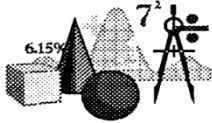




# SPARKS

Daytona Section Newsletter  
March 2022

<https://r3.ieee.org/daytona/>



## SECTION MEETING

March 24, 2022

6:45 PM – 8:15 PM

Embry-Riddle Aeronautical University  
Lehman Bldg, Room LB367  
1 Aerospace Blvd, Daytona Beach, FL

## CHAIR'S REPORT



As many of you are aware, Charles Husbands volunteered as a section archivist, AKA webmaster, for over 14 years, thereby providing the ability to look through section events, contributions, and endeavors. Allan Jusko has diligently presented much of this in newsletter form which is conveniently delivered to email



inboxes throughout the section. There are others, and their efforts are much appreciated, but I am mainly drawing from these two sources for this article.

One of the endeavors started over a decade ago, ended up being put in storage, and subsequently rebuilt, updated, and installed at Burns Sci-Tech Charter School (K-12). This effort has been recognized and applauded at many levels of the IEEE. But that is not the end of the SRT story. Rebecca DeMarco and Kira McFadden (ERAU, Student Chapter Chair) are actively pursuing and implementing 2 one-week technical training camps for girls attending Burns.

This coincides with the Daytona Section's recent push for student member engagement as well as the creation of a WIE chapter. Several of the women in the Daytona Section have been contacted as to their thoughts concerning WIE and the responses thus far have been overwhelmingly positive. In response, I would like to make the WIE group official. Here is what I need to do so:

- Active IEEE standing for at least 6 months for potential WIE members
- Must be Graduate Student Level, Members, Life Members, etc.
- A minimum of 6 members to join the chapter and sign the WIE creation petition
- (My preference) Women, though men may also be involved and part of a WIE chapter
- Someone to direct the WIE activities and meetings

To be clear: a WIE chapter is not a section and therefore will have the autonomy to operate their group as will best benefit and serve the WIE and its endeavors. It would be desirable to get this off the ground by the end of March 2022. There are some of you who have wanted to take part and this is a great opportunity.

I would like to close this column by thanking Rebecca DeMarco for getting these conversations started and jumping in with both feet. Consider this article an open invitation for women within the Daytona Section to join the Daytona WIE and for those of you so inclined, find out more about the all-girl training camps and how you can be involved.

*Dr. W. Shawn Wilkerson*

## **FEBRUARY'S PRESENTATION**

The February Daytona Section monthly meeting took place in conjunction with Embry Riddle's Engineering Week program and Keynote address presentation. The Speaker was Dr. Paul Bevilaqua, Aeronautics Engineer, Member of the National Academy of Engineering and Co-Inventor of the F-35 Joint Strike Fighter Lift Fan. He gave a very informative presentation on the process involved in designing the Joint Strike Fighter.

## **MARCH PROGRAM**



*Old Professor  
IEEE Daytona Section  
Daytona Beach, FL*

*Dear Old,*

*Are you are giving your ~~potporri~~, ~~potporridge~~, ~~potpoury~~, however you spell it, at the Daytona*

*Section IEEE March 2022 meeting? I am really anxious to attend after the two-year hiatus.  
Energetically,  
M. C. Squared*

*Dear Mr. Squared,  
It's spelled potpourri. And, yes, I am giving my potpourri at the  
March meeting. 'See you then.*

*Best Regards,  
The Old Professor*

Our March presentation will be given by none other than The Old Professor himself, Dr. Al Helfrick. As usual, the topic and its contents are highly classified and will be presented at a secret secured location, room LB367, Lehman Building at Embry Riddle University. All members and guests are welcome to attend. This has always been an enjoyable presentation.

## **ANOTHER TALE FROM THE OLD PROFESSOR**

### **FAKE ESTATE**

I can remember during my college days trying to understand quantum mechanics, relativity, and elementary particle physics. With a lot of effort, I gained a reasonable understanding of those subjects. There are some “things”; I will call them “things” for lack of a better term, I think I will never understand. Among them are blockchain, crypto currency, and the metaverse.

