



Shaping Tomorrow's
Built Environment Today

MINUTES

**RESEARCH ADMINISTRATION COMMITTEE MEETING
MARRIOTT
TAMPA, FLORIDA**

JUNE 24TH & JUNE 28TH, 2023

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

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JUNE 24TH & JUNE 28TH, 2023

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**PRINCIPAL MOTIONS
RESEARCH ADMINISTRATION COMMITTEE
JUNE 24TH & JUNE 28TH, 2023**

| NO. | PAGE | MOTION |
|------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | 1 | Minutes for the RAC 2022 spring meetings be approved as drafted. |
| 2 | 2 | The conflict of interest document be added to the research manual. |
| 3 | 2 | <u>1825-WS</u> , <i>Effects of Locally Provided Makeup Air, sponsored</i> - TC 5.10 (Kitchen Ventilation), be <u>returned</u> |
| 4 | 2 | <u>1909-WS</u> , <i>In-Tube Condensing Flue Gas Heat Transfer and Pressure Drop with Enhancements for Residential Furnaces</i> , sponsored by TC 1.3 (Heat Transfer and Fluid Flow), be <u>returned</u> . |
| 5 | 3 | <u>1915-WS</u> , <i>Refrigerated Warehouse Doorway Infiltration Air Energy Reduction</i> , sponsored by TC 10.02 (Refrigeration Applications), be <u>conditionally accepted</u> . |
| 6 | 3 | <u>1921-WS</u> , <i>Enhancing Whole-Building Calibrated Simulation Using Indoor Environmental Data</i> , sponsored by TC 4.7 (Energy Calculations), be <u>returned</u> . |
| 7 | 3 | <u>1930-WS</u> , <i>Investigation into sensible ranges for potable hot water temperatures to maximize public safety while balancing water and energy conservation</i> , sponsored by TC 3.06 (Water Treatment)), be <u>returned</u> . |
| 8 | 3 | <u>1947-WS</u> , <i>Climate change driven extreme temperature effects map for efficiency and resilience map of heat pump technology</i> , sponsored by TC 2.05 (Global Climate Change), be <u>returned</u> . |
| 9 | 3 | an IRG award is not awarded this society year. |
| 10 | 3 | unsolicited research proposal solicitation be reinstated beginning the society year 2023-24. |
| 11 | 4 | <u>1716-TRP</u> , <i>Oil Concentration of Field Installed Liquid Chillers with Flooded Type Evaporators</i> ” be awarded to Delta Heat GmbH for a period of 13 months at a total cost to ASHRAE of \$132,420. |
| 12 | 4 | <u>1869-TRP</u> , <i>Evaluation of VOCs with Respect to Development of Revised Standard 62.1 Indoor Air Quality Procedure (IAQP) Design Compounds and Design Limits</i> ” be awarded to Portland State University for a period of 18 months at a total cost to ASHRAE of \$187,936. |

NEW ACTION ITEMS
RESEARCH ADMINISTRATION COMMITTEE
June 24th & June 28th 2023

| Action # | Responsibility | Summary of Action |
|----------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Staff | Update research manual to include the new research funding approval amount of \$350k. |
| 2 | Staff | Circulate a doodle poll to new members to determine a good date and time for new member training. |
| 3 | Wen | Draft letters to non-winners of the ASHRAE Graduate Grant-in-Aid to encourage them to apply in the future. |
| 4 | Elbel | Draft pre-proposal and proposal letters to the IRG applicants to make sure all required information is included in the proposal. |
| 5 | Landsberg, Bogart | Come up with ideas/questions to be included on the work statement coversheet in reference to recommended bidders, i.e., have they been contacted. |
| 6 | Staff | Have IT to update website error, "PEC Training" should be PES Training. |
| 7 | Staff | Circulate a doodle poll for the fall meeting after TechC has scheduled their meeting. |

**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 meeting. | 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

ATTACHMENT 1: 1716-TRP
ATTACHMENT 2: 1869-TRP



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MINUTES

RESEARCH ADMINISTRATION COMMITTEE JUNE 24TH & JUNE 28TH, 2023

MEMBERS PRESENT:

Omar Abdelaziz, *Chair*
William Murphy, *Vice-chair*
Jin Wen, *Chair RPS*
Ahmed Kashef, *RL Section 1.0,*
William Hutzal, *RL Section 3.0,1*
Dennis Landsberg, *RL Section 4.0*
Douglas Scott, *RL Section 5.0*
Stefan Elbel, *RL Section 6.0*
James Bogart, *RL Section 7.0*
Carl Huber, *RL Section 8.0,*
Roland Charneux *RL Section 9.0*
Lorenzo Cremaschi, *RL Section 10.0*
Tyler Glesne, *BOD Ex-Officio*

