



Shaping Tomorrow's
Built Environment Today

MINUTES

RESEARCH ADMINISTRATION COMMITTEE

**CNN CENTER HOTEL
ATLANTA, GEORGIA**

FEBRUARY 4TH & FEBRUARY 8TH 2023

Note: These draft minutes have not been approved and are not the official, approved record until approved by the Research Administration Committee (RAC).

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ADJOURNED

**PRINCIPAL MOTIONS
RESEARCH ADMINISTRATION COMMITTEE
FEBRUARY 4TH & FEBRUARY 8TH 2023**

NO.	PAGE	MOTION
1	1	Draft minutes of the RAC fall 22 meeting be approved as written.
2	3	research funding approval limit be increased from \$250K to \$350k due to inflation pressures post-CoVID-19.
3	4	<u>1944-RTAR</u> , <i>Development of Standard Flow Hood Calibration Methods Investigating the baseline of flow capture hood calibration procedure</i> – TC 7.07 (Testing and Balancing), be <u>accepted with comments</u>
4	4	<u>1949-RTAR</u> , <i>Cost and energy implications of increased filtration efficiency in Healthcare Facilities</i> - TC 9.06 (Health Care Facilities), be <u>returned</u>
5	4	<u>1864-WS</u> , <i>Investigating the applicability of Standard 62.1's Ventilation Rate Procedure for Health Care Rooms</i> , sponsored by SSPC 170 (Ventilation of Health Care Facilities), be <u>accepted</u> .
6	4	<u>1915-WS</u> , <i>Refrigerated Facilities Doorway Infiltration Air Energy Reduction</i> – TC 10.02 (Refrigeration Applications), be <u>returned</u> .
7	4	<u>1928-WS</u> , <i>A decision and evaluation framework to validate weather time series and statistics for use in building performance analysis and design</i> - TC 2.09 (Ultraviolet Air & Surface Treatment), be <u>conditionally accepted</u> .
8	4	<u>1929-WS</u> , <i>Evaluation of building life cycle analysis tools incorporating embodied carbon</i> - TC 2.08 (Building Environmental Impacts and Sustainability), be <u>returned</u> .
9	5	RAC approved a motion that the following IRG proposals be invited to submit full IRG proposals; #001, #003, and #004
10	5	RAC approved a motion to award Khaled Alghamdi the 2023-24 Homer Addams award.
11	5	Davide Zivini be awarded the 2023-2024 New Investigator Award.
12	6	<u>1843-TRP</u> , "Validation of Low-Order Acoustic Models of Combustion Driven Oscillations on Fire Tube Water Heaters", be awarded to Secat Inc., for a period of 18 months at a total cost to ASHRAE of \$142,504
13	6	<u>1857-TRP</u> , "Improved simplified methodology for describing and calculating heat conduction between buildings and the ground", be awarded to Pennsylvania State University for a period of 30 months at a total cost to ASHRAE of \$112,773
14	6	<u>1884-TRP</u> , "The Incorporation of Odorants in Refrigerants to Improve Leak Detection (Experimental Phase III)", be awarded to Optimized Thermal Systems, Inc., for a period of 12 months at a total cost to ASHRAE of \$149,847
15	6	<u>1890-TRP</u> , "Minimum Flow Velocities for Purging Air and Debris from Hydronic Piping Systems", be awarded to Purge Rite, LLC. for a period of 24 months at a total cost to ASHRAE of \$150,000

**RECURRING ACTION ITEMS
(EACH MEETING)**

<u>Responsibility</u>	<u>Summary of Action</u>
Chair	Report to Technology Council on RAC's MBO Status.
Research Liaisons	Remind all TC chairs and research subcommittee chairs in section that a draft of all Work Statement and RTARs, and all later versions should be sent to their Research Liaison for review before information is passed on to the Manager of Research.
RPS (Primary) RAS (Secondary)	Review RTARs
RAS (Primary) RPS (Secondary)	Review Work Statements
RAS (Primary) RPS (Secondary)	Review TRPs and URPs
RPS (Primary) upon (Secondary)	Review and revise the Society's Research Implementation Plan based accepted RTARs.
Subcommittee Chairs	Report Status of assigned MBOs.
Staff	Distribute copies of Technology Council's Action Items and Motions affecting RAC.
BOD ExO	Report to the RAC Chair BOD's Actions and Motions affecting RAC.
Staff	Forward URPs to RAS Chair to help identify a champion for the URP on RAC based on members background and experience. The RAC URP Champion will either help select a cognizant TC to review the URP or return the URP with a recommendation that it not be reviewed further as a possible ASHRAE research project.

