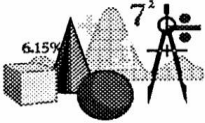




SPARKS

Daytona Section Newsletter
September 2020



SECTION MEETING

Thursday September 24th at the Halifax River Yacht Club
331 South Beach Street, Daytona Beach, Florida 32114



2019 Outstanding Section Membership
Recruitment Performance
Daytona Section

PRESENTATION

**Everything you wanted to know
about a Small Radio Telescope
but were afraid to ask**

CHAIR'S REPORT



Back in April of this year, I stated, in the last Chair's Report, that the next time we will be getting together face to face as a group for an IEEE Daytona Section meeting will be on September 24, 2020, for dinner and a show at the Halifax River Yacht Club. Hopefully, you marked your calendars for this September meeting because we are going forward with the section meeting. The Halifax River Yacht Club has agreed to provide a place to meet and a dinner for all who desire it while providing social distancing and a safe environment. Please review this newsletter for more information on the meeting. I hope to see you there.

Also, in the last Chair's Report, I discussed the work being done to install the IEEE Daytona Section's Small Radio Telescope (SRT) at the Burns Science and Technology Charter School in Oak Hill, Florida. The work is proceeding through the dedication of several of the IEEE Daytona Section members plus some employees of the Burns School. The project is a great example of collaboration between IEEE and an educational institution. Eventually, the SRT should provide educational opportunities for students with the guidance of IEEE and hopefully the desire for some of the students to pursue electrical engineering and become IEEE members.

The SRT project has become what I will describe as the poster project for Region 3 (Southeast US and Jamaica). The Daytona Section has been able to secure the maximum IEEE PACE funding for the project. We were asked to discuss the project at the Region 3 meeting last month. If you would like to help, please ask. There is a more detailed description of the SRT work being done in this newsletter.

Please keep reading your messages from IEEE for any changes that may occur. My hope for all of you is good health and good fortune.

Rich

CORONAVIRUS PRECAUTIONS BEING TAKEN FOR OUR MEETING

Our Section is addressing concerns for the safety of members and guests who will be attending our meeting. We understand our Section has many members whose age is considered to be in the higher risk range. We are working with the Halifax River Yacht Club to provide a safe, healthy environment for our members . As such, the following procedures and requirements will be followed as per the Yacht Club's policy.

All people, members, non-members and staff are required to wear face coverings while in the common areas of the building. For us, that includes the entrance lobby, hallways, stairs, elevators and restrooms. In our designated meeting room, the door(s) will not be left open before or during the meeting.

During our meeting, face covering during our meet and greet times is encouraged but not required, personal preference of other members should be honored. During meals, face coverings are not required. If you need to leave the room for any reason, face coverings must be used.

If any member signing up for the meeting is experiencing a fever or exhibits any signs of the virus, they are asked to cancel their attendance by calling Allan Jusko at 386-671-3706. We will notify the club to cancel the meal.

The Yacht Clubs operating procedures will include sanitizing the room, tables and surfaces before the meeting. After cleaning, utensils will be wrapped and placed on the tables to eliminate their personnel's contact with them. Servers will wear face coverings while in the room. Tables and seating will set using social distancing guidelines.

We hope all of our Section members, family and guests stay safe and healthy.

SEPTEMBER'S PRESENTATION

DAYTONA SECTION SRT PROGRESS

It has been a major undertaking by our Section to relocate the Small Radio Telescope (SRT). It was purchased from a grant to our Life Members Affinity Group in late 2008.

The SRT was initially installed on the Planetarium roof at the Museum of Arts and Science in Daytona Beach. After damage due to flooding of the planetarium from a hurricane, the SRT was removed and stored until a more suitable location could be found.

Early this year, an understanding was established with the Burns Science and Technology Charter School, grades K-8, in Oak Hill to locate the SRT at the school and provide a working program for educational use. Our presentation this month will be an informal report and discussion of the history, update and progress on our installation of the SRT.

Rich Kent will discuss his presentation at the Region 3 meeting at SoutheastCon in Raleigh, NC in March. Members of the team will be available to discuss the progress, issues and resolution of "undocumented features" we've encountered during the installation process.

We still have work to be done, primarily with software and development of lesson plans so the SRT can be used as an educational tool for the faculty and students of the school. This part of the process will be the most important and help from any Section member interested in promoting the science to the younger generation would be appreciated. It's a rewarding venture and a chance to contribute one's years of knowledge to a worthwhile cause.

