



**ASHRAE TC 9.2**

**Industrial Air Conditioning**

**Winter Meeting Agenda – Orlando, FL**

**Hilton Orlando, L, Lake Highland B**

**Tuesday 2/4/2020**

**1:00 – 3:30 P.M.**

**1:00 - 3:30 P.M. Kevin Marple chaired the meeting**

**1. Call to Order and Opening Remarks - Marple**

- “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>.)” <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>

**2. Self-Introduction of Members and Guests – All**

Total attendance: 37, 7-Remote, 30-On location

See sign in sheet for attendees.

Remote participants: (7 participating)

- Mohammad Farooq Saeed
- Bill Kumpf
- Ken Goodman
- April Ricketts
- Jeremy Snyder
- Harvey Schowe
- Danilo Catelan

Total Attendance:

- 30 – local / 7 - online / 37 - Total
- Non-Voting members: 20
- Guests: 11

### 3. Quorum Status Determination of Meeting Quorum – Marple/Phyfe

Quorum reached: 5 of 9 present at votes, final attendance of 6 members

Voting Members:

Kevin Marple ✓ (roll-off 6/30/20)	Bill Lampkin ✓	Mike Connor ✓ (roll-off 6/30/20)
Duncan Phyfe ✓	Mike Baucom	Erich Binder ✓ (post-voting)
Ravi Ganta	John McKernan ✓	Joel Foster

### 4. Approval of Minutes from Atlanta Minutes – Marple/Phyfe

- Minor correction to spelling of Bill Kumpf

**Motion:** Phyfe / *to accept the minutes with minor corrections*

**Second:** Conner

**Vote:** Unanimous (5-0-0, chair voting) / **Motion Passed**

### 5. Chair Report Section Chair Meeting Update – Marple

TC 9.2 Chair: Highlights from Chairs breakfast (full report attached)

- Program statics from TAC
- Upcoming meeting
  - Ventilation 2021, Toronto CA
    - August 15-18, 2021
    - Call for papers coming soon
    - Topics in minutes
  - ASHRAE conference
    - Austin programs due 2/10
    - Chicago call for papers out

Section 9 section head:

- Roster update link, please update
- TC 9.8 large building, Chair passed away (week before ASHRAE)
  - TC 9.4 voted to merge into TC 9.8
- Multiple Section 9 TC's looking to merge
  - TAC looking to continue the merger process in Section 9
- TC 9.2 is considered active & healthy

### 6. Membership Report Voting Member Status, Roster Update & New Members - Marple

- Call for members to join/upgrade
- 2 voting members rolling off (Kevin & Mike)

## **7. Chapter Technology Transfer Committee (CTTC) Liaison - (Marple)**

- No report

## **8. Handbook/Programs/Research Subcommittee Reports - (Jensen/Foster/Mead)**

## **9. Handbook Subcommittee Report - Goodman**

- Technical problems, no audio report
- Handbook chapters up for review/dates:
  - Discussion on 9.2 & old TC 5.8 chapters
- Eric: how to propose “update” or “new”
  - For existing chapters discuss w/Ken Goodman (chair)
  - Connor: walk through of his ongoing new chapter process

## **10. Research - Mead**

- No Report

## **11. Program Report: Future Programs and Program Plan – Foster**

- No Report

## **12. Update on all Standards – Deep Ghosh**

- Guideline 21, Battery Ventilation
  - Published, revision of 2012 issue
  - Joint venture w/IEEE titled: IEEE 1635/ASHRAE Guideline 21
  - Workshop Monday

## **13. Nuclear**

- Scott remotely led
- Good student attendance
- Design guide completed (15 sections)
  - Sub. Committee voted 4-0-1, requesting TC 9.2 send Design Guide for publishing
  - **Motion:** Sub. Committee requests that the Chair of TC 9.2 submit the Design Guide for publishing
    - 5-0-0, chair voting / Motion Passed
- Ghosh: update on Vogel plant building:
  - fuel load this year with second plant to follow in year

## **14. Hazardous Spaces**

- Ghosh: explained general scope to Martin
- No vote this meeting, due to comment incorporation

