track Chair:** Ashish Rakheja
- **Track 7. Building Integrated Renewables and Natural Systems:** As the movement toward more sustainable buildings and net-zero buildings continues to grow, the inclusion of building integrated renewable energy systems paired with other natural systems will become increasingly common. At the same time, advances are being made with respect to integrating renewable energy systems into the built environment. Papers and programs in this track will focus on advancements in building integrated renewable systems, application of building integrated renewable systems, and the use of renewable and natural systems in the move toward net-zero buildings.  
**Track Chair:** Maggie Moninski  
[maggie.moninski@gmail.com](mailto:maggie.moninski@gmail.com)
- **Track 8. The Engineer's Role in Architecture:** As the built environment becomes more complex, the role of the engineer in developing high performance facilities is increasingly important. With significant attention being paid to integrated teams and early involvement by all team members, what is being done well, and what can be done better? Papers and programs in this track will focus on improving the design and construction process by defining the roles to be played by engineers moving forward.  
**Track Chair:** Ashu Gupta

Program Focus at Kansas City, MO Annual Conference – June 22 –26, 2019

- **Track 1: Systems & Equipment in the Built Environment**  
Track Chair: Kimberly Pierson  
Email: [kdpwildcat@gmail.com](mailto:kdpwildcat@gmail.com)  
Selection of equipment and systems is paramount to HVAC&R design. Papers and programs in this track will assist designers, engineers, and operators in the design, selection, and operation of HVAC&R systems and equipment.

- **Track 2: Fundamentals and Applications**

Track Chair: Gary C. Debes

Email: gary.debes@comcast.net

Fundamentals are the foundation for understanding applications in engineering. Key components of ASHRAE fundamentals include thermodynamics, psychrometrics, 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.

- **Track 3: Optimization in HVAC&R**

Track Chair: Vikrant Aute

Email: vikrant@umd.edu

The application of systematic optimization techniques is gaining ground in the field of HVAC&R, resulting in significant cost and performance benefits. This track seeks programs focused on using models to inform decision-making for design and operation of HVAC&R and High Performance Buildings. Topics of interest include but are not limited to: novel optimization techniques and their application to HVAC&R, optimization of heat transfer surfaces, component optimization, system optimization, and optimization of high performance buildings, model-predictive control and other methods focusing on minimizing first and operating costs of these systems.

- **Track 4: Commissioning New & Existing Buildings**

Track Chair: Raul Simonetti

Email: raul.simonetti@carel.com

With low energy and zero energy buildings becoming more prevalent, there are many issues that arise with installation, startup, commissioning and O&M. Making sure that the design intent of these more complicated HVAC systems is understood by all team members and building operators is key to the building's success. This track will address an array of topics including lessons learned, improvement of process and team communications and effort to improve the installation, startup, O&M and commissioning of HVAC systems.

- **Track 5: Occupant Health & Safety**

Track Chair: Christine Reinders

Email: creinders@cannondesign.com

Indoor air quality has become a vital consideration during all phases of a building's life as it is closely linked to comfort, occupant satisfaction, productivity and health. Proper design of fire and smoke control is another crucial method in protecting building occupants. This track seeks presentations and papers that explore these links, particularly in ways that make the case for high levels of indoor air quality compelling to building owners. Topics including (but not limited to): filtration, change-overs, best practices for maintainability, fire ratings/dampers, detection and ventilation for toxic gases, operator safety in equipment rooms, OSHA requirements, industrial and hazardous spaces, and many other design aspects directly related to occupant health & safety.

- **Track 6: Modeling Throughout the Building Life Cycle**

Track Chair: Nivedita Jadhav

Email: nivi2307@gmail.com

Modeling was originally concerned primarily with building and system design specifications. The demands of energy efficient operation brought about the need for modeling of part-load operation for a variety of off-design conditions. The explosion of computational capacity and data collection capability is rapidly expanding the scope, complexity and practical applications of modeling both during design, but even more so for fault detection, diagnostics and operational optimization. Presentations and papers are solicited related to all aspects of building modeling, with a particular interest in successful applications that have extended modeling into operational phases of the building life cycle.

- **Track 7: Professional Development**

Track Chair: Richard Rose  
Email: richr@mticontrols.com

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.

