**Draft Minutes**

**TC 2.4 Program Subcommittee Meeting**

**June 17, 2021 – 2:00pm-3:00pm**

**Subcommittee Chair: Jon Rajala**

1. Call to Order
2. **ASHRAE Code of Ethics**

**Introduction: “As members of ASHRAE or participants in ASHRAE activities, we pledge to act with honesty, fairness, courtesy, competence, integrity and respect for others in our conduct. We will avoid conflicts of interest, and behavior that is discriminatory and/or harassing.”**

**For more, read here:**

[**https://www.ashrae.org/about/governance/code-of-ethics**](https://www.ashrae.org/about/governance/code-of-ethics)

1. Introductions – Skip due to virtual format
2. Submissions?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Forum 1** | **Is there a Magic Formula for Combining Multiple Air Cleaning Technologies to Improve Air Quality?** | **TC 2.3, co TC 2.9** | **Ashish Mathur** | **June 28 – 4:00pm – 5:00pm** |
| **Seminar 7** | **COVID-19 Particle Removal by Air Filter Devices** | **TC 2.4** | **KJ Choi** | **June 29 – 7:00am – 8:30am** |
| **Seminar 14** | **Reducing Ozone: A Critical Factor in Improving IAQ** | **TC 2.3** | **KJ Choi** | **June 29 – 7:00pm – 8:30pm** |

1. Next conferences:

2022 ASHRAE Winter Conference Las Vegas, NV Jan 29 – Feb 2, 2022

<https://www.ashrae.org/conferences/2022-winter-conference-las-vegas>

**~~Monday, April 12, 2021~~**~~: Conference Paper Abstracts, Technical Papers Due~~**~~Friday, April 30, 2021:~~**~~Conference Paper Abstract Accept/Reject Notifications~~**Friday, June 18, 2021**:  Website Opens for Program Proposals  
**Monday, July 12, 2021:** Conference Papers Due  
**Monday, August 2, 2021:** Debate, Panel, Seminar, Forum, Workshop and Debate Proposals Due  
**Friday, August 6, 2021:** Revised Conference Papers/Final Technical Papers Due  
**Monday, August 23, 2021:** Conference Paper Accept/Revise/Reject Notifications