- goal to have email ballot well before Austin

#### **15. STD 62.1 Liaison**

- no report, unable to make it to meetings
- position open

#### **16. STD 90.1 Liaison**

- Liaison-position is open - no report

#### **17. TG 2 HVAC Liaison**

- (Abramson) TG 2
  - Reviewing scope
  - Publish standard guideline 29 'Resilience & Security'
  - Chapter 59 published
  - Looking to have 2 future sessions in Austin
  - 8AM tomorrow session on resilience
- (Abramson) MTG-OB: occupant & behavior
  - Met Monday
  - Application/Chapter 25 published
  - Requesting TAC to move from MTG to TC

#### **18. Webmaster**

- Baucom: No Report
- Web Sites <http://tc0902.ashraetcs.org/index.php>

#### **19. Journal/Insights Liaison**

- Norm Maxwell is liaison - no report.

#### **20.ASHRAE Learning Institute (ALI)**

- Norm Maxwell is liaison no report.

#### **21. Old Business:**

- Industrial HVAC Conference – August 2021 Toronto (Frank Mortl/ACGIH)
  - Industrial ventilation manual by ACGIH – Partnership w/ASHRAE
    - Working to develop programs together to create
      - Practical knowledge
    - Leveraging experience conferences put on ACGIH
      - Annual in various states & countries



- Quarter 4 hour courses available
- ASHRAE taking on conference as ASHRAE Topical Conference
  - ASHRAE plans to keep 3 year event cycle
  - Using Topical Conference ASHRAE format
    - Technical and practical focus
    - Expecting 250 – 300 people in attendance
  - International event not strictly US/Canada
- (Marple) call for paper coming, TC 9.2 should be major contributor
- TC 5.8 discussion:
  - Is a subcommittee required on TC 9.2
    - At present no need to consider subcommittee identified
  - Focused on handbook chapters
  - Chapters identification – to ensure updates are continued through TC 9.2
- TC 5.4 Merger (TAC Initiative)
  - No discussion in TC meeting
  - TC 5.4: Industrial ventilation control
    - Previously struggling
    - Currently strong with activity & pipeline of research
- (Marple) Recognize Eric & Matt for seminar on Sunday
  - Cold climate design & application
- Matt/Eric:
  - Felt it was a good seminar
  - Many questions after seminar
  - Background to code to application
- Bill K – feedback to TAC merger: “What happen with all the feedback?”
  - (marple) provided and response “thank you”
    - No specific response

## **22. New Business – Marple**

- Industrial HVAC Guide for Oil & Gas Facilities (Binder)
  - Sunday – Cold climate seminar
  - Creating international guide for Oil & Gas beyond cold climate
    - Off-shore and specifically more international perspective
    - Much information existing needs to be captured
    - Looking for volunteers
- TC 9.2 sub-committee policy
  - Reduce space by off-site meeting (conference call)
  - Report in Main TC meeting
  - Cost of people/space driving ASHRAE’s initiative
- Toxic Shelter Guidance (Martin Timm)
  - “Informal remarks” - What could happen?
    - No specific information for industrial facilities on ventilation
      - Residential data is available

- Refinery does include limited information
- ASHRAE providing data for infiltration of toxics
- Shelter vs. evacuate “by wind”
  - When does the shelter become untenable
    - Instructions for leave vs. stay
- Preparing literature search
  - Looking to see interest within TC 9.2
  - Is there energy for a Gap analysis
    - Erick/Matt discussed some experience
      - Risk (company) vs. protection of people (ventilation)
      - Eric’s handbook comments all in similar focus guide
    - Siting: for fire/explosion not much on toxic
      - (Ghosh) nuclear does this for nuclear or toxic release
    - (Schowe) design guide w/formula looking at density/contaminate distribution
      - (Kay Clark) echo Schowe’s discussion
    - (Abramson) bomb shelter [section 2] for physiological data
- UNEP providing training on refrigerants
  - Volunteers for creating a guideline/checklist

### **23. Adjourn Announcement of Next Meeting**

- Next meeting 6/30/2020 @ Annual Conference, Austin

**Adjourn:** Binder moved. 2:55 pm

**Action Items:**

Action for	Action Item
Marple	Handbook chapters published to web (confirm: capture "TC 5.8" chapters)
Phyfe/Marple	Toxic shelter contact lists

Respectfully submitted

Duncan Phyfe

Secretary

February 6,2020

**Attachments:**

- TC 9.2 Agenda for Orlando
- TC 9.2 Approved Meeting Minutes from 2019 Summer /KC (not including attachments)
- TC 9.2 Sign-In
- Orlando 2020, TAC Section Head Breakfast Handout

**ASHRAE TC 9.2 – Industrial Air Conditioning and Ventilation Committee**  
**Annual Meeting Agenda – Orlando, FL**  
**Hilton Orlando, L, Lake Highland B**  
**Tuesday 2/4/2020**  
**1:00 – 3:30 P.M.**

*“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>.)”*

Item	Activity	Topics	Presenter	Duration (in Min.)	Approximate End Time
1	Call to Order and Opening Remarks	Approval of Agenda/Code of Ethics	Marple	0:02	1:02 PM
2	Self-Introduction of Members and Guests	Attendance Sheet	All	0:05	1:07 PM
3	Quorum Status	Determination of Meeting Quorum	Marple/Phyfe	0:05	1:12 PM
4	Approval of Minutes from Kansas City, MO	Minutes and Activity Report	Marple/Phyfe	0:10	1:22 PM
5	Chair Report	Section Chair Meeting Update	Marple	0:10	1:32 PM
6	Membership Report	Voting Member Status, Roster Update & New Members Announcements	Marple	0:05	1:37 PM
7	Chapter Technology Transfer Committee (CTTC)	Status Report	Marple	0:02	1:39 PM
8	Handbook/Programs/Research Subcommittee Reports	Update on Subcommittee Meeting	Jensen/Foster/ Mead	0:18	1:57 PM
9	Handbook	Update	Goodman	0:02	1:59 PM
10	Research	Open	Mead	0:05	2:04 PM
11	Program Report	Review of Future Programs & Program Plan	Foster	0:10	2:14 PM
12	Standards	Open	Ghosh	0:05	2:19 PM
13	Nuclear (Winter Meeting Only)	Update	John MacMurray	0:05	2:24 PM
14	Hazardous Spaces	Design Guide Development Report & Discussion	Baucom	0:10	2:34 PM
15	Standard 62.1 Liaison	Meeting Report	Open	0:05	2:39 PM
16	Standard 90.1 Liaison	Meeting Report	Baucom	0:02	2:41 PM
17	TG2.HVAC Liaison	Meeting Report	Abramson	0:05	2:46 PM
18	Webmaster	Status Report	Baucom	0:05	2:51 PM
19	Journal/Insights Liaison	Update on Journal Activities	Maxwell	0:05	2:56 PM
20	ASHRAE Learning Institute (ALI)	Report on ALI	Maxwell	0:04	3:00 PM
21	Old Business	Ventilation 2021 Conference; Ventilation Subcommittee; TC5.4 Merger (TAC Initiative)	Marple/Binder	0:15	3:15 PM
22	New Business	Industrial HVAC Guide for Oil & Gas Facilities; Toxic Shelter Guidance	Marple/Baucom/Binder	0:13	3:28 PM
23	Adjourn	Announcement of Next Meeting – Austin 6/30/2020	Marple	0:01	3:29 PM



**ASHRAE TC 9.2**  
**Industrial Air Conditioning**  
**Annual Meeting Agenda – Atlanta, GA**  
**Kansas City Convention Center, 2015B**  
**Tuesday 6/25/19**  
**1:00 – 3:30 P.M**

**1:00 - 3:30 P.M. Kevin Marple chaired the meeting**

**1. Call to Order and Opening Remarks - Marple**

- “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>.)” <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>

**2. Self-Introduction of Members and Guests – All**

See sign in sheet for attendees.

Remote participants:

- Anthony Arens
- Caterina Clark
- Joel Foster (voting member)
- Bill Kumpf
- Erik Ostberg
- April Ricketts

**3. Quorum Status Determination of Meeting Quorum – Marple/Phyfe**

Yes we have quorum: 9 voting members in attendance.

- Voting members: **9 Total** ( local: 8 & Online: 1)
  - *Local:* Erich Binder, Mike Connor, Kevin Marple, Duncan Phyfe, Deep Ghosh, Bill Lampkin, Ravi Ganta, John McKern
  - *Online:* Joel Foster
- Total Attendance:

- 18 – local / 6 - online / **24 - Total**
- Non-Voting members: 5
- Guests: 5

#### **4. Approval of Minutes from Atlanta Minutes – Marple/Phyfe**

- Minor corrections to Atlanta Minutes:
  - Bill Lampkin & Deep Ghosh comments to the TC merger discussion (corrected)

**Motion:** Erich Binder / *to accept the minutes with minor corrections*

**Second:** Mike Connor

**Vote:** Unanimous (No abstentions) / **Motion Passed**

#### **5. Chair Report Section Chair Meeting Update – Marple**

Section 9 section head:

- Update on ASHRAE plan:
  - Remote sub-committee meetings
  - TCs suggesting merging as seen for synergies vs. forced merger
    - (Marple) in conversations with other TC

TC 9.2 Chair: Highlights from Chairs breakfast (full report attached)

- Changed the meeting format to improve communications
- Program submission dates available through Austin
- Discussion on consolidated TCs toned down
  - But the TCs are encouraged to talk and consider mergers
  - TC 9.2 has been approached by various to start the merger conversations
    - What are the past “spun offs” maybe that could be brought back
      - Discussion nothing identified
    - Discussion over benefit to merger vs. standing alone
      - Not meeting quorum is a push from ASHRAE for the merge to leverage common resources
      - Few volunteers needed for voting membership and committee executives

#### **6. Membership Report Voting Member Status, Roster Update & New Members - Marple**

- Call for members to join/upgrade
- Marple to follow up with members for their roll-off dates

#### **7. Chapter Technology Transfer Committee (CTTC) Liaison:**

- No report

## 8. Handbook Subcommittee Report

- No report

## 9. Research - Ken Mead

- No report
- Ghosh: Heat Gain from Electrical Equipment, submitted 2011
  - ASHRAE not processed
    - Suggesting ASHRAE to process research
  - 2011 limited scope of data should be updated for 2019
    - Create RTAR to update (RTAR for next meeting)

**Motion:** Deep Ghosh / *Recommend the society to release the Heat Gain from Electrical Equipment research for processing*

**Second:** Erich Binder

**Vote:** Unanimous (No abstentions) / Motion Passed

- Marple: TC 2.3 still looking for champion for 3D printer RTAR
  - General conversation around industrial sized printers
  - Joel Foster, volunteered
    - Input from Bill Kumpf on topic

## 11. Program Report: Future Programs and Program Plan – Bill Lampkin

- See attached minutes from subcommittee meeting
- No programs in KC
- Orlando:
  - Erich Binder working on Cold Climate
    - Marple willing to be the session chair
  - Hazardous space – Baucom, close to publication
    - Osterberg willing to help
  - Battery Workshop – Ghosh
  - Discussion of Tracks for Orlando & Austin
    - Orlando seems to be the best venue
  - Phyfe has a “template” for session submission
    - Will provide for any that are interested

## 12. Update on all Standards – Deep Ghosh

- STD SPC 128 Method of Rating Portable Air Conditioners
  - Published
- IEEE 1635, joint venture Guideline 21, Battery Ventilation
  - Published

### 13. Hazardous Spaces

- Hazardous Spaces Guide is in final stages
  - Cindy Michael's (ASHRAE) – recommending 6x9 booklet
    - Need to change the numbering style
    - Booklet helps imply this is not a guideline/standard
    - Provide a disclaimer in document to state “roadmap goal”
  - Roadmap vs. scientific document
    - Not a guideline/standard
    - Document will point user to the right documents that apply to various processes (these are the documents one needs)
  - Additional cold climate references added
  - Chemical Safety Board (USCE)
    - No responses from draft provided to them
    - (Osterberg) USCE provided recommendation to ASHRAE for this document
  - Targeting: Final review by committee over the summer
    - Desire voting to publish prior to winter meeting
  - (Kumpf) NOTE: TC 9.10 has referred to this document as a standard
    - (Binder) to reach out (Kelly Cramm) for feedback
    - (Binder/ Baucom) Welcomes review by any TC

