Full Committee Meeting Agenda

TC 1.4 Control Theory and Application
http://tc0104.ashraetcs.org/
Tuesday, June 27, 2023 1:00 – 3:30 pm EDT Hybrid Conference

"Commitment to the ASHRAE Code of Ethics – In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, integrity and respect for others, and we shall avoid all real or perceived conflicts of interests. (See full Code of Ethics: https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics.)"

1) **Call to Order**

2) **TC 1.4 Scope**

   a) ASHRAE Technical Committee 1.4 is concerned with control theory, systems, and components (excluding refrigerant flow controls) for heating, ventilating, air conditioning, and refrigeration uses.

3) **Introduce Members, Guests, and Liaisons**

   a) General Introductions – In person and virtual

   b) Determination of a quorum

VOTING MEMBERS FOR THIS MEETING (Need (5) or ½+1 for a Quorum)

NAME	Roll-Off-Date		NAME	Roll-Off-Date	
Charlotte Dean	6/30/26	X	Christopher Benson	6/30/23	X
Chariti Young	6/30/26	X	Elise Backstrom	6/30/25	X
Nemat Lotfi	6/30/23		Joe Kilcoyne	6/30/25	X
Amanda Pertzborn	6/30/23	X	Paul Ehrlich	6/30/25	X

4) Voting Items

    a) Approval of minutes from 2023 Winter Meeting. Chariti Young moved, Elise Backstrom seconded. 5-0-0 (CNV).

    b) Final Report Approval - *RP-1661 Development of Near-Optimal Control Sequence for Chiller Plants with Water Side Economizer using Dynamic Models. Chariti moved to approve. Amanda seconded. Chariti moved to table vote to email ballot after research subcommittee and voting members have had adequate time to review Final Report.*

    c) Vote to Co-sponsor TC 5.11's RTAR titled *Establishing a Minimum Relative Humidity Level to Achieve Occupant Health and Productivity Benefits. The relevance of this RTAR to TC1.4 was questioned by Chris Benson, Joe Kilcoyne, and Paul Ehrlich. Chariti suggests co-sponsorship from Standard 55.*

        i) *Chariti motions to vote to not co-sponsor the RTAR but encourage co-sponsorship with Standard 55. Chris Benson seconds. 7-0-0.*

        ii) *Chris Benson recommends future potential collaboration options.*

5) Chair's Report

    a) Announcements and Highlights from TC Chairs Breakfast Meeting

        i) GAC: The Government Affairs Update (GAU) is a resource for ASHRAE members, as well as those interested in the built environment, to stay informed about actions across all levels of government concerning the HVAC&R community, the engineering profession, and sustainable and resilient development.

            (1) The bimonthly update from ASHRAE's Government Affairs department also highlights ASHRAE member involvement with the government.

            (2) https://www.ashrae.org/about/government-affairs/government-affairs-updates

            (3) Subscribe: https://ashrae.realmagnet.land/gau-newsletter-signup

        ii) TAC: ASHRAE has made available to members several videos related to Diversity, Equity, and Inclusion as they relate to ASHRAE

            (1) Training Recordings: DEI Foundations and Implicit Bias in Decision-Making

            (2) https://presentationaccess.ashrae.org/Index?identity=memberchair

6) Announcements

    a) **TAC – Technical Activities Committee – Section Head Jason Atkisson (incoming) | Corey Metzger (outgoing)**
        i) Upcoming conferences
- Jan. 20-24, 2024 – Chicago, IL
- June 22-26, 2024 – Indianapolis, IN
- Feb. 8-12, 2025 – Orlando, FL
- June 21-25, 2025 – Phoenix, AZ

ii) Reported by Corey Metzger. New standing committee: Global Technical Standards Committee. 4 ISO standards to be managed by ASHRAE staff. Jamie Bennett was involved in developing the standing committee. (Interest should be passed to Jamie, Jason, or Corey). Government Affairs involvement opportunities are available.

iii) Recognition of Joe Kilcoyne as outgoing chair.
   (1) Motion by Chariti that TC1.4 appreciates Joe's dedication and hard work for TC 1.4. Ron seconded.

b) **RAC – Research Activities Committee – Section Head Ahmed Kashef**
   i) Ahmed Kashef is rolling off.