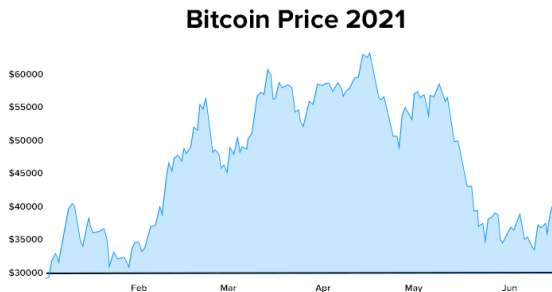
Let's start with non-fungible tokens, NFTs. When I first heard about NFTs I knew what fungible meant. It means something that can be exchanged for something similar of equal value to satisfy a particular purpose. I have had lots of fungible tokens in the form of nickels, dimes, and quarters. I never thought of those monetary coins as tokens. The most familiar tokens to me were Philadelphia subway tokens. I could exchange my subway token for a scenic ride under the streets of Philadelphia. The NON fungible token, if I interpret the definition of “non fungible” correctly, can't be exchanged for anything.



I have to pay for this NFT which is an entry in a “digital ledger”. Let me see if I have it right. I pay someone to put a record in a digital ledger and I can't use that record to buy goods or services? I can only buy and sell the NFT? If I buy an NFT I own an eternal entry in a digital ledger?

Some of these “tokens” are digital artwork, music, videos etc. I have seen some of the artwork and they are terrible. NFT art certainly isn't on a par with the Old Masters like Rembrandt.

Now let us look at cryptocurrency which is also a digital ledger entry. Cryptocurrency can be exchanged for goods and services. You can actually get paid in cryptocurrency if your employer allows. Some merchants accept cryptocurrency for purchases. (I bet the merchants turn the cryptocurrency into dollars before the close of business the same day.)



It can be argued that most people already trade in digital currency. You buy items using your credit card and then pay the credit card bill with an electronic money transfer from your bank account. I do that. My exchanges are in US dollars. But have you ever seen the fluctuations in the price of the cryptocurrency, Bitcoin?

Every currency has fluctuations. But if the US dollar fluctuated as much as Bitcoin has in the past year or so, I would definitely be piling up gold bars down town in my bank's vault.

Now to the subject of the "metaverse". My best understanding is the metaverse is a computer-generated virtual universe where users can create an "avatar" which is a computer-generated image that represents the user in the metaverse.



Get ready for this. A few months ago, I read in a financial publication that people are buying land, that is real estate, in the metaverse and paying handsome prices for it. I assume this is for building a home for their avatar to live in, or maybe start a metaverse business, perhaps selling non fungible tokens.

I have always wondered if land and the buildings and other improvements thereon is called "real" estate is their "fake" estate? Now I know. Yes. There is fake estate. You can buy land, build a house on it and your avatar can live in your fake estate.

I believe in augmented reality and virtual reality technologies. As a long-time aviation person, I see these technologies as valuable for flight simulators, low visibility landing, accident reconstruction, etc. But I am not about to give up my little piece of the earth's terra firma with the house and barn for anything in the metaverse and I still get paid and pay my bills in good old greenbacks. When will the world become so fake, we won't know real from fake? Or when will cybercriminals cause a metaverse Armageddon?

I might stock up on some gold bars.

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

## LIFE MEMBER NEWS

### SUGAR WORKS DISTILLERY LIFE MEMBERS TOUR



On Thursday, February 17<sup>th</sup>, the Daytona section of the IEEE, Life Members Affinity group toured the Sugar Works Distillery in New Smyrna beach, Florida.

The distillery is run by Tom McPeck and his wife. Tom is an Architect. He received his Architecture degree in 1997 at Texas A&M followed by a PHD in 2009. He was a college professor at various schools, including UCF. He also started the Agerpoint software company.

The McPeeks's started out with "0" experience 4 years ago in the distillery industry and presently produces 2000 – 4000 bottles per month. They recently moved and are introducing new equipment that will allow them to produce up to 10,000 bottles per month. The distillery produces rum, whiskey, tequila and vodka. Gin production will be their next product. The controls for Sugar Works are custom designed using Tom McPeck's specifications. With software from Agerpoint, Tom said he could control the entire plant from his cell phone!

The raw materials needed to produce whiskey are filtered water, yeast, ground corn and grains. Sugar and molasses are used in producing rum.

Two types of "stills" are used at Sugar Works, a Pot Still and a Coffey Still. The "Pot Still" is a large kettle or pot which is heated from the bottom, boiling off the alcohol and allowing the vapors to be sent to a condenser. The vapor is then separated and the alcohol collected.