### 14. STD 62.1 Liaison

- Duncan Phyfe is liaison - no report, unable to make it to meetings

### 15. STD 90.1 Liaison

- Liaison-position is open - no report
- Baucom: submitted an article to Processing Magazine, full text is attached
  - Article intro:

*With growing emphasis on energy efficiency by State Regulators, growing numbers of OEMs, Engineering Firms and End Users are caught up in a desperate struggle. Overlooking or not being able to apply a 90.1 Scope provision, State Regulators are often requiring that Industrial HVAC Systems achieve mandated energy efficiency ratings, which can compromise compliance with NFPA 496 requirements or API 500 recommendations, limiting abilities to ensure the safety of facilities and protect workers!*
  - Asking TC for permission to go before 90.1 and ask for an addendum or other to clarify scope/regulations
    - Ensure energy savings should not trump safety



- (Ghosh) to touch base with chairman of 90.1
- (Marple) encouraged Baucom to continue his efforts within ASHRAE
  - Active work in TX but Needs to be non-state specific
  - (Jensen) In discussions with States disclaimer that you aren't representing ASHRAE in conversations

#### **16. TG 2 HVAC Liaison**

- Doug Abramson is liaison - no report

#### **17. Webmaster**

- Baucom website is updated
- Web Sites <http://tc0902.ashraetcs.org/index.php>

#### **18. Journal/Insights Liaison**

- Norm Maxwell is liaison - no report.

#### **19. ASHRAE Learning Institute (ALI)**

- Norm Maxwell is liaison no report.
- (Binder) Typically producing "TED Talk" style
- (Phyfe) ASHRAE's eLearning is looking for Subject Matter Experts

#### **20 Old Business:**

- HVAC Guide:
  - (Binder) Basics of applications books – is the TC interested in doing something?
    - Incorporate into industrial conference
- Industrial HVAC Conference – Fall 2021 Toronto (Doug Cochrane)
  - ASHRAE/CEC approached to take on conference
    - Existing leadership is stepping away
      - Not providing great detail of history
      - Looking to package as "ASHRAE out of the box – topical conference"
    - ASHRAE will take over conference as "Topical"
      - CEC believes resources available
      - CEC working up budget and location/site data – to be completed by July 5, 2019 for review by steering committee
    - Topical conference ~225 ppl
    - Conference would be in Toronto
  - Looking for TC to take on steering committee

- Co-Director: (Doug Cochrane)
- ACTION: Steering committee required:
  - The following individuals agreed to be on the steering committee: Mark Miller; Deep Gosh; Michael Baucom; Michael Connor; Erich Binder; Erik Ostberg; Eileen Jensen; Kevin Marple; and Matthew Kampen
- Typical conference is Academic/Research
  - Likely, function more industrial practitioners
    - Reduced not removed research
- Discussion/Q&A:
  - Various questions: conference style, dates, attendees, etc.

## **21. New Business – Marple**

- ASHRAE-UNEP
  - Assessment Guide for Sustainable Operations and Maintenance of Refrigeration and Air Conditioning Plants (MTG)
    - Looking for 2 representation
    - Binder volunteered, Phyfe Alternate
- ASHRAE Guide for Oil & Gas
  - Looking towards Industrial
  - (Foster/Binder) to follow up
- Nuclear Sub-committee
  - Annual meeting only
    - Incorrectly scheduled for this meeting
  - Working on Design Guide – 17 Chapters
    - 7 chapters completed
    - 5 chapters to be completed by July
    - Plan to be completed 12/19
      - Currently accelerating for 10/19 completion for 1/20 publication
  - CONACT/ASHRAE communications
    - (Krumpf) letter needed from ASHRAE to be liaison “as official”
      - If updates are informal “not speaking for ASHRAE”
      - (Marple/Ghosh) to follow up
- Calling attention to February 4th, 2020 schedule for Winter Conference TC9.2 Meeting

