



Corona



Cedar Rapids Section - Institute of Electrical and Electronic Engineer
Serving Engineering Professionals in Eastern Iowa

APRIL 2019

CORONA REBOOT

We rebooted the Cedar Rapids Section newsletter. Stay tuned for details on IEEE Day and our 75th Anniversary celebration.

Add IEEE CR Section calendar to your calendar: <https://tinyurl.com/yyt7ma75>

UPCOMING EVENTS

A Summary of Hardware Vulnerability Assessments

4/15/19 6:30 PM

321 3rd Ave SW, Rochester, Minnesota, United States

Cybersecurity and You: Recommendations on

Protecting Your Personal Digital Assets

4/16/19 5:30 PM

Sector67, 56 Corry Street, Madison, Wisconsin, United States

Radar Remote Sensing at the University of Cape Town

4/18/19 10:00 AM

3043 ECpE Building Addition, Ames, Iowa, United States

Cybersocial #20190004 - 19 April 2019 - Third Friday Monthly Meetup

4/19/19 5:00 PM

Five Cities Brewery, 2255 Falcon Ave, Bettendorf, Iowa, United States

Tour of Skarshaug Testing Laboratory

RRVS April 2019 Section Meeting

4/25/19 6:00 PM

Rock Valley College, 3301 N. Mulford Rd, Rockford, Illinois, United States

IEEE ECN: Entrepreneurs and Startups, A Panel Discussion

4/26/19 11:30 AM

Sector67, 56 Corry Street, Madison, Wisconsin, United States

ABCs of Electric Utilities for the non-power Electrical Engineer

5/2/19 6:00 PM

Rock Valley College, Rockford, Illinois, United States

Quad Cities Engineering & Science Council Trivia Night

5/4/19 6:00 PM

1111 W 35th St, Davenport, Iowa, United States

MOON TALK - Role Collins Radio played in the Race to the Moon

5/7/19 5:30 PM

450 5th Avenue SE, Cedar Rapids, Iowa, United States

May Cedar Rapids IEEE Executive Committee Meeting

5/13/19 5:00 PM

450 5th Ave SE, Cedar Rapids, Iowa, United States

ProCon 2019 - 22nd Annual Professional Development Conference

www.cr-ieee-procon.org

5/14/19 8:00 AM

1200 Collins Road NE, Cedar Rapids, Iowa, United States

July Cedar Rapids IEEE Executive Committee Meeting

7/9/19 5:00 PM

Cedar Rapids, Iowa, United States

August Cedar Rapids IEEE Executive Committee Meeting

8/13/19 5:00 PM

Cedar Rapids, Iowa, United States

September Cedar Rapids IEEE Executive Committee Meeting

9/10/19 5:00 PM

Cedar Rapids, Iowa, United States

October Cedar Rapids IEEE Executive Committee Meeting

10/8/19 5:00 PM

Cedar Rapids, Iowa, United States

November Cedar Rapids IEEE Executive Committee Meeting

11/12/19 5:00 PM

Cedar Rapids, Iowa, United States

December Cedar Rapids IEEE Executive Committee Meeting

12/10/19 5:00 PM

Cedar Rapids, Iowa, United States

June Cedar Rapids IEEE Executive Committee Meeting

6/12/19 5:00 PM

450 5th Ave SE, Cedar Rapids, Iowa, United States

NOTE FROM THE CHAIR

For all our IEEE members and friends in the engineering community, please appreciate this year is our 75th Anniversary of the Cedar Rapids Section, 1 of 24 sections ranging from Ohio to Nebraska in Region 4. IEEE tries to keep the embers of engineering magic alive as it is seen periodically in our events that gather people around various technical topics and sparks our inspiration. It is what happens when engineering passion is touched in whatever field of study or vocation we pursue as we network with each other and guest speakers.