**RECURRING ACTION ITEMS
(FALL MEETING)**

<u>Responsibility</u>	<u>Summary of Action</u>
RAS	Initial Plan for Research Breakfast Workshop for Winter Meeting
RLs	Review "Service to ASHRAE Research Award" nominations submitted by TC chairs and select the best nomination for RAC consideration.
MORTS	Prepare semi-annual report to RAC by December 15.

RECURRING ACTION ITEMS
(WINTER MEETING)

<u>Responsibility</u>	<u>Summary of Action</u>
RPS	Review New Investigator Award Nominations
RPS	Review Homer Addams Award Nominations
RPS	Review Innovative Research Grant (IRG) Pre-Proposals
MORTS	Prepare semi-annual report to RAC by May 15.

RECURRING ACTION ITEMS
(SPRING MEETING)

<u>Responsibility</u>	<u>Summary of Action</u>
RPS	Plan workshop for new RAC members at the Annual meeting.
RPS	Review Grant-In-Aid Applications

RECURRING ACTION ITEMS
(ANNUAL MEETING)

<u>Responsibility</u>	<u>Summary of Action</u>
Chair	Invite new RAC members to meeting and any training sessions at meeting.
Incoming Chair	Finalize MBOs and roster assignments. Set date for fall meeting.
RAS	Review Invited Innovative Research Grant (IRG) Full-Proposals

LIST OF ATTACHMENTS

1. **1843-TRP**, Analysis Sheet
2. **1857-TRP**, Analysis Sheet
3. **1884-TRP**, Analysis Sheet
4. **1890-TRP**, Analysis Sheet



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MINUTES

RESEARCH ADMINISTRATION COMMITTEE FEBRUARY 4TH & FEBRUARY 8TH 2023

MEMBERS PRESENT:

Omar Abdelaziz, *Chair*
William Murphy, *Vice-chair*
Natascha Milesi Ferretti, *Chair RAS*
Jin Wen, *Chair RPS*
Ahmed Kashef, *RL Section 1.0*
William Hutzal, *RL Section 2.0*
Chee Sheng Ow, *RL Section 3.0 (FEB, 8TH Only)*
Dennis Landsberg, *RL Section 4.0*
Douglas Scott, *RL Section 5.0*
Stefan Elbel, *RL Section 6.0*
James Bogart, *RL Section 7.0 (FEB. 4TH Only)*
Carl Huber, *RL Section 8.0*
Roland Charneux, *RL Section 9.0*
Lorenzo Cremaschi, *RL Section 10.0*
Xudong Wang, *Consultant AHRTI*
Hywel Davies, *Consultant CIBSE*
Tyler Glesne, *BOD Ex-Officio*

GUESTS:

ASHRAE STAFF:

Michael Vaughn, *Sr. MORTS*
Donna Daniel *Res.-Coord*

MEMBERS ABSENT:

Sarah Maston, *Coordinating Officer*

A. CALL TO ORDER

Chair Abdelaziz called the meeting of the committee to order at 8:00 AM.

B. ASHRAE CODE OF ETHICS - <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>

C. ADDITIONS AND/OR CHANGES TO THE AGENDA

Work Statement 1926-WS – not ready for review during this meeting.

D. APPROVAL FALL (SEP. 12th & Oct. 7th) MINUTES

It was moved and seconded that,

- (1) The draft minutes of the RAC fall 2022 meetings be approved as written.