## **22. Adjourn Announcement of Next Meeting**

- Next meeting February 4<sup>th</sup>, 2020 @ Winter Conference, Orlando

**Motion to Adjourn:** Binder moved. 3:20 pm

**Action Items:**

Action for	Action Item
Marple	Follow up with TC 9.2 members with roll-off dates
Ghosh	Communicate to ASHRAE Research to release the 2011 heat gain work to be processed and finalized
Marple	Connect Joel Foster with TC 2.3 for 3D printer RTAR
Phyfe	Send out seminar session "template"
Ghosh	To touch base with Chairperson of SSPC 90.1 – for discussion with Baucom on "Energy Saving over Safety"
Phyfe	Look at ASHRAE's Elearning for possible interest of TC 9.2 to champion as SME
Foster/Binder	To look into creating a Guideline for Oil & Gas
Marple/Ghosh	Follow up on need/desire for official ASHRAE liaison role for Ghosh with CONACT

Respectfully submitted

Duncan Phyfe

Secretary

July 10, 2019

**Attachments:**

- TC 9.2 Agenda for Kansas City
- TC 9.2 Approved Meeting Minutes from 2019 Winter /Atlanta (no including attachments)
- TC 9.2 Sign-In
- TC 9.2 Program Sub-Committee Report / Program
- full text of Mike Baucom's submitted article for Processing Magazine
- June 2019, TAC Section Head Breakfast Handout



Sign-in Sheet  
**TC 9.2 – Industrial Air-Conditioning and Ventilation**  
**Main Committee Meeting**  
Hilton Orlando, L, Lake Highland B  
Tuesday February 4<sup>th</sup>, 2020 (1:00- 3:30PM)

	Name	Company	Phone Number (Cell or Office)	Email Address	Member (M) Cor. Member (CM)/ Guest(G)	For Guests Join TC-9.2 Y/N
13	Bill Lampkin	Greasheide Fan	715-432-6825	bill.lampkin@greasheide.com	CM	
14	Kay Clark	Bonnerille Power Administration	360-619-6760	cccclark@bpa.gov	CM	
15	Duane Hammond	CDC/NIOSH	513-841-4286	dhammond@cdc.gov		
16	Bill D'Netto	Billette Solutions Inc.	403-463-2025	billdne@telus.net	G	Y
17	Kevin Gildea	Howden	513-714-7093	kevin.gildea@howden.com	CM	
18	MARK MILLER	TCS BASYS	608-658-1132	MARK.MILLER@MAL.ASHRAE.ORG	CM	
19	Vance Payne	NIST	301-975-6663	SH9@ashrae.org	GCM	
20	Douglass Abramson	HANDY Hubby	301-518-4462	Doug314103@aol.com	CM	
21	TAE KWON	AHRI	703-600-0362	tkwon@ahrinet.org	G	Y
22	John McKernan	EPA	513-569-7415	mckernan.john@epa.gov	M	
23	Chait Johar	AAON	918-382-6736	cjohar@aaon.com	CM	
24	Erica Brewer	EBCL	403-836-0832	ebcl@shaw.ca	VM	



**Sign-in Sheet**  
**TC 9.2 – Industrial Air-Conditioning and Ventilation**  
**Main Committee Meeting**  
Hilton Orlando, L, Lake Highland B  
Tuesday February 4<sup>th</sup>, 2020 (1:00- 3:30PM)

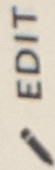
	Name	Company	Phone Number (Cell or Office)	Email Address	Member (M) Cor. Member (CM)/ Guest(G)	For Guests Join TC-9.2 Y/N
1	KEVIN MARPLE	BENZ CO.	503-201-2169 (C)	KMARPLE@BENZCO.COM	M	
2	Eileen Jensen	BPA	360-619-6748	nejensen@bpa.gov	CM	
3	MIKE CONNOR	WSP	678-477-3459	MICHAEL.CONNOR@WSP.COM	VM	
4	DEEP GHOSH	SLC	205-992-7368	dghosh@southaven.com	M	
5	Martin Timm	Linde	716-359-5794	safatyenggga@gmail.com	G	Y-CM
6	FRANK MORIL	ACGIH	248-982-6179	frankm@acgih.org	G	
7	ERIK OSTBERG	TBP	907 632 0792	erik-ostberg@bp.com	CM	
8	Sama Fakhimi	AAF Flanders	812 697 5489	Sfakhimi@aaFinH.com	No	Yes
9	Panos Fyras	AHRI	240-314-9760	pfyras@ahrinet.org	G	N
10	Tony Arens	General Motors	248-321-9056	anthony.arenas@gm.com	CM	
11	Ardy Cochrane	Industrial Air	(330) 339-4536	acochrane@industrialairinc.com	CM	N
12	MAX KAMPEN	ConocoPhillips	(907) 230-1335	matthew.kampen@cp.com	CM	