We have several events this year that provide those opportunities as Bill (current Vice-Chair and Membership Development Chair) has put together in this Corona edition. Meredith (Secretary, Past Chair, Young Professional Chair, ProCon Chair) has dug deep to make the ProCon 2019 event happen this year plus invaluable support from others in the ProCon committee. Bruce has taken over the treasury position (also the Power Energy Society Chair) from Bob Dawson who also has been a mainstay in our section over many years. Chang (Information Management Coordinator) has been sharing his enthusiasm and talent with many University, STEM and STEAM workshops. Vicki is currently the Region 4 Membership Development Chair and Ashley is the Region 4 secretary (both past Chairs). Many others have come and gone in this section and we will all continue to stand on the shoulders of these individual.

Our section varies in status yearly but is approximately made up of 8 societies and affinity groups, ~327 members including 15 Students. We have a lot of sticks in the fire and if any of those touch on your passion please contact us to see where you can contribute to create an event or function to share those interests with others, bringing technology to humanity.

Below is our contribution to the Region 4 Newsletter this past March.

Dan

CEDAR RAPIDS IEEE SECTION REGION 4 NEWSLETTER REPORT - MARCH 2019

It is cold and icy in Iowa now. Lots of confinement indoors kept lighted and heated by technology that keeps us busy in IEEE. SpaceX launched its rocket last night to test out their new crew capsule for return the USA to manned flight! That warms us up. Space is the next frontier for IEEE.

We started planting tomatoes, eggplants and peppers for the Master Gardener donation gardens this week. These seedlings are kept under LED lights on a heated mat at 77 degrees to be transplanted into a greenhouse when the temperatures get above freezing. Many new technologies used in this effort from ordering online, delivery on site, various computer and electronic support for the project. But the human element is still necessary to plant and nurture the seedlings bringing forth new life being produced for humanitarian needs, most importantly food insecurity. The food is used for pantries to feed those in need that do not get nutritious groceries from their other resources.

Unfortunately, those LED lights (or more correctly, the driver electronics for those lights) have the potential to generate considerable RFI. EMC practitioners will be involved in understanding the interference problems and how they can best be mitigated.

The Humanitarian Activity Committee (HAC) presentation at the OpCom 2019 conference illustrated the need for many different types of food and environmental research applications. Support for potential IEE HAC projects was solicited. Cedar Rapids Section will be investigating various opportunities to link Master Gardener type resources with our IEEE volunteers and resources in the HAC initiatives.

IEEE Day 2019 in early October will be when the Cedar Rapids Section will celebrate our 75th IEEE Section Anniversary! We hope to resurrect some of our illustrious past in that

event and provide inspiration for future IEEE endeavors. We have many historical technological developments in the Cedar Rapids area mainly due to the Arthur Collins Radio Company (ArthurCollins.org) that became part of Rockwell, then Rockwell Collins and most recently into Collins Aerospace recently acquired by UTC.

The University of Iowa also provided the Van Allen physics pioneering along with the Iowa State University engineering program along with many other colleges in the area in the Cedar Rapids area.

We continue to work in renewing our Student Branches at the University of Iowa that manage to submit their plan by February 1, thanks to our young professionals Secretary Meredith Godar and much utilized Chang Wu, that have been putting on workshops for the universities and community colleges as well as a participant in STEAM. We are also working with University of Northern Iowa. We hope to start a new student branch this year at the local Kirkwood community college.

Our Treasurer Bruce Lindholm also the Power and Energy Society Chair as well as being on the IEEE Industrial Committee and active is supporting various section initiatives submitted our Section requirements by February 15th. Our past treasurer Bob Dawson, also our PACE chair continues to support us in maintaining the course.

Milestones that the Cedar Rapids Section would like to perpetuate and/or support are the Universal S-Band and GPS. At the OpCom 2019 we linked up with the Region 6 Coastal Las Angeles Section GPS advocates that we are now working with to further along the GPS milestone event ([http://ieeemilestones.ethw.org/Milestone-Proposal:Global_Positioning_System_\(GPS\),_1973](http://ieeemilestones.ethw.org/Milestone-Proposal:Global_Positioning_System_(GPS),_1973)). Many of our IEEE members in the Cedar Rapids area have worked with GPS but many of those original engineers have moved out of the area but the GPS technology from that legacy is still a core area in Collins Aerospace.

After watching the Collins legacy video and realizing the Deep Space network was established by use of the unified S-band for bundling multiple telemetry and communications channels we thought we should establish a milestone project for that. Our Vice Chair Bill Caldwell (also our Membership Development chair) found this being already established but not finished in the IEEE Milestone resource (http://ieeemilestones.ethw.org/Milestone-Proposal:Apollo_Unified_S-Band_Communications_System,_1969.) We would very much like to help fill out these TBDs as well.

Bill Caldwell has worked with Vickie Osborne to research and investigate the Organization Analytics (OC) resources and has established a comprehensive analysis of our Cedar Rapids Section OA. We are over 400 members in a variety of societies beyond those organized societies listed in our CR Section (<http://sites.ieee.org/cedar-rapids/>)

It is a continuous challenge to stay abreast of the tsunami of technology that is flooding our industrial fourth revolution. Our volunteers are involved in so many of these attributes and members are quite immersed in their careers. We are attempting to renew the vigor for IEEE in our section for existing members as well as bring into our fold the many engineers not yet members.

Various activities from our societies follow:

ProCon - Meredith Godar

Planning May 14th Cyber and Internet Security Conference

EMC Society - Dale Svetanoff

The Cedar Rapids chapter of the EMC Society will undergo some changes this year. First and foremost, due to significant loss of members, it will likely be necessary for the chapter to form a joint chapter with another one of the societies. Possible candidates include the CommSoc, MTTTS, or PES chapters. We are also looking at hosting a second Lightning

Workshop, an all day event that was well attended back in 2016 but which fell short on some of its goals. Among those were design guidelines for unit chassis and pc boards.

MTT Society - Mana Roy

We had 2 presentations by DML (Distinguished Microwave Lecturer) speakers:

Dr. Markus Gardill on April 6, 2018 & Dr. Walid Ali-Ahmad on December 3, 2018. Couple of local speakers had consented to speak, but they could not find time from their busy schedule.

Our Vice Chairman Rob Erlandson attended the CCM (Chapter Chairmen's Meeting) meeting during the IMS 2018 held in Philadelphia in June 2018.

It has been a perennial problem (just like other chapters) to get a good audience for the meetings. The same holds true for the availability of speakers. Fortunately, for the DML program, we can get speakers if they are willing to come to Cedar Rapids.

Our 2 DML speakers for 2019 have already scheduled meetings here: in June and September.

Education/Stem - John Nirchl/Bruce Lindholm/Bill Caldwell/Bob Dawson

45th Annual Engineering Career Guidance Conference at Kirkwood Community College. 225 kids were registered. I believe middle and high schools across Kirkwood's 9 County service area were all invited. Some do not have stem programs, but there were a lot of schools there.

Young Professionals - Meredith Godar/Amy Kurr

Event planned for March 14th for the Tau Beta Epsilon & HKN honor societies with Young Professionals and open to all engineers.

Computer Society - Leon Tabak/Raman Aravamudhan

The Cedar Rapids Section contributed to the support of the twelfth annual University of Iowa Computing Conference, hosted by students of the UI Department of Computer Science and ACM Student Chapter. The UICC is an official ACM Chapter Conference hosted on the University of Iowa campus, and is dedicated to advancing computing as a discipline and a profession. This year's conference occurred on February 22-23, and had the theme of Artificial Intelligence.

<https://cs.uiowa.edu/resources/events/uicc-2019>

Communications Society - Loyd Hoelecek
Consultants Network - Dan Roesler
WIE - Vickie Osburn
PACE - Bob Dawson
Student Activities - Jim Trepka

<https://www.facebook.com/IEEECRSection/>

Dan Roesler
Cedar Rapids Section Chair 2019

NOTE FROM THE EDITOR

The Corona is the IEEE Cedar Rapids Newsletter. Through volunteer turnover, the Corona has not been published for some time. If you have news worthy items or announcements, get them to me. We can do pictures. We did not this time. We plan on publishing in July, October, and January. Get your items to me before July 1, October 1, and December 21.

We will do special editions for urgent announcements and special events. If you need publicity in a short notice, let me know.

By the way, we are looking new editor. Let me know if you are interested.

Thank you,

Bill Caldwell
bill.caldwell@ieee.org