



1791 Tullie Circle, N.E. / Atlanta, GA 30329
404-636-8400

TC/TG/TRG MEETING MINUTES

TC/TG/TRG NO. (TITLE): TC 5.9 Enclosed Vehicular Facilities
DATE/TIME OF MEETINGS: June 25 2024 3:30 - 5:30 PM
LOCATION: Indianapolis, IN
Hybrid Conference

- ❖ The Chair, Matt Davy, called the meeting to order at 3:32 pm.
- ❖ There were 5 of 7 voting members present, which met requirements for a quorum.
See attendee list attached to minutes.
- ❖ Chairman's Remarks – Matt Davy
 - ❖ Provided a reminder of the ASHRAE Code of Ethics.
 - ❖ Attended Chair meeting on Sunday morning and provided a review of handout/presentation items.
 - ❖ Updated FG Reference Manual available at www.ashrae.org/TAC
- ❖ Liaison Reports
 - ❖ Section 5 Head (Kevin Marple)
 - ❖ Roster updates are possible before June 30th.
 - ❖ TAC strategic plan has been approved.
 - ❖ Electronic Communications Committee (ECC) -- online platform for all TC forms; completed by end of calendar year.
 - ❖ Activity Form is due tonight.
 - ❖ This is the last meeting for Kevin -- Estaban Baccini will be his replacement.
- ❖ Approval of minutes from 2024 Chicago Winter Meeting – approved.
- ❖ Membership/Roster
Starting July 1st: (All voting members and/or subcommittee chairs)

Name	Role	Voting		Name	Role	Voting
Dmitry Kogan	Chair	Yes		David Newman	Membership	
Sean Cassady	Vice Chair	Yes		Michael Feuser	Member	Yes
David Hahm	Secretary	Yes		Elias Papadopoulos	Member	Yes
David Hahm	Research Chair	-		TJ Lyle	Member	Yes
Yuan Li	Standards Chair	Yes				
Andrew Louie	Handbook Chair					

Name	Role	Voting		Name	Role	Voting
Yoon Ko	Program Chair					
Fraser Campbell	Webmaster					

❖ Subcommittee Reports

❖ Programs Subcommittee (Yoon Ko) – see report attached to minutes.

- ❖ No programs sponsored by TC5.9
 - ❖ Programs of interest at the Indy conference:
 - ❖ Duncan Pfyfe Seminar 26 (modeling battery storage)
 - ❖ Hassan ?? (WSP) Conf Paper 9 (BEB depot)
 - ❖ Hodges (J-H) Conf Paper 15 (smoke control of long atria)
 - ❖ Orlando
 - ❖ Review of ideas from last meeting
 - ❖ Michael Feuser interesting in presentation; connect w/ David Newman
 - ❖ PIARC -- see notes from Yoon
 - ❖ Phoenix
 - ❖ Cheng Wee Leong interested in presenting
 - ❖ Old topics – remove old ideas and start new
 - ❖ Presentations at future committee meetings? (suggestion by Igor)
 - ❖ AI for tunnels? debate
 - ❖ New topics
 - ❖ Retrofitting of tunnel ventilation for enclosed vehicular facilities
 - ❖ Hydrogen vehicles -- Igor
- ❖ Research Subcommittee (David Hahm) – no update
- ❖ Battery storage ally is TC9.2; reach out to Duncan
 - ❖ Phase 2 of FHWA -- Phase 1 officially issued? Need to get main funding from FHWA

❖ Handbook Subcommittee (Andrew Louie) – no new updates

- ❖ Need to schedule meetings for reviewing existing edits
- ❖ Handbook subcommittee meetings -- still in committee

❖ Standards Subcommittee (Yuan Li)

- ❖ Standard 217 maintenance -- suggestions from Bill Lampkin for changes (driven by industry); need to document and standardize; need to schedule meetings for review; include reference to Standard 241
- ❖ Enrollment form for Standard 217 members? <https://www.ashrae.org/technical-resources/standards-and-guidelines/apply-to-a-project-committee>
- ❖ First meeting in September?

❖ Webmaster (Simona Georgiev) – no update

❖ New Business and Comments

- ❖ Website updates -- connect w/ Fraser; get basecamp set-up for Fraser.
- ❖ Next Meeting scheduled for Orlando, FL – Tuesday February 11, 2025
- ❖ Adjournment at 4:52pm.
- ❖ Submitted by Matt Davy, Chair – TC 5.9

TC5.9 PROGRAM SUB-COMMITTEE REPORT

Prepared by Yoon Ko

Indianapolis Summer 2024

1. Programs for the current meeting Programs:

No program sponsored by TC 5.9

Some programs of interest to 5.9 embers:

- Seminar 26: Modeling Battery Storage Applications, Monday, Duncan presentation on 'Evaluation of Hydrogen out-Gassing from Overcharged Batteries within an Electronics Cabinet', June 24, 9:45 AM – 10:45 AM EDT
- Conference Paper Session 9: Electrification Technology, Monday, June 24, 11:00 AM – 12:00 PM EDT
 - Investigation of Fire Hazard Mitigation, Control and Ventilation for Battery Electric Bus Fire in Enclosed Vehicular Facility (IN-24-C022), WSP
- Conference Paper Session 15: Fundamentals and Application of IAQ, Tuesday, June 25, 11:00 AM – 12:30 PM EDT
 - Presentation 4: The Role of Heat Transfer in Smoke Control of Long Atria (IN-24-001), TC 5.6 research project

2. Future conferences

	Conference paper abstract due	Seminar, Forum proposal due	Extended Abstract Paper Due
Orlando, FL, Feb. 8-12, 2025	closed	Friday, August 2, 2024	closed
Phoenix, June 21-25, 2025			
Las Vegas, NV, Jan. 31-Feb. 4, 2026			
Austin, TX, June 27-July 1, 2026			

Debate - 1 moderator, 60-90 min, 3-4 panelist, in individual presentations

Forum - 1 moderator, 60 minutes, no presentations

Panel -1 moderator, 60-90 minutes, 3-6 participants, no individual presentations

Seminar -2-3 speakers for 60 min or 3-5 speakers for 90 min

Workshop - One chair and two presenters (maximum), 60 min long including 30 min presentation and 30 min discussion

2025 ASHRAE Winter Conference (February 8 - 12, 2025 | Orlando, FL, USA)

[Call for Programs \(confex.com\)](https://confex.com)

Track 1: Artificial Intelligence, Building Automation and Controls

Track 2: Energy Storage and Grid Resiliency

Papers and programs in this track focus on advances in cost-effective TES materials and systems, integration of thermal TES in building envelopes or HVAC systems and grid resiliency.

Track 3: Fundamentals and Applications

Track 4: Future-Proofing the Built Environment

innovative technologies and strategies that are evolving across the globe that reimagine our relationship with the built environment now and into the future, including design strategies for extreme climates and weather, appropriate responses to energy supply disruptions, and how all these factors are tied to resilience and energy conservation efforts.

Updated on 2025-02-09

Track 5: 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 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 6: Industrialized Construction: Opportunities and Challenges

Track 7: Pathways to Building Decarbonization

case studies and research across the globe on the methods / policies being evolved to reduce carbon impacts on the global environment; tools and resources to make zero energy design and operation more easily achievable; innovative low-carbon materials and state-of-the-art technologies and strategies to achieve zero energy communities and campuses; and policies, regulations, codes, standards and utility and government programs for adoption and scale up of net zero (or net positive) energy building and community initiatives.

Track 8: Refrigeration and Refrigerants

Track 9: Ventilation and Indoor Environmental Quality

3. TC 5.9 Program topics

- ☐ NEW TOPICS!
- ☐ Underground Parking Garage issues + EV hazards [Cheng]
Yoon to contact Cheng to develop a program proposal (seminar?)
- ☐ AI application to tunnel safety systems [Igor]
Yoon to contact Igor to prepare a DEBATE proposal
- ☐ Hydrogen vehicle safety issues

FYI, on-line submission link for Orlando meeting

[Call for Programs \(confex.com\)](https://confex.com)

- ☐ Other topics, please contact Yoon Ko <yoan.ko@nrc-cnrc.gc.ca>

ID	Name2	Affiliation	Email2	Member	Member Category	YEA Member?	International Member?
1	Duncan Phye	Verdantas	dphyfe@verdantas.com	Yes	Corresponding	No	No
2	Bill Lampkin	Greenheck fan. Damper	Bill.lampkin@greenheck.com	Yes	Corresponding	No	No
3	Andrew Louie	WSP	andrew.louie@wsp.com	Yes	Non-Voting	No	No
4	Fraser Campbell	Halton MEI	fraser.campbell@halton.ca	Yes	Provisional	No	No
5	Eric Li	RWDI	eric.li@rwdi.com	Yes	Corresponding	No	No
6	Dimitry Kogan	Port Authority of NY & NJ	dkogan@panynj.gov	Yes	Voting	No	No
7	George Hadjisophocleous	Carleton University	g.hadjisophocleous@carleton.ca	Yes	Corresponding	No	No
8	Jacob Carr	AWV	jcarr@awv.com	Yes	Provisional	No	No
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14	Yuan Li	Jacobs	yuan.li@jacobs.com	Yes	Corresponding	No	No
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