

Digital Communications Conference

September 16-18, 2022 • Charlotte, NC

Last Revision: September 14, 2022



<http://www.tapr.org>

Schedule at a Glance

Thursday, 15 Sep

9:00 AM TAPR Board Meeting
5:00 PM (everyone is welcome to attend)

Friday, 16 Sep

8:45 AM Conference Registration and
Demonstration Room Open
9:30 AM Welcome
9:45 AM Technical Presentations
Noon Lunch
1:00 PM Technical Presentations
5:30 PM Friday Night Social
10:00 PM Demonstration Room Closed

Saturday, 17 Sep

8:00 AM Conference Registration and
Demonstration Room Open
8:45 AM Technical Presentations
Noon Lunch
1:00 PM Technical Presentations
4:45 PM TAPR Membership Meeting
6:00 PM No Host Cash Bar
7:00 PM Dinner Banquet
10:00 PM Demonstration Room Closed

Sunday, 18 Sep

8:00 AM Sunday Seminar
Noon

Rooms at a Glance

Registration – Foyer
Demonstration Room – Duke

Thursday

TAPR Board Meeting – **Gantt Boardroom**

Friday

Main Session Technical Presentations – **Belk+Mint**
Lunch – **Party Deck**
DCC Social – **Party Deck**

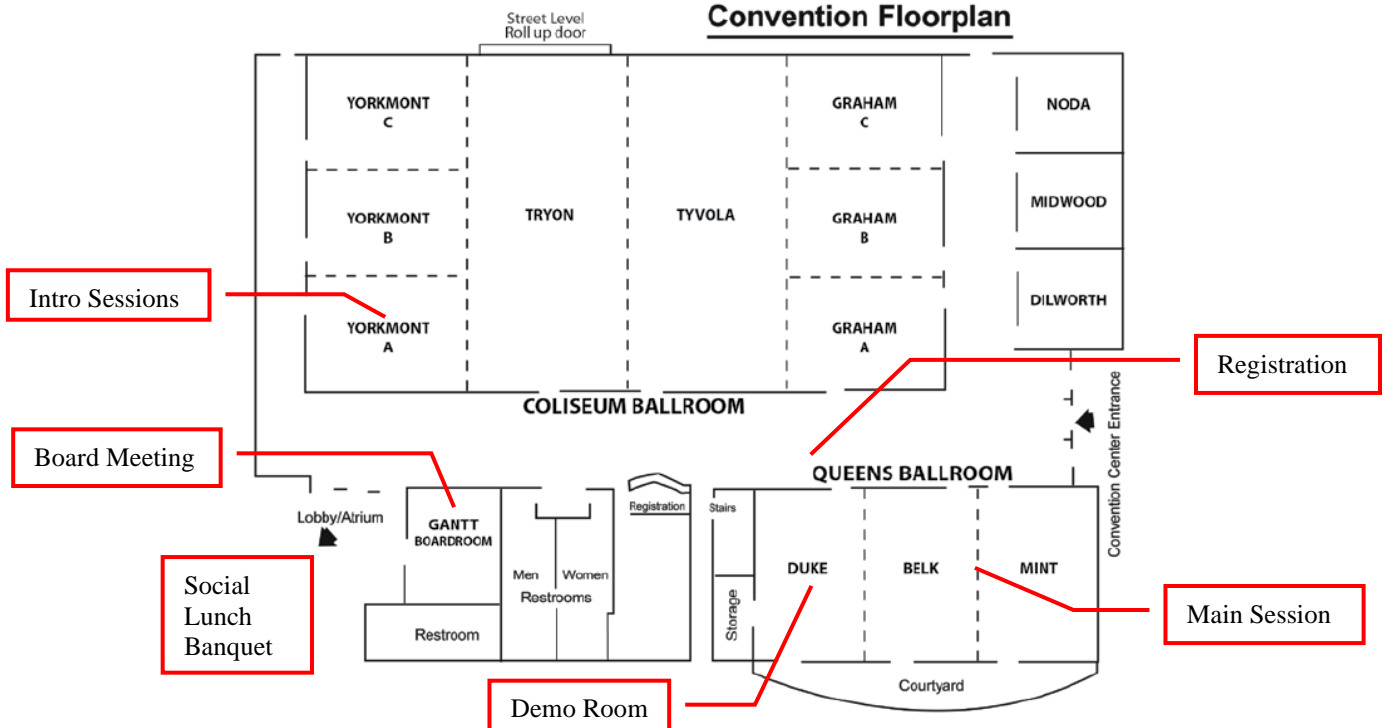
Saturday

Main Session Technical Presentations – **Belk+Mint**
Introductory Sessions Presentations – **Yorkmont A**
Lunch – **Party Deck**
Dinner Banquet – **Party Deck**