- **Track 8: Research Summit**

Track Chair: Bing Liu  
Email: BLiu@neea.org

Active research, and the exchange of those research findings, are critical to the development of our HVAC&R industry and built environment. The seventh 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, 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.

- **Track 9: Radiant Heating & Cooling Mini-Track**

Track Chair: Devin A. Abellon  
Email: devin.abellon@uponor.com

As more and more jurisdictions and building owners are answering the call to establish higher energy-use standards for their construction projects, design teams are looking beyond traditional HVAC solutions to provide energy efficiency while maintaining occupant comfort and safety. A system that continues to gain momentum in North America is radiant heating and cooling. A radiant design strategy embodies the integration of architectural design and HVAC systems design with overall energy efficiency and comfort in mind. The papers and presentations in this track will explore the fundamental concepts of how different radiant systems work (high mass vs. low mass), how they are designed, constructed and optimally controlled, and where they have been used in the past, with lessons learned and documented performance data.

## **5. Upcoming TC Award Nomination Submission Deadlines**

### **2018-2019 Hightower Award Nomination Process and Deadline**

Nominations for the 2018-2019 George B. Hightower Technical Achievement Award are due to you Section Head by **September 1, 2018**. The award recognizes outstanding technical leadership and contributions on a TC/TG/TRG during the past four years, excluding research and standards activities. Please go to the Technical Committee page of the ASHRAE website at the following link under the “Procedures and Forms...” heading: <http://www.ashrae.org/tcs>.

### **2018-2019 Service to ASHRAE Research Award Nomination Process and Deadline**

Nominations for the 2018-2019 Service to ASHRAE Research Award for TC volunteer efforts in research are due to RAC research liaison by **September 1, 2018**. Please go to the Research page of the ASHRAE website at the following link under the “Research Grants and Awards” heading: <http://www.ashrae.org/research>.

**6. Upcoming Webcasts, Workshops and Conferences:**

**1. 2018**

- i. **EPRI Electrification 2018 International Conference & Exposition** – August 20 to 23, 2018 – Long Beach, CA USA  
<https://www.ashrae.org/conferences/ashrae-endorsed-conferences/epri-electrification-2018-international-conference-exposition>
- ii. **1st IIR International Conference on the Applications of HFO Refrigerants** - Sep. 2 to 5, 2018 – Birmingham, England  
<https://www.ashrae.org/conferences/ashrae-endorsed-conferences/1st-iir-international-conference-on-the-applications-of-hfo-refrigerants>
- iii. **2018 JSRAE Annual Conference** – Sep. 4 to 7, 2018 - Fukushima 963-8642, Japan –  
<https://www.ashrae.org/conferences/ashrae-endorsed-conferences/2018-jsrae-annual-conference>
- iv. **IBPC 2018** – Sep. 23 to 26, 2018 – Syracuse, NY USA Contact:  
<https://www.ashrae.org/conferences/ashrae-endorsed-conferences/ibpc-2018>
- v. **Building Simulation 2018** – Sep. 26 – Sep. 28, 2018 – Chicago, IL USA – Contact:  
<https://www.ashrae.org/conferences/topical-conferences/2018-building-performance-analysis-conference-and-simbuild>
- vi. **AHR Expo-Mexico** - October 2-4, 2018 – Mexico City, Mexico Contact:  
<https://www.ashrae.org/conferences/ashrae-endorsed-conferences/ahr-expo-mexico>
- vii. **The Third International Conference on Efficient Building Design – Materials and HVAC Equipment Technologies** - October 4–5, 2018 - Beirut, Lebanon  
<https://www.ashrae.org/conferences/topical-conferences/the-third-international-conference-on-efficient-building-design>
- viii. **AHR Expo 2019** – Jan. 14 to 16 – Atlanta, GA USA – Contact:  
<https://www.ashrae.org/conferences/winter-conference/ahr-expo>
- ix. **ICR 2019** – August 24-30, 2019 – Montréal,, Québec, H2Z 1H2, Canada – Contact:  
<https://www.ashrae.org/conferences/ashrae-endorsed-conferences/icr-2019>

Please let me know if I can be of any other assistance.

Sincerely,  
Mike Vaughn