MOTION #1 PASSED: 11-0-0-1, CNV

E. CHAIR'S REPORT

A. CHAIR'S REPORT

a) Disposition of Motions from Last Meeting or Letter Ballots – None

1. RAC approved the following 9 Research Projects for Bid solicitation at their RAC 2022 fall Meeting:

- **1566-TRP** (Equations to estimate evaporation rates from heated water pools in indoor recreational aquatic facilities, Sponsored by TC 8.10, Mechanical and Desiccant Dehumidification Equipment, Heat Pipes and Components; Co-sponsored by, TC 9.8, Large Building Air Conditioning Applications)
- **1716-TRP** (Oil Concentration of Field Installed Liquid Chillers with Flooded Type Evaporators, sponsored by TC 8.02, Centrifugal Machines)
- **1790-TRP** – Water Solubility and the Distribution of Water between Vapor and Liquid Phases of Low GWP Refrigerants, sponsored by TC 3.03, Refrigerant Contaminant Control
- **1843-TRP** - Validation of Low-Order Acoustic Models of Combustion Driven Oscillations on Fire Tube Water Heaters, sponsored by TC 6.10, Fuels and Combustion; Co-sponsored by TC 6.6, Service Water Heating Systems
- **1857-TRP** – Improved simplified methodology for describing and calculating heat conduction between buildings and the ground, sponsored by, TC 4.7, Energy Calculations; Co-sponsored by, TC 4.1 Load Calculation Data and Procedures & TC 4.4 Building Materials and Building Envelope Performance
- **1884-TRP** – The incorporation of odorants in refrigerants to improve leak detection (Experimental Phase), Sponsored by TC 3.01, Refrigerants and Secondary Coolants; Co-sponsored by, MTG for Low Global Warming Potential Refrigerants
- **1890-TRP** – Minimum flow velocities for purging air and debris from hydronic piping systems, Sponsored by TC 6.08, Geothermal Heat Pump and Energy Recovery Applications; co-sponsored by TC 6.01, Hydronic and Steam Equipment and Systems & TC 6.02, District Energy
- **1918-TRP** – The Verification of openings, the limitations of openings, air distribution and humidity conditions in Naturally Ventilated spaces to compliment Section 6.4 of ASHRAE Standard 62.1, Sponsored by SSPC 62.1, Ventilation and Acceptable Indoor Air Quality
- **1919-TRP**- The effects of duct size and aspect ratio on flow noise in elbows, Sponsored by TC 2.06, Sound and Vibration; co-sponsored by TC 5.02, Duct Design

b) New & On-going Action Items Assigned by Tech. Council

1. Better support Research Promotion in raising funds for ASHRAE research program

c) MBO Status Report – Review with action items

It is moved and seconded that,

- (2) research funding approval limit be increased from \$250K to \$350k due to inflation pressures post-CoVID-19.

MOTION #2 PASSED: 10-0-0-1, CNV

Action #1 <Cresmachi>:Write-up a plan to expand the research budget.

Action #2 <Murphy>: Write-up a procedure on the “Conflict of Interest:, for New Investigator,Homer Adams Award, and Innovative Research Grants to be added to the reference manual.

F. BOD EX-OFFICIO & COORD. OFFICER

BOD Ex-Officio Tyler Glesne was in attendabce and announced that he will be leaving RAC after this meeting. He thanked RAC for their outstanding service and wishes much success!

G. DISCUSSION ITEMS

H. ACTION ITEM TRACKING AND PRELIMINARY REVIEW OF FALL ACTIONS & 22-23 MBOs

**New Action Items
Research Administration Committee (RAC)**

Action #	Responsibility	Summary of Action	Status
1	Cremaschi	Write-up a plan to expand the research budget.	New
2	Murphy	Write-up a procedure on the “Conflict of Interest:, for New Investigator,Homer Adams Award, and Innovative Research Grants to be added to the reference manual.	New
3	Staff	Send out a doodle poll for pre-spring meeting.	New
4	Staff	Change Research Breakfast time to 7:00 AM instead of 6:30 AM for the Tampa meeting	New
5	Staff	Change the RAC Saturday meeting time to 8:00 AM through 3:00 PM.	New
6	Bogart, Landsberg, Cremaschi	Recommendations to address the list server and bidders list. Who receives the announcements?	New

I. PROPOSED & POSSIBLE ROB, MOP, REFERENCE MANUAL, RESEARCH MANUAL OR WEBSITE CHANGES & OTHER ITEMS FOR DISCUSSION

NONE

J. RTAR REVIEW

It is moved and seconded that,

- (3) 1944-RTAR, Development of Standard Flow Hood Calibration Methods Investigating the baseline of flow capture hood calibration procedure – TC 7.07 (Testing and Balancing), be accepted with comments.

MOTION #3 PASSED: 11-0-1-1, CNV

It is moved and seconded that,

- (4) 1949-RTAR, Cost and energy implications of increased filtration efficiency in Healthcare Facilities - TC 9.06 (Health Care Facilities), be returned.

MOTION #4 PASSED RPS: 5-0-0-1, CNV

K. WORK STATEMENT REVIEW

It is moved and seconded that,

- (5) 1864-WS, Investigating the applicability of Standard 62.1's Ventilation Rate Procedure for Health Care Rooms, sponsored by SSPC 170 (Ventilation of Health Care Facilities), be accepted.

MOTION #5 PASSED: 11-0-0-1, CNV

It is moved and seconded that,

- (6) 1915-WS, Refrigerated Facilities Doorway Infiltration Air Energy Reduction – TC 10.02 (Refrigeration Applications), be returned.

MOTION #6 PASSED RAS: 3-1-2, CNV

It is moved and seconded that,

- (7) 1928-WS, A decision and evaluation framework to validate weather time series and statistics for use in building performance analysis and design - TC 2.09 (Ultraviolet Air & Surface Treatment), be conditionally accepted.