Sunday

Sunday Seminar – **Belk+Mint**

Convention Floorplan



2022 DCC Conference Schedule

	Friday – Main Session	Saturday – Main Session	
8:30 AM	Conference Registration Demonstration Room Open	Conference Registration Demonstration Room Open	Introductory Session
9:30 AM	Welcome and Introductions	Welcome and Introductions	
9:45 AM	HamSCI, The Personal Space Weather Station, and the 2023 and 2024 Solar Eclipses Nathaniel Frissell, W2NAF	ESP32 APRS: Creating a Low-Cost Tracker Jason Rausch, K4APR	9:45 AM Intro to System Fusion Digital Voice Mark Thompson, WB9QZB
10:30 AM	Crowdsourced Doppler Measurements of Time Standard Stations Demonstrating Ionospheric Variability Kristina Collins, KD8OXT	Amateur Communications Below 9 kHz: The Dreamer's Band and The New EbNaut Digital Mode Jonathan Rizzo, KC3EEY	11:00 AM Introduction to High- Definition Digital ATV Mel Whitten, KOPFX
	BREAK	BREAK	
11:15 AM	Database/Central Control System for PSWS Bill Engelke, AB4EJ	Bushwhacking in the Land of Digital Voice David Vine, WA1EAW	
	Progress on Programming the TangerineSDR FPGA Cuong Nguyen, KC3UAX		
Noon	Lunch	Lunch	
1:00 PM	Lightning Talks (Impromptu 5-minute talks)	Lightning Talks (Impromptu 5-minute talks)	
1:45 PM	Towards Developing an Algorithm for the Separation of Transmitters of High Frequency Chirp Signals of Opportunity for the Purpose of Ionospheric Sounding Nisha Yadav	Starlink, AREDN, and Networking. Tom McDermott, N5EG	1:45 PM Introduction to D-STAR Digital Voice Roland Kraatz, W9HPX
	PyLap: An Open-Source Python Interface to the PHaRLAP Ionospheric Raytracing Toolkit Gerard Piccini, KC3ZHK and Devin Diehl		
2:30 PM	BREAK	BREAK	
	Measuring Characteristics of Traveling Ionospheric Disturbances Observed with a Network of Low Cost HamSCI Personal Space Weather Stations Veronica Romanek, KD2UHN	APRS-IS Evolution (Recorded Talk) Pete Loveall, AE5PL	
3:15 PM	Comparison of Manual and Machine Learning Assisted HF Amateur Radio LSTID Observations Diego Sanchez, KD2RLM	FST4Won the HF BANDS: Why, What to Expect, Equipment, Results (Recorded Talk) Gwyn Griffiths G3ZIL, et. al.	3:15 PM Basic Microcontroller Interfacing Techniques Darrell Davis, KT4WX
	TangerineSDR Prototype Hardware and MagnetopI Production Status (Recorded Talk) Scotty Cowling, WA2DFI	Modern Technology Impacts on Digital Ionosondes and Amateur Radio (Recorded Talk) Bob McGwier, N4HY	
4:00 PM	The Whistler Catcher VLF LEAF Module Jonathan Rizzo, KC3EEY	GPS modules as RF Signal Sources -- Possibilities and Pitfalls / TAPR SynthDO John Ackermann, N8UR	
	Claude Shannon's Radiotelegraphy: Progress in Coherent CW David Kazdan, AD8Y		
4:45 PM	Play Time: in the Demonstration Room	TAPR Annual Meeting	
5:30 PM	Friday Night Social	Play Time: in the Demonstration Room	
6:00 PM	No-Host Cash Bar	Dinner No-Host Cash Bar (6:00 PM) Dinner (7:00 PM) On-Ramps to Learning and Other Lessons from the Road Rosy Schechter, KJ7RYV Executive Director of ARDC Awards Presentation Prize Drawings	
10:00 PM	Demonstration Room Closed		

2022 DCC Conference Schedule

	Sunday Seminar
8:00 AM	Opening Remarks John Hays, K7VE
8:10 AM	University of Scranton ARC – W3USR Nathaniel Frissell, W2NAF
8:50 AM	Bridgerland ARC Kevin Reeves
9:30 AM	BREAK
10:00 AM	National Radio Astronomy Observatory Lyndelee von Schill, Heather Cochrane
10:40 AM	M-17 Project Ed Wilson, Stephen Miller
11:00 AM	ARISS Frank Bauer, KA3HDO
11:40 AM	A quick review of the ARDC Grant Application Process John Hays, K7VE
Noon	Conclusion

Thank you to our local hosts!

Charlotte Digital Radio Group	Mecklenburg Amateur Radio Society
<p>The Charlotte Digital Radio Group is a group of hams that are interested in learning about, supporting, and promoting Digital Voice modes. Started around 2006 with ICOM's roll out of the first D-STAR radios we tried out the new mode in a true ham experimental way using a Kenwood TKR-850 repeater and a Satoshi modem board. We purchased our first ICOM D-STAR stack in June 2007 before the advent of D-Plus and reflectors. When System Fusion and DMR came out, we added repeaters for those systems, too. Today, we operate 12 Digital Voice repeaters supporting one or more of D-STAR, DMR, C4FM, NXDN and P25 at 5 repeater sites around Charlotte.</p> <p>https://www.charlottedstar.org/</p> <p>https://groups.io/g/CharlotteDigitalRadio</p>	<p>The Mecklenburg Amateur Radio Society, an active affiliate club of the American Radio Relay League (ARRL), is based in Charlotte, NC. The club has been serving Amateur Radio Operators, or Hams, in Mecklenburg County and the surrounding areas since it was founded in 1949. We are incorporated in North Carolina as a 501(c)(3) charitable organization. Our primary focus is to provide valuable training, actively promote the amateur radio hobby, and most of all – have fun!</p> <p>The Mecklenburg Amateur Radio Society is active in Public Service events, ARES and AUXCOMM emergency communications, contesting, license examinations, and education about radios and operating platforms. Each March, the Society produces the largest Hamfest in the region including Forums, dealers and a large indoor flea-market.</p> <p>https://w4bfb.org/</p> <p>https://www.facebook.com/MecklenburgAmateurRadioSociety/</p>