GUESTS:

Chris Gray, *Incoming RL*
Jennifer Nelson
Drury Crawley, *Incoming BOD Ex-Officio*

ASHRAE STAFF

Michael Vaughn, *MORTS*
Donna Daniel, *COORD*

VIRTUAL MEMBERS:

Natascha Milesi-Ferretti, *Chair RAS*
Chee Sheng Ow, *RL Section 2.0*

A. CALL TO ORDER & INTRODUCTIONS & ASHRAE CODE OF ETHICS

Chair Abdelaziz called the meeting of the committee to order on Saturday, June 24, 2023, at 8:00 a.m. and recessed at 3:00 p.m. The meeting was reconvened on Wednesday, June 28, 2023, at 7:00 a.m. and adjourned at 10:00 a.m.

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

C. ADDITIONS AND/OR CHANGES TO THE AGENDA

None

D. APPROVAL OF MINUTES – SPRING 2023 MEETING

It was moved and seconded that,

- (1) the draft minutes of the RAC 2023 spring meeting be approved as drafted.

MOTION #1 PASSED: 13-0-0-1 (14) CNV

E. CHAIR'S REPORT

- a) Disposition of Motions from Last Meeting or Letter Ballots
 1. The four projects bid in Fall 2022(1843, 1857, 1884, and 1890) with project funding motions were approved by RAC/TechC in Atlanta, Georgia.

- b) New & On-going Action Items Assigned by Tech. Council
 - 1. Completed RAC Budget Forecast form for TechC –
- c) New Information Items: TBD
 - 1. Plans for ASHRAE Annual Meeting in Tampa
 - 2. PMS or PES Training Webinars – Need to set date for Webinars in spring and fall
- d) MBO Status Report – Review with action items

F. BOD EX-OFFICIO & COORD. OFFICER

Tyler Glesne gave a brief presentation to RAC and thanked the committee for their work. Presentation available via basecamp.

G. ACTION ITEM REVIEW

**Carry-over Action Items
Research Administration Committee (RAC)
Winter 2023**

| Action # | Responsibility | Summary of Action | Status |
|----------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1 | Cremaschi | Write-up a plan to expand the research budget. | Complete |
| 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. | On-going |
| 3 | Staff | Send out a doodle poll for pre-spring meeting. | Complete |
| 4 | Staff | Change Research Breakfast time to 7:00 AM instead of 6:30 AM for the Tampa meeting | |
| 5 | Staff | Change the RAC Saturday meeting time to 8:00 AM through 3:00 PM. | Complete |
| 6 | Bogart Landsberg Cremaschi | Recommendations to address the list server and bidders list. Who receives the announcements? | On-going |

It is moved and seconded that,

- (2) The conflict of interest document be added to the research manual.

MOTION PASSED RAC: 13-0-0-1 (14) CNV

H. RTAR REVIEW

RAC did not review any RTARs for this meeting

I. WORK STATEMENT REVIEW

RAC reviewed a total of five work statements were submitted to RAC. Four were returned with comments and one was conditionally accepted.

It is moved and seconded that,

- (3) 1825-WS, Effects of Locally Provided Makeup Air, sponsored - TC 5.10 (Kitchen Ventilation), be returned.

MOTION PASSED RAS: 5-0-0-1 (6) CNV

It is moved and seconded that,

- (4) 1909-WS, In-Tube Condensing Flue Gas Heat Transfer and Pressure Drop with Enhancements for Residential Furnaces, sponsored by TC 1.3 (Heat Transfer and Fluid Flow), be returned.

MOTION PASSED RAS: 4-0-1-0 (6) CNV

It is moved and seconded that,

- (5) 1915-WS, Refrigerated Warehouse Doorway Infiltration Air Energy Reduction, sponsored by TC 10.02 (Refrigeration Applications), be conditionally accepted.

MOTION PASSED: 9-0-2-1 (13) CNV

It is moved and seconded that,

- (6) 1921-WS, Enhancing Whole-Building Calibrated Simulation Using Indoor Environmental Data, sponsored by TC 4.7 (Energy Calculations), be returned.

MOTION PASSED RAS: 3-1-0-2 (6) CNV

It is moved and seconded that,

- (7) 1930-WS, Investigation into sensible ranges for potable hot water temperatures to maximize public safety while balancing water and energy conservation, sponsored by TC 3.06 (Water Treatment)), be returned.