**Sign-in Sheet**  
**TC 9.2 – Industrial Air-Conditioning and Ventilation**  
**Main Committee Meeting**  
Hilton Orlando, L, Lake Highland B  
Tuesday February 4<sup>th</sup>, 2020 (1:00- 3:30PM)

	Name	Company	Phone Number (Cell or Office)	Email Address	Member (M) Cor. Member (CM)/ Guest(G)	For Guests Join TC-9.2 Y/N
25	RAMANDEEP SINGH	ICF	630-481-1219	ramandeep.singh@icf.com	G	Y
26	Shaun Nienhueser	HDR	402-885-1821	shaun.nienhueser@hdrinc.com	PCM	
27	Adithya Athreya	TAMU	979-739-7609	athreyaaadithya1996@tamu.edu	G	
28	Saurabh Shekhadar	Texas A&M	979-250-7334	Saurabh.Shekhadar@tamu.edu	G	
29	Kushan Abeyawardhane	TAMU	716-208-7216	kushan2018@tamu.edu	G	✓
30	Duncan Phye	ADLEN	978.827.0198	dphyfe@aldenlab.com	M	N
31						
32						
33						
34						
35						





EDIT



PERSONALIZE

9.2

Members present

Muhammad Farooq Saeed

Bill Kumpf

Ken Goodman

April Ricketts

Jeremy Snyder

Harvey Schowk

Danilo Catelan



## Conferences and Expositions Committee Information Items for Technical Committees

2020 Winter Conference, Orlando, Florida  
February 1-5, 2020

### 2020 Winter Conference, Orlando, Florida

Thank you to all the TCs who helped with the review of the technical, conference and extended abstract papers, submitted program proposals and otherwise participated in the development of the conference!

Technical Program Statistics for Orlando:

#### Paper Sessions

*(Conference/Technical Papers combined)*

- 25 Paper Sessions

#### Conference Papers

- 165 conference paper abstracts submitted, 137 approved
- 73 conference papers presented

#### Technical Papers

- 27 Technical papers received
- 25 Technical papers presented

#### Seminars

- 123 submitted
- 75 presented

#### Panels

- 2 submitted
- 2 scheduled

#### Workshops

- 6 submitted
- 2 scheduled (*1 presented in TC Mtg.*)

#### Forums

- 5 submitted
- 1 scheduled

#### Debates

- 2 submitted
- 2 scheduled

### Conferences and Upcoming Deadlines

A full list of ASHRAE conferences and program details is available at <https://www.ashrae.org/conferences>.

Conference	Upcoming Deadline	Conference Site
<b>2020 ASHRAE Annual Conference</b> Austin, TX June 27 – July 1, 2020	Extended Paper abstracts and program proposals due February 10	<a href="https://www.ashrae.org/Austin">ashrae.org/Austin</a>
<b>IAQ 2020: Indoor Environmental Quality Performance Approaches</b> , Athens, Greece September 14-16, 2020	Notifications on abstract submissions, February 12	<a href="https://www.ashrae.org/iaq2020">ashrae.org/iaq2020</a>
<b>The Fourth International Conference on Efficient Building Design</b> Beirut, Lebanon October 1-2, 2020	Conference papers due February 15	<a href="https://www.ashrae.org/beirut">ashrae.org/beirut</a>
<b>2021 ASHRAE Winter Conference</b> Chicago, Illinois January 23–27, 2021	Conference paper abstracts and technical papers due March 18	<a href="https://www.ashrae.org/chicago">ashrae.org/chicago</a>
<b>Ventilation 2021</b> Toronto, ON Canada August 15-18, 2021	Call for papers to be announced shortly	<a href="https://www.ashrae.org/ventilation2021">ashrae.org/ventilation2021</a>