1. Proposals in Progress – Working list notes

|  |  |  |  |
| --- | --- | --- | --- |
| **Type** | **Title** | **CoSponsor** | **Chair** |
| Chicago Paper Session | Biological threat detection  **\* No update – I still haven’t heard anything from Russ** | 2.4 co-sponsor | Russ Taylor |
| **Future idea**  **Toronto** | Particles in Outer Space … Contact NASA  **\*Mike contacted Vijay. Unsure of when Vijay will get information.**  **Lot of interest on moon particulate – just need to find the right contact working in this subject.**  **Marilyn – will help contact**  **Morris – can assist as needed**  **Jon – bother Vijay about this after summer** |  | **Vijay**, Mike Corbat (NASA) |
| **After Las Vegas**  **Maybe Toronto** | Climate and particulates: filtration, loading, entrainment  2 other people with Brian – Kathleen maybe? Brandon Boor (maybe phase 1 report)  **Brandon Boor Phase 1 report is available now, but probably not the right time for him to work on this with project delays.**  **Brian – contact with wildfire smoke for presentation**  **Kathleen can possibly provide something if can’t find others**  **Mattea – can help put together presentation materials – lessons learned from wildfires and future planning** | 2.4, 2.9? | Brian Krafthefer |
| **~~Phoenix Seminar~~** | **~~COVID-19 particle removal by air filter devices~~**  **~~Single vs multiple masks as a topic?~~**  **~~Infection related, HVAC related, mask related – combine~~**  **~~Paolo talk? Show test data comparing masks/respirators~~**  **~~Bobby Singer has some info too~~**  **~~Broader than just air cleaning devices~~**  **~~Biological aerosols~~**  **~~Karin Foarde – Marilyn contacting for speaking~~** |  | **~~KJ, Christine~~** |
| **After Las Vegas** | Particles above 10 um – still need to talk and find speakers  **\* Jeff can add to presentation from residential particles**  **\* Kathleen – droplets? Medical? COVID related Lindsay Maher (?)**  **\* Brian – has some people to check with**  **\* Marilyn – Sneeze particle information online – need to see if people have measured this – found paper, can contact authors**  **\* Tim can look and send info to Brian**  **\* Zied – research at MIT – slow motion camera**  **Brian needs contacts to speak on this**  **\* Vijay can possibly combine space particle here if we can’t fill cull session on that topic** |  | Brian, Brandon, Jeff |
| **\*Not likely for Austin. Keep on list for later.** | INDA IAQ Regulations (Rahul speak to INDA)  **\*Christine – Probably fine to ignore this topic.**  **\*Rahul – No meeting since October/November 2018. Person leading this has left INDA. Bob had volunteered to lead the committee, but unknown of progress after 2018.**  **Rahul will check with INDA. Is this killed or planning on pursuing?**   * **Rahul – can you provide update? Is this dead?**   **Jon can reach out to Rahul to get an update** |  | Rahul |
| **Toronto or later** | Back to Basics – Aerosol chemistry and testing  Health effects, contamination, measurements  **\*Keep topic on list. Tim and Dara still interested**.  **\* Zied suggests talking to Brent can coordinate efforts**  **No update this meeting, but leave on list**  **Dara/Tim still interested, but haven’t worked on details** |  | Dara/Tim |
| **\*Definitely after Las Vegas** | **Does particle matter really matter?**  EHC/UV – hospitals  **\* Marilyn - No update, but leave on list** | 2.5, EHC?, IEQ-GA | Marilyn Listvan – Bill Bahnfleth, C Seyffer |
| **Toronto?** | **Jeff – Why you shouldn’t lick your filter**  **Possibly two topics contaminants/what’s on filters and how we can detect**  **\*Leave this on the list. Jeff is still interested.**  **\*Check with Brian. If Brian is not interested, take this off the list.**  **\*Christine – Leave on list. Topic is interesting, emerging. \*Marketing people would be interested in this topic.**  **\*Jon – Can contribute to this topic**  **No update this meeting, but leave on list**  **\*Jeff – what can we learn from what is caught on the filter**  **\*KJ – smart filter – smart fibers/fabrics**  **\*Kathleen can help discuss what is found on filters**  **\*Mattea – Intel possibly has data from types of things found on the filters and odors – can help Kathleen**  **\*1 smart fiber/filter type presentation and 2 related to contaminants?** | 2.4, 2.3 | Brian Krafthefer – Brent, Seigel, Chuan He  KJ – textile speaker |
| **Las Vegas** | **COVID and indoor air purifier (filtration)**  **\*KJ – find speaker related to room air cleaner**  **\*Jeff – Brent Stephens and Elliott Gall gave a presentation to EPA, might have to be handled carefully, can also talk**  **\*Kathleen – comment - present data from using air cleaners**  **\*Marilyn – comment about how to handle potentially infected filters**  **\*Mattea – Intel had policy where up to person doing the work, but no confirmed cases of COVID from handling filters** |  | **KJ** |
| Chicago or after | Effects of Forest Fires on IAQ  **\*Jeff – EPA has done a lot of work that is publicly available. EPA did a 2-day workshop on this topic.**  **\*Jeff thinks there isn’t a need for this in ASHRAE.**  **Brian - TC (?) looking into forest fire withing ashrae**  **COMBINE WITH CLIMATE PARTICULATE IDEA** |  | Jeff S, Brian K |
|  | **Paul Francisco – maybe step outside technical and discuss policy for indoor air quality – what can be done to help people stay healthy, particularly low income**  **Vijay – Possibly involve other TCs and debate/forum** |  |  |
| Conf Paper and … ??? | Urban Aerosols … wait for RP1734  **\*Waiting for research projects to finish.** |  | Brandon, Zied |
| Conf Paper and … ??? | Local Sensors … wait for RP1756  **\*Waiting for research projects to finish** |  | Jordan Clark, Zied |
|  |  |  |  |