The "Coffey" still refers to the column still design patented by Aeneas Coffey in 1830. A more efficient alternative to the pot still, it is capable of continuous distillation by reheating the liquid, rather than requiring distillation in batches. The Coffey Still can produce higher ABV spirits than Pot Stills.

Below is the link to the distillery if anyone wants to visit. Tours are offered through a link on their website <https://sugarworksdistillery.com/>

Ron Gedney, LF, Life Member Chair  
Marty Oksenhorn, LM, Life Member Vice Chair

## REGIONAL NEWS

In conjunction with other IEEE Sections in the Region, the Daytona Section will be co-hosting virtual event presentations of interest to our membership. This month, the presentation will be **NUCLEAR ENERGY: A BASELOAD OPTION** by Chuck Hawkins. All members interested are invited to register and attend the Zoom presentation.

Chuck Hawkins, a member of the Florida West Coast Section is doing an IEEE virtual event with R6 on March 22, Tuesday at 9pm EDT. (The registration link is below.) The program is targeted for 45 minutes, and the Director of the Thorium Energy Alliance will be in attendance and will be invited to say a few words

## Date and Time

Date: **Tuesday, 22 Mar 2022**

Time: **09:00 PM to 10:00 PM**

Times are US/Eastern

### REGISTER HERE:

<https://events.vtools.ieee.org/m/304909>

or

<https://us02web.zoom.us/meeting/register/tZMlduiqrz4tE9ybdxzJmny3PdTS4ENDihe1>

## Hosts

- [Florida Council](#)
- [Gainesville Section](#)
- [Canaveral Section](#)
- [Florida West Coast Section](#)
- [Palm Beach Section](#)
- [Orlando Section](#)
- [Daytona Section](#)
- [Broward Section](#)
- [Melbourne Section](#)
- [Miami Section](#)
- [Jacksonville Section](#)
- [Northwest Florida Section](#)
- [Tallahassee Area Section](#)

## Registration

Starts 15 March 2022 01:48 PM

Ends 22 March 2022 01:48 PM

## 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 \$39, 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](mailto:a.jusko@ieee.org)

## FUTURE MEETING DATES

2022 Section meetings, depending on the coronavirus situation at the time:

Spring semester meeting: Apr 28

## DAYTONA SECTION SOCIAL MEDIA INFORMATION

Facebook: <https://www.facebook.com/daytonaieee/>

Twitter: @IEEEDaytona

LinkedIn: <https://www.linkedin.com/company/ieee-daytona-section>

## ENGINEERING HUMOR



## **2022 SECTION OFFICERS**

**Chair – Dr. Shawn Wilkerson**  
386-322-7999 shawnwilkerson@ieee.org

**Vice Chair – Dr. Jianhua Liu**  
386-226-7713 liu620@erau.edu

**Treasurer – Dr. Eduardo Rojas**  
386-226-7701 rojase1@erau.edu

**Secretary – Ron Gedney, LF**  
386-847-8094 rgedney@aol.com

**Awards Chair – Rich Kent, LSM**  
206-369-1965 rtkentjr@msn.com

**Computer Society Chapter Chair**  
**Dr. Keith Garfield**  
386-226-7081 garfielk@erau.edu

**Life Member Chair – Ron Gedney, LF**  
386-847-8094 r.gedney@ieee.org

**Vice Chair – Martin Oksenhorn, LSM**  
386-283-4339 moksenho@yahoo.com

**Student Activities Chair – Rebecca DeMarco**  
1-623-200-8867 demarcr1@erau.edu

**Webmaster – Dr. Helen Hernandez, SM**  
386-872-0483 hhernandez@ieee.org

**SPARKS Editor – Allan Jusko, LSM**  
386-671-3706 a.jusko@ieee.org

### **Embry Riddle Aeronautical University**

**Student Advisor – Dr. Keith Garfield**  
386-226-7081 garfielk@erau.edu

**Student Chapter Chair – Kira McFadden**  
mcfaddek@my.erau.edu

**WIE Chair – Kira McFadden**  
mcfaddek@my.erau.edu

### **Bethune-Cookman University**

**Student Advisor - Dr. Xiaohe Wu**  
386-481-2673 wux@cookman.edu

**Student Chapter Chair – Manit Bhusal**  
manit.bhusal@students.cookman.edu