7) Liaison Reports – TC 1.4 Sponsored Functional Groups

a) **SGPC 13 Specifying Building Automation Systems**

   i) Chair Todd Gottshall, Vice Chair Philip Naughton

   (1) Reported by Tara, incoming Vice Vhair. Committee has the public review comments and is in the process of addressing. Document greatly increased in page quantity (~200 to 600), so committee is looking for options to reduce page quantity and potentially create a user guide. Q1/2024 is approximate date of publishing.

   (2) Future of Guideline 13 is looking at potential sections on IT/OT, integration with other systems, as well as others. Would require extending the scope of Guideline 13.

b) **SGPC 36 High Performance Sequences of Operation for HVAC Systems**

   i) Chair Jeff Boldt, Vice-Chair Joe Zhou

   (1) Reported by Joe Zhou, incoming chair. Worked with DOE to develop Control Flow software for automatic generation of project specific specifications compliant with Guideline 36. Creating a working group to test Guideline 36 application and promote industry adoption, if interest in participating, contact Jim Coogan. NIST Functional Performance test module tool seminar occurred at this conference. Approved addendums that will require a future vote.

c) **SPC 231P CDL – A Control Description Language for Building Environmental Control Sequences**

   i) Chair Paul Ehrlich

   (1) Project started in 2020, Standard is 90-95% complete. Committee meets every two weeks by Zoom. Contact Paul Ehrlich if interested in being involved.

d) **SSPC 135– BACnet - A Data Communication Protocol for Building Automation and Control Networks**

   i) Chair Coleman Brumley, Jr. No representative present to report.

   ii) Chariti mentioned BACnet SC working group.

e) **MTG.CYB - Cybersecurity for HVAC Systems And Related Infrastructure**

   i) Liaison –Ron Bernstein

(1) Committee meeting was held on June 12th prior to the conference. June edition of the ASHRAE Journal had article. Committee discussed promotional opportunities outside ASHRAE to get input from other societies.

f) **MTG.EBO - Effective Building Operations**

i) Liaison –Joe Kilcoyne

(1) Looking to co-sponsor a program for Chicago. A topic has not been finalized but the Controls track was singled out.

(2) Have started an infographic similar to the Epidemic Task Force's to provide a single starting place for EBO resources.

8) Sub-Committee Reports

a) **Executive** – Joe Kilcoyne | vice chair Elise Backstrom

i) Voting Member Succession

NAME	Roll-Off-Date	User	Contractor	Manufacturer	Consultant	Research
Nemat Lotfi	6/30/2023			1		
Amanda Pertzborn	6/30/2023					1
Christopher Benson	6/30/2023	1				
Elise Backstrom	6/30/2025				1	
Joe Kilcoyne	6/30/2025				1	
Paul Ehrlich	6/30/2025					1
Charlotte Dean	6/30/2026				1	
Chariti Young	6/30/2026			1		
TOTAL		**1**	**0**	**2**	**3**	**2**
NAME	Roll-Off-Date	User	Contractor	Manufacturer	Consultant	Research
Jayson Bursill	6/30/2027			.5		.5
JoeDon Breda	6/30/2027	1				
Taraneh Shoorideh	6/30/2027				1	

Name	Date					
Elise Backstrom	6/30/2025				1	
Joe Kilcoyne	6/30/2025				1	
Paul Ehrlich	6/30/2025					1
Charlotte Dean	6/30/2026				1	
Chariti Young	6/30/2026			1		
TOTAL		**1**	**0**	**1.5**	**4**	**1.5**

  ii) TC Leadership Succession

    (1) Effective 6/30/23: Elise Backstrom chair, Charlotte Dean vice-chair, Michelle Shadpour secretary/webmaster

  iii) Subcommittee Leadership

    (1) Terry and Tara will swap roles – Terry will be the new Handbook Chair, Tara will become the vice chair.