LIFE MEMBERS AFFINITY GROUP

Small Radio Telescope (SRT)

Since February, 2020, a small group of LMAG and Section members have been working to install and restore the SRT at the Burns school in Oak Hill. Working through the Pandemic, the group (Dave Defanti, Ron Gedney, Al Jusko, Dr. Liu, and Hugh Ward) met Tuesdays and/or Saturdays to re-assemble, and check out the SRT.

In May we ran into problems reconciling the 20-year-old software with today's computer technology. After much effort by Leo Gelada, Dr. Liu and checked by Shawn Wilkerson, we faced up to the fact that we needed to replace the SRT electronics. With the support of Section Chair Rich Kent, we undertook a \$3500 refurbishment of the SRT. The new electronics arrived early in July and were assembled by Dr. Liu. Meanwhile, Hugh Ward decided on the best site for the SRT where it would have adequate access to the Southern and Northern sky. The Burns school then poured a 9 foot square concrete apron for permanent installation of the SRT.

Al Jusko designed and built the mounting structure during the month of July, while the concrete was curing. In August, despite the heat and humidity, we met each Saturday



and assembled the updated SRT on its permanent platform. The Burns school dug a trench to a nearby building so that we could bury the cabling and set up the electronics inside. We are in the process of checking everything out and calibrating the system.

Our goal is to have the SRT ready for the Burns school to use by IEEE Day, October 6, 2020.

Ron Gedney, Life Member Chair

ANOTHER TALE FROM THE OLD PROFESSOR

A CHALLENGE FOR 1950'S/1960'S GEARHEADS

Many engineers who were teenagers in the 1950's and 1960's and were crazy about cars were known as "gearheads". Those days are long gone but let's see how much us old gearheads remember from then. Can you define:

1. Candy Apple Red
This was very labor intensive but popular on 50's and 60's hotrods.
2. Tube grills
Not for grilling hamburgers.
3. Fuzzy Dice
Everyone should know this one.
4. Rolled and pleated
Found in the interior of the car.
5. Half and full moons
Has nothing to do with the phases of the moon.

6. J. C. Whitney
Still around after more than 100 years.
 7. Frenched headlights and tail lights
Apparently has nothing to do with the country of France.
 8. Deuce Coupe
The Beach Boys had a hit song about this one.
 9. Hurst conversions
Replaced the "three on the tree".
 10. Suicide knob
This one is still being used particularly on industrial equipment and for handicapped drivers.
 11. Metal flake
Refer back to candy apple red.
 12. Spinners
The opposite of moons.
 13. Lowering kits
Some cars could not navigate steep driveways because of this.
 14. Chopped and channeled
Only the ultimate hot rods would have this feature.
 15. Fender skirts
They were really cool if you put some colored lights behind them and you had
- #12.
16. Hemi
This was particularly popular in all-out dragsters.
 17. Daytona Beach's Crane Company
Their products were and still are available from mild to full race.



This is the Little Deuce Coupe that was on the album cover of the Beach Boys 1962 hit of the same name. For extra credit, can you identify the following on the car: slicks, chopped, triple deuces, (hint: they are on top of the blower), Frenched headlights? What on the car was reversed and chromed?

The Old Professor had a 1955 Ford convertible in 1962 with the 292 CID "Thunderbird V8". It was heavily customized with about half of the work done by your humble correspondent. The Ford had, from the list above: 2, 3, 4, 9, 11, 12, a little bit of 13 and 15 with colored lights. The Ford only lasted a year in my stable as it was sold and replaced with a 1958 MGA roadster. That was the end of my American car ownership and cars with more than 2 seats. This excludes the necessary "family bus", usually a station wagon or sedan and the four Corvettes that I owned including the one I still own. Although proudly made in America, I don't classify Corvettes as an "American car".

Al Helfrick, a.k.a. The Old Professor

PE CORNER

The Rule-Change Process

The Florida Statutes are the laws that have been passed by the legislature, including the practice of licensed professions. Chapter 471 of the Florida Statutes governs the practice of engineering in the state. In some areas, the Statutes are very specific, and maybe even prescriptive. For example, Section 471.017 F.S. contains the continuing education requirements for engineers' license renewal. This section specifies that the number of continuing education hours required for license renewal is 18, and the mix of those hours. The statute says (verbatim):

1. One hour must relate to this chapter and the rules adopted under this chapter.
2. One hour must relate to professional ethics.
3. Four hours must relate to the licensee's area of practice.
4. The remaining hours may relate to any topic pertinent to the practice of engineering.

It is up to the agency or board that administers each part of the law to craft detailed rules that put the law into practice. These rules constitute the Florida Administrative Code. In our case, the Florida Board of Professional Engineers (FBPE) is tasked with that responsibility. Chapter 61G15 FAC contains the rules governing the practice of engineering. In the case of continuing education, the FBPE's rules specify, among other things, who qualifies to provide this continuing education and what level of instruction the content must be to qualify, i.e. basic math courses don't qualify for continuing education hours.

The rule creation process is not done in a vacuum but rather in a public forum with input invited from any interested party. Practice of Engineering rule changes may begin in a number of ways, including as a result of a change to the Florida Statutes, or from a suggestion from an engineer or other interested party. The FBPE often assigns a committee, chaired by a Board member and including participation from interested parties and FBPE staff, to review the suggested change and come up with new rule language as a starting point. Once the committee process is completed, a rule change is proposed to the full Board. This rule is then published for comment. The process is somewhat iterative, with the FBPE proposing changes to the rules, followed by a comment period, followed by more proposed changes, etc. until consensus is reached on a final new rule which is voted on and passed by the Board.

The FBPE has recently enacted several rule changes to implement Florida Statute changes passed by the legislature in 2020. These include reducing the number of years a Professional Engineer must be licensed in another jurisdiction in order to be deemed to have passed the licensure examinations for a license by endorsement, and limitations on indemnification in Design Professional Contracts.

Whether you are a PE looking to attain required CEHs, or an engineer looking to learn something new or keep current with the latest trends in the profession, IEEE has seminars that will meet your needs. With the renewal deadline only 5 months away seminar demand

is high. Sign up now!

Art Nordlinger, PE, Senior Member

DAYTONA SECTION SHIRTS



We are pleased to offer Daytona Section polo shirts for our Section members. The shirts are embroidered with the IEEE Logo and DAYTONA SECTION on the left and your name and grade, if desired, on the right. The shirt is a high quality 5 oz, 65/35 poly/cotton pique in Royal Blue with white embroidery. Available in S - 2XL in men's as well as ladies' sizes. Price is \$30, including tax, for S-XL size's, 2XL size is \$3 additional.

For more information or to order shirts contact: Allan Jusko 386-671-3706 or a.jusko@ieee.org.

FUTURE MEETING DATES:

The dates for the 2020 fall session are: October 22nd and November 19th.

EDITORS NOTES

Visit our Daytona Section website: <https://ewh.ieee.org/r3/daytona/>

ENGINEERING HUMOR



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SEPTEMBER 2020 MEETING

Thursday September 24th at the Halifax River Yacht Club
331 South Beach Street, Daytona Beach, Florida 32114
Just south of the Fire Station at the corner of Beach and Orange Streets

TOPIC– Everything you wanted to know about a Small Radio Telescope but were afraid to ask

AGENDA

5:30 PM Greetings & Cocktails
6:00 PM Dinner
7:00 PM Presentation

Dinner Selections

Chicken Alfredo - Creamy Alfredo Sauce over Linguine

Grilled Salmon - with a cream dill sauce Garlic Mashed Potatoes and Steamed Broccoli

Beef Tips Dijonnaise - Sautéed Tenderloin tips with mushrooms, shallots, white wine, Dijon Mustard, Demi-glacé and cream. Served over bowtie pasta

All Dinners come with HRYC House Salad and Bread Service, Coffee or Tea

Members and guests \$20.00 each
Students \$5.00

IMPORTANT DINNER NOTE!

The Yacht Club is requiring us to give them a dinner count by the Tuesday afternoon before our meeting. As always, all members and guests are welcome to attend the meeting and presentations, however any dinner requests received after Tuesday afternoon may not be accepted

Please contact Allan Jusko by Tuesday September 22nd at noon to give us a count for dinner or for further information

If you make reservations and are unable to attend, call prior to the event to cancel.

The Section is charged for all dinners ordered, please let us know if your plans change

Allan Jusko Editor

386-671-3706