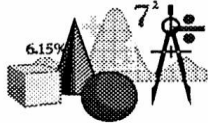




SPARKS

Daytona Section Newsletter
January 2016



JANUARY SECTION MEETING

Thursday January 28th at the Halifax River Yacht Club, 6:00 PM
331 South Beach Street, Daytona Beach, Florida 32114

PRESENTATION TOPIC

Systems Thinking: Apple Pie and the Sorcerer's Apprentice

CHAIR'S REPORT



It's that time of the month again, where the distinguished editor has cajoled, pleaded, and threatened the Chair into writing the introductory letter for the newsletter. The chill of Florida winter has driven all wit from me at this time, so a few brief reminders will (hopefully) suffice.

(Editor's note; One does what one needs to do, threatening usually works, cajoling and pleading not so much)

Make sure to renew your membership before IEEE headquarters in Piscataway runs the ever-so-infamous "terminator" program, removing your access to IEEE e-mail, discounts, life insurance, publications, and free software.

Engineers Week is coming! Make your plans for February 21-27, when we will be celebrating the engineers of present, past, and future, and attempting to inspire greater participation in the discipline while raising awareness of its contributions. Make sure to note our annual IEEE Engineers Week Banquet on WEDNESDAY, FEBRUARY 24 at ERAU, which will replace our traditional monthly meeting.

The Tomoka Science Fair will be held on January 30. While we already have two volunteer judges for the event, more participation is always welcome! Contact Charlie Husbands if you would like to volunteer.

If you, or anybody you know, has obtained an unmanned aircraft (drone, quadcopter, etc.), please remember it must be registered appropriately NO LATER THAN FEBRUARY 19 to avoid criminal charges. As a bonus, if you do so by January 20, this registration will be free. For more information, visit <https://www.faa.gov/uas/registration>.

Come to the monthly meeting (THURSDAY, JANUARY 28) for networking and technical development opportunities!

Jeanette

JANUARY PROGRAM

SYSTEMS THINKING: APPLE PIE AND THE SORCERER'S APPRENTICE

In today's increasingly globally connected world, complexities emerge that are being manifested in bizarre, unexpected, and potentially destructive ways. Despite mankind's awesome technical achievements, many of these unwelcome side effects are a result of what Herbert Simon calls "bounded rationality" - our human limitations on how we think. This talk will illustrate this with some challenges of the past, inviting a little audience participation to have some fun. We then discuss some of today's current issues and show how the science of systems thinking (not really new, perhaps just better organized) forms a framework for grappling with the increasingly challenging issues emerging in our increasingly complex world.

OUR SPEAKER

Dr. Tony Hagar's career has spanned over 5 decades with the federal government, the aerospace industry, and academia. He served in the Air Force and later with the Central Intelligence Agency. He worked on the Apollo Lunar program, and was the Mission Science Operations Team Chief for the Voyager Mission encounter at Saturn, receiving NASA awards for research, service, and flight operations. He spent a dozen years with the Institute for Defