



DRAFT Agenda

TC 7.5 Fault Detection and Diagnostics

1:00 PM-1:45 PM (EST), Saturday, January 16, 2021

Access Information:

<https://ashrae-org.zoom.us/j/94468508923?pwd=N0tCQlZlYmpSbzAxdl3NnVOOEFUUT09>

Zoom Meeting ID: 944 6850 8923

Passcode: 959041

Find your local number: <https://ashrae-org.zoom.us/u/aend4PQmJv>

Prepared by Liping Wang

Subcommittee Scope: explore and develop technologies to detect and diagnose common faults in both commercial and residential buildings. The scope of this subcommittee includes (a) identifying and sponsoring research projects to develop new FDD technologies, evaluate existing FDD technologies; provide recommendations to building operators and practical engineers, and develop supporting tools for researchers in FDD areas, and b) organizing programs to disseminate research findings and advancements in FDD areas among ASHRAE members.

Agenda:

0:00	Call to Order	
	Self-introduction, announce the subcommittee scope.	
2 mins	Sessions at current ASHARE conference	
3 mins	<p>TC7.5 Technical Discussion: How can Automated Fault Detection and Diagnosis (AFDD) Research Contribute to ASHRAE Standards and Guidelines?</p> <p>Panelists:</p> <p>AFDD in Std. 90.1 by Richard Lord AFDD in Std. 189.1 by Scott West SPC 207 by Kristin Heinemeier AFDD in Guideline 36 by Reece Kiriu</p> <p>Schedule:</p> <p>3:00 pm -4:00 pm (EST) January 18, 2021</p> <p>Access Information:</p> <p>Meeting ID: 991 7610 5572 Passcode: 621843 Find your local number: https://ashrae-org.zoom.us/u/a8ke5bz0l</p>	
5 mins	<p>2021 Annual ASHRAE conference seminar ideas</p> <ul style="list-style-type: none"> • Fundamental and Applications • HVAC&R Systems and Equipment • Research Summit • Professional Development 	

	<ul style="list-style-type: none"> • Design, Control, and Operation of Critical Environments • HVAC&R for Indoor Plants & Animals • Future Proofing-Renewable, Regenerative, and Resilient. • Hot, Hot, Hot • Mini-track <p>Seminar proposals January 6, 2021 – January 13, 2021</p>	
10 mins	Potential Seminar Ideas for 2021 Winter ASHRAE	
	<p>Automated Alarm Management: DDC alarms used for FDD?</p> <p>Segment the alarm information into useful pieces. The building operator has to go through all the alarms. Make a presentation to collect information to make an RTAR is a goal. TC1.4: program will be the co-host.</p> <p>Carol identified three speakers. Plan to submit the seminar proposal if we will have a virtual conference in 2021 winter ASHRAE.</p>	Carol Lomonaco, Kim Barker
	<p>FDD in Guideline (GPC) 36</p> <p>2020 Annual: Guanjing, David, and Chirag showed interest in this topic. Consider submitting a seminar proposal for 2021 winter ASHRAE.</p>	TC 1.4, co-sponsor 7.5 FDD Chair: Guanjing Lin (LBNL) David Yuill, Chirag Parikh
	<p>Fault prevalence types and impacts by building types and system types.</p> <p>2021 Annual or later.</p>	Piljae Im (Chicago), David Yuill, Guanjin, Jin Wen
	<p>Moving Beyond Data Overload to Effective Use of Fault Detection and Diagnostics Analytics</p> <p>Guanjing will resubmit for 2021 winter conference.</p>	Guanjing Lin
	Residential FDD (multip family residential buildings) revIew of FDD on residential.	David Yuill, Jin Wen, Zheng O'Neill, Li Song
	<p>Big data analysis for AFDD</p> <p>2021 Winter or Annual conferences</p>	Jin wen (Chair), David Yuill, Liping Wang
	<p>2020 Annual: California requirement of FDD</p> <p>May consider FDD requirement in standards such as Title 24, Guideline 36, SPC 207.</p>	Steve Taylor, Kim Barker, Kristin Heinemeier

	New ideas?	
15 min	Update/Discussion of Active project/RTARs/Work Statement	
	WS 1812 Development of AFDD for leakage of ground-source heat pumps (work statement revision)	Zheng O'Neill and Kristen Cetin
	Evaluation of ASHRAE Standard 207P Interested in co-sponsor 1.4	David Shipley, Kim Barker, Mike Brambley, Ahmed Abdel-Salam Chirag Parikh, Liping Wang, David Yuill
	Research Ideas	
	New idea: User's experiences with FDD? How do users respond to the alarms, correct or false?	Austin Rodgers, PNNL Laura Towsley (laura.towsley@rycom.com). Scott West Eric Yang
	Literature Review and Survey of existing FDD methods and data ATL - FDD literature review and central location for download data/methods etc. (collection of methods) – existing Not only compiling but the assessment of new technologies (indicating last large-scale study is 2005) Characterization (qualitatively) evaluate. IEA 34.	Nick Gayeski, Jin Wen
	Automated Alarm Management: DDC alarms used for FDD? (automated analytics to correct alarms or utilize alarms) – return the threshold to reduce false alarms in an automated process. 2020 Annual: Seminar idea first (possibly virtual conference). Plan to propose an RTAR based on the seminars discussion.	Carol Lomonaco, Reinhard Seidl, Li Song, Te Qi, John Wallace
	What research should TC 7.5 provide to use the FDD results to support the energy-saving requirement for Standards and Guidelines such as Standard 90.1 and 189.1? What is the minimum requirement for 90.1? An internal TC7.5 meeting. Host a meeting for brainstorming by inviting members from other standards. Or discuss this in TC 7.5 main meeting or seminar or forum. What can be done in the future for FDD sections in the standards and guidelines?	Guanjing Lin and Kim Barker, Scott West, Glenn Remington, Li Song
	User experience and organization adoption of FDD	
10 min	New ideas and discussions	
Adjourn		