1. Subcommittee meeting scheduling?
2. Anything else?
3. Adjournment

**Attendance** (at least those who commented in chat box)

|  |  |
| --- | --- |
|  | Name |
| 1 | Brian Krafthefer |
| 2 | Jon Rajala |
| 3 | Mark Tucker |
| 4 | Jeffrey Siegel |
| 5 | Larry Fletcher |
| 6 | Kevin Kwong |
| 7 | Paul Francisco |
| 8 | Phil Winters |
| 9 | Vijay |
| 10 | Mick Flom |
| 11 | Yusuf Bhetasiwala |
| 12 | Kathleen Owen |
| 13 | Marilyn Listvan |
| 14 | Tim Johnson |
| 15 | K-J Choi |
| 16 | Mattea Brown |
| 17 | Russ Baldinger |
| 18 | Lu Song |
| 19 | Matt Middlebrooks |
| 20 | Don Thornburg |
| 21 | Dara Feddersen |

**Chat Box**

12:59:33 From Brian Krafthefer to Everyone : Brian Krafthefer, bkrafthefer@gmail.com

13:00:07 From Jon Rajala to Everyone : Jon Rajala, jrajala@aafintl.com

13:00:33 From Mark Tucker to Everyone : Mark Tucker mtucker@swmintl.com

13:00:45 From Jeffrey Siegel to Everyone : Jeffrey Siegel, University of Toronto, Jeffrey.siegel@utoronto.ca

13:00:45 From Larry Fletcher to Everyone : lfletcher@rgf.com

13:01:31 From Kevin Kwong to Everyone : Kevin Kwong - kevin@lmstechnology.com

13:01:40 From Paul W Francisco to Everyone : Paul Francisco - pwf@illinois.edu

13:01:55 From Phil.Winters to Everyone : Phil Winters, pwinters@filtrationgroup.com

13:02:03 From Doc Particle to Everyone : Vijay - vijay@aerfil.com

13:02:24 From Mick Flom to Everyone : Mick Flom, mflom2@mmm.com

13:02:39 From Yusuf Bhetasiwala to Everyone : Yusuf- yusufbhetasi@gmail.com

13:03:04 From Jeffrey Siegel to Everyone : sounds great

13:03:24 From Kathleen Owen to Everyone : Kathleen Owen kathleenowen@att.net

13:03:58 From Marilyn Listvan to Everyone : Marilyn Listvan. mlistvan@yahoo.com

13:04:07 From Tim Johnson to Everyone : Tim Johnson, TSI tim.johnson@tsi.com

13:04:09 From Kyung Ju Choi to Everyone : K-J Choi, kchoi228@gmail.com

13:04:27 From mattea to Everyone : Mattea Brown, Intel TD mattea.brown@intel.com

13:04:59 From Russ Baldinger to Everyone : Russ Baldinger, Columbus Industries, rbaldinger@colind.net

13:05:33 From L.Song to Everyone : Lu Song, Lydall, l.song@lydall.com

13:06:04 From Matt Middlebrooks to Everyone : Matt Middlebrooks - Consultant MiddlebrooksTS@gmail.com

13:06:28 From Don Thornburg to Everyone : Don Thornburg, Camfil USA, don.thornburg@camfil.com

13:13:21 From Sam Meleika to Everyone : I think the wildfire topic would be very interesting

13:13:33 From Dara Feddersen - H&V to Everyone : Dara Feddersen - H&V - [dara.feddersen@hovo.com](mailto:dara.feddersen@hovo.com)