MOTION #7 PASSED: 12-0-0-1, CNV

It is moved and seconded that,

- (8) 1929-WS, Evaluation of building life cycle analysis tools incorporating embodied carbon - TC 2.08 (Building Environmental Impacts and Sustainability), be returned.

MOTION #8 PASSED RAS: 4-0-1, CNV

L. INNOVATIVE RESEARCH GRANT PRE-PROPOSALS

It is moved and seconded that,

- (9) RAC approved a motion that the following IRG proposals be invited to submit full IRG proposals; #001, #003, and #004.

MOTION #9 PASSED: 11-0-0-1, CNV

M. HOMER ADAMS

It is moved and seconded that,

- (10) RAC approved a motion to award Khaled Alghamdi the 2023-24 Homer Addams award.

MOTION #10 PASSED: 11-0-0-1, CNV

N. NEW INVESTIGATOR AWARD

It is moved and seconded that,

- (11) Davide Zivini be awarded the 2023-2024 New Investigator Award.

MOTION #11 PASSED: 10-0-1-1, CNV

O. CARRY-OVER TRPS, FUNDED EXTENSIONS, & GRANT REQUESTS

None

P. RESEARCH SUBCOMMITTEE CHAIR'S BREAKFAST

a) Proposed Announcements

1. Service to ASHRAE Research Award recipient this year – Brent Stephens – TC 2.04.
Submission date for Service to ASHRAE Research Award Sep. 1st
 2. Importance of obtaining full TC votes on approvals of submitted RTARs and WSs for both sponsoring and co-sponsoring TCs
 3. WS based on conditionally approved RTAR must acknowledge how conditions were cleared.
 4. Be sure to include Milestones in WSs submitted to RAC
 5. Additional Announcements (TBD)
- b) RL Reminders for TCs

Q. TRPS TO POTENTIALLY BID SPRING 2023

RAC to review and evaluate TRPs to potentially be released for bid during the Spring meeting.

R. CONSULTANTS REPORTS

- a) AHRI – Xudong Wang- verbal report
- b) CIBSE – Hywel Davies- verbal report

S. MORTS REPORT

Semi-Annual Report - Basecamp

T. UNFINISHED BUSINESS OR OUT-OF-SEQUENCE BUSINESS

Action #3 <STAFF>: Send out a doodle poll for pre-spring meeting.

- a) Need for a follow-up conference call to select TRPs to bid spring 2023
- b) How many times should a research project go out for re-bid?

U. TENTATIVE RESEARCH PROJECTS

It is moved and seconded that,

- (12) 1843-TRP, "Validation of Low-Order Acoustic Models of Combustion Driven Oscillations on Fire Tube Water Heaters", be awarded to Secat Inc., for a period of 18 months at a total cost to ASHRAE of \$142,504. (**Attachment #1**)

MOTION #12 PASSED: 10-0-1-1 CNV

It is moved and seconded that,

- (13) 1857-TRP, "Improved simplified methodology for describing and calculating heat conduction between buildings and the ground", be awarded to Pennsylvania State University for a period of 30 months at a total cost to ASHRAE of \$112,773. (**Attachment #2**)

MOTION #13 PASSED: 11-0-0-1 CNV

It is moved and seconded that,

- (14) 1884-TRP, "The Incorporation of Odorants in Refrigerants to Improve Leak Detection (Experimental Phase III)", be awarded to Optimized Thermal Systems, Inc., for a period of 12 months at a total cost to ASHRAE of \$149,847. (**Attachment #3**)

MOTION #14 PASSED: 12-0-0-1 CNV

It is moved and seconded that,

- (15) 1890-TRP, "Minimum Flow Velocities for Purging Air and Debris from Hydronic Piping Systems", be awarded to Purge Rite, LLC. for a period of 24 months at a total cost to ASHRAE of \$150,000. (**Attachment #4**)

MOTION #15 PASSED: 10-0-1-1 CNV

NOTE: No action taken on the following TRPs:

- 1918-TRP, TC wishes to clarify work state and rebid project.
- 1919-TRP, TC wishes to clarify work state and rebid project.

V. RESEARCH LIAISON REPORTS

- a) RL Reminders for Atlanta (Each RL send written update to staff after meeting)

W. NEW BUSINESS

Action #4 <STAFF>: Change Research Breakfast time to 7:00 AM instead of 6:30 AM for the Tampa meeting.

Action #5 <STAFF>: Change the RAC Saturday meeting time to 8:00 AM through 3:00 PM.

Action #6 <Bogart, Landsberg, Cremaschi>: Recommendations to address the list server and bidders list. Who receives the announcements?

X. NEW BUSINESS

a) How many times should a potential project be released for re-bid?

Y. REVIEW OF NEW ACTION ITEMS

ADJOURNED

RAC adjourned at 10:40 AM