## **2020 Annual Conference, Austin, Texas**

The 2020 ASHRAE Annual Conference technical program is comprised of eight tracks as well as a mini-track, selected to represent areas of focus common among ASHRAE membership. The track focus areas include fundamentals and applications, HVAC&R systems and equipment, research summit, professional development and other specific topics including grid-interactive efficient built environment, multifamily and residential buildings, resilient buildings and communities, zero energy buildings, communities: opportunities and challenges and a building myths mini-track.

“We are living in a constant changing world. ASHRAE members are facing a major evolutionary change in how buildings and energy systems interact,” said Bing Liu, chair of the 2020 Annual Conference. “Instead of individual equipment and system, buildings are becoming integrated, flexible and resilient systems to respond to the climate change challenges. The 2020 ASHRAE Annual Conference aims to address these challenges and feature a strong technical program with a wide range of topics applicable to engineers, architects, designers and professionals.”

**Extended abstracts and program proposals are due February 10.**

## **2021 Winter Conference, Chicago, Illinois**

The deadline for submitting a conference paper abstract and or technical paper is March 18, 2020. Decisions on conference paper abstracts will be sent by April 22. Conference Papers for accepted abstracts will be due July 8, 2020.

### Tracks

**Track 1: Fundamentals and Applications**

**Track 2: HVAC&R Systems and Equipment**

**Track 3: Refrigeration and Refrigerants**

**Track 4: Environmental Health Through IEQ**

**Track 5: Building Performance and Commissioning for Operation and Management**

**Track 6: Energy Conservation**

**Track 7: International Design**

**Track 8: Standards, Guidelines and Codes**

## Topical Conferences

### **CIBSE ASHRAE Technical Symposium 2020**

Organized by CIBSE and ASHRAE, Glasgow, Scotland, April 16-17, 2020 [www.cibse.org/symposium](http://www.cibse.org/symposium)

### **IAQ 2020: Indoor Environmental Quality Performance Approaches**

Co-organized by ASHRAE and AIVC, Athens, Greece, September 14-16, 2020 [ashrae.org/iaq2020](http://ashrae.org/iaq2020)

#### Topics

- Health and Well-being
- Performance Metrics
- Interactions between IEQ parameters
- Occupant Behavior
- Smart Sensors and Big Data
- Smart Controls
- Resilience and IEQ
- Ventilation
- Air Tightness
- Thermal Comfort
- Policy and Standards

### **The Fourth International Conference on Efficient Building Design**

Co-organized by ASHRAE, the American University of Beirut, the ASHRAE Lebanese Chapter and the Munib and Angela Masri Institute of Energy and Natural Resources, Beirut, Lebanon, October 1-2, 2020 [ashrae.org/beirut](http://ashrae.org/beirut)

#### Topics

Sustainable building designs  
Energy efficiency standards  
Building materials  
Indoor air quality systems

HVAC technologies  
Solar heating and cooling for built environment  
Low and near zero energy buildings

### **Ventilation 2021**

Organized by ASHRAE, Toronto, ON Canada, Aug. 15-18, 2021 [ashrae.org/ventilation2021](http://ashrae.org/ventilation2021)

#### Topics

- Occupational health, environmental emissions and safety considerations in industrial process ventilation system design and applications
- Innovations in ventilation systems
- Thermal hydraulic modeling, measurement and test and balancing techniques, AI applications, optimization models, data mining
- Industrial HVAC Systems: Innovation and Best Practices
- Best practices and risk evaluations and management in industrial ventilation and air conditioning systems application

## Future Annual and Winter Conferences

Annual 2021 – Phoenix, Arizona, June 26 – 30

Winter 2022 – Las Vegas, Nevada, Jan. 29 – Feb. 2

Annual 2022 – Toronto, ON Canada, June 25-29

### **Conferences and Expositions Committee (CEC)**

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