MOTION PASSED RAS: 3-1-1-1 (6) CNV

It is moved and seconded that,

- (8) 1947-WS, Climate change driven extreme temperature effects map for efficiency and resilience map of heat pump technology, sponsored by TC 2.05 (Global Climate Change), be returned.

MOTION PASSED RAS: 5-0-0-1 (6) CNV

J. INNOVATIVE RESEARCH GRANT

RAC reviewed three IRG full-proposals.

- a) IRG-001 (Rapid Filter Forensics for Improved Indoor Air Quality) - Siegel
- b) IRG-003 (Reinforcement Learning Ensemble Control for Flow Distribution Management) - Bach
- c) IRG-004 (Using Surface Wettability Patterning to Enhance Air-Side Heat Transfer by Generating Frozen Water Droplet Vortex Generators on the Fin Surface) - Sommers

It is moved and seconded that,

- (9) an IRG award is not awarded this society year.

MOTION PASSED: 12-0-0-1 (13) CNV

K. UNSOLICITED RESEARCH PROPOSALS

It is moved and seconded that,

- (10) unsolicited research proposal solicitation be reinstated beginning the society year 2023-24.

MOTION PASSED: 11-0-0-0 CNV

L. CONSULTANTS REPORTS

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

M. RSESEARCH SUBCOMMITTEE CHAIR'S BREAKFAST

Presentation available via basecamp

N. PLANS FOR FY 23-24 SOCIETY YEAR

- a) Thank the chair and members rolling-off RAC (Kashef, Hutzal, Ow, Cremaschi,
- b) Chair, Vice Chair and Subcommittee Chairs:
 - a. William Murphy – RAC Chair
 - b. Natascha Milesi-Ferretti – RAC Vice-chair
 - c. Stefan Elbel – RAS Chair
 - d. Jin Wen – RPS Chair
- c) Introduce new members of RAC
 - 1. Chris Gray – RL Section 2 – RPS
 - 2. Srinivas Katapamula RL Section 1 – RPS
 - 3. Matthew Mullen - RL Section 6 – RAS
 - 4. WenBin Ng - RL Section 10 – RAS
 - 5. Zheng O'Neill - RL Section 3 – RAS
- d) New RAC Member Training – early August Web session prior to fall meeting?
- e) Review new assignments & positions for RAC members
- f) Fall Meeting 2023 – Need to meet before TechC meets on October 9th, 2023.
- g) Review SY 23-24 RAC MBOs

O. TENTATIVE RESEARCH PROJECTS

It is moved and seconded that,

- (11) 1716-TRP, Oil Concentration of Field Installed Liquid Chillers with Flooded Type Evaporators” be awarded to Delta Heat GmbH for a period of 13 months at a total cost to ASHRAE of \$132,420. (**Attachment #1**)

MOTION PASSED:12-0-0-1 CNV

It is moved and seconded that,

- (12) 1869-TRP, Evaluation of VOCs with Respect to Development of Revised Standard 62.1 Indoor Air Quality Procedure (IAQP) Design Compounds and Design Limits” be awarded to Portland State University for a period of 18 months at a total cost to ASHRAE of \$187,936. (**Attachment #2**)

MOTION PASSED: 13-0-0-1 CNV

STATUS OF OTHER TENTATIVE RESEARCH PROJECTS THAT WERE UP FOR FUNDING CONSIDERATION AT THIS MEETING:

- a) 1566-TRP, Equations to estimate evaporation rates from heated water pools in indoor recreational aquatic facilities, Responsible Committee: TC 8.10, (Mechanical and Desiccant Dehumidification Equipment, Heat Pipes and Components); Co-sponsored by: TC 9.8, (Large Building Air Conditioning Applications) - Huber Lead, Cremaschi 2nd - (Conflicts – RAC / None TechC / None) 3 bids received.
Status: RAC did not approve the contractor recommendation instead, RAC has asked the TC to form a new PES and re-evaluate the bids received.
- b) 1919-TRP, The Effects of Duct Size and Aspect Ratio on Flow Noise in Elbows, Responsible Committee: TC 5.2 (Duct Design) - Hutzal Lead, Hutzal 2nd - (Conflicts – RAC / None TechC / None) – Single bid received.
Status: TC will letter ballot contractor recommendation.

P. RL Reminder Report

Q. MORTS REPORT

Available via basecamp

R. UNFINISHED BUSINESS

None

ADJOURNED

The meeting of the Research Administration Committee was adjourned at 10:30:00 a.m., Wednesday, June 28, 2023.