    (2) Michelle will look for a new vice-chair for YEA subcommittee

    (3) Frank will be looking for a new vice-chair for Programs subcommittee

  iv) Potential collaboration with TC 7.5 at 2024 Winter Conference

b) **Education/YEA** – Michelle Shadpour | vice chair Elise Backstrom
 i) This year there were 3 programs sponsored by TC 1.4 with YEA members, Seminar 45, Seminar 11, and TC Special Seminar.
Potential Student Activities and YEA webinars on Controls.
 c) **Program** – Frank Shadpour | reported by Michelle Shadpour

d) **Brainstorming - Innovative and Disruptive Technologies** – Chad Moore | vice chair Chris Benson
 i) New title attracted new interest.
 ii) Potential future discussion on gaps in standards and future needs in TC.

e) **Research** –Amanda Pertzborn | vice chair Jayson Bursill
 i) 0 RTARs submitted, 6 WSs for this meeting (1 accepted, 5 returned). Encouraging RTAR submissions. Restrictions on research funding lifted, budget up to pre-COVID amounts. Co-funding is strongly encouraged.
 ii) No nominees to Service to ASHRAE Research. If someone in mind, nominate to Amanda or Elise.

f) **Handbook** – Tara Shoorideh | vice chair Terry Schroeder
 i) Subcommittee is working on Handbook chapter 7. Updated all the references and re-aligned with Standards.
 ii) Working on updating language on convergence of IT/OT, cybersecurity, additional end devices, IAQ reference updates, updating the commissioning section, and deharmonization.

iii) Working to have updates complete prior to one month before the winter meeting for TC review/approval.

g) **Standards** – Steve Taylor
   i) No report.
h) **Webmaster** – Charlotte Dean

9) Committee Liaison Reports
a) Task Force on Building Decarbonization (TFBD) – Larry Fisher
   i) Development is working on writing grants to other industries to support these topics.
   ii) Rewriting the strategic plan to include decarbonization.
b) Epidemic Task Force (ETF) – Mike Pouchak
   i) ETF has been disbanded. (To be removed from future agendas.)
   ii) Seminar was presented at this conference.
   iii) Exit from pandemic operating mode is up to each organization, ETF will not provide direction.
c) TC 1.5 (Emerging Computing Applications) – Mike Pouchak
   i) RP-1815: Integrating occupant behavior data with MTG. Multiple TC co-sponsors.
d) TC 2.10 HVAC Security – Kim Barker
   i) No report.
e) TC 7.5 (Smart Building Systems) – Joe Zhou
   i) 3 new RTARs/WSs. One on occupant centric demand response program for residential buildings, the other on smart buildings, connected communities, and microgrids. Awaiting vote for submission to RAC.
f) TC 9.10 (Laboratory Systems) – Jim Coogan
   i) Seminar (Wednesday) on airflow control.
g) TC 9.11 (Clean Rooms) – Phil Naughton
h) SSPC 62.1 (Ventilation and Acceptable IAQ) – Steve Taylor
   i) No report.
i) SSPC 90.1 (Energy Efficient Design of New Buildings) – Steve Taylor
   i) No report.

10) Old Business

a) The editor of Special Publications with ASHRAE has asked whether TC 1.4 members will agree to review the ASHRAE's eLearning coursebooks FUNDAMENTALS OF HVAC CONTROL SYSTEMS and FUNDAMENTALS OF HVAC SYSTEMS in preparation for an update to their eLearning courses.

   i) Existing ASHRAE eLearning Course Package: DDC Controls
      (1) DDC Networks and Protocols
      (2) DDC Specification, Installation, and Commissioning
      (3) DDC Introduction to Hardware and Software
   ii) Feedback form was sent out. TC needs to have a consensus of comments prior to sending back to Publications, Joe to compile comments.

11) New Business

a) Jim Coogan proposal: Bring a chatbot to participate in a TC meeting at the next conference, small scale for Chicago conference, likely one meeting.

12) Upcoming Deadlines
- Chicago Winter Conference
- Seminar, Forums, Workshops, Panels and Debates proposals are due by Wednesday, August 2, 2023.
- The portal to submit programs opened on Wednesday, June 14, 2023

13) Next Meeting – 2024 ASHRAE WINTER CONFERENCE| January 20-24, 2024| Chicago

14) Adjourn. Chariti motioned. Paul Seconded. 6-0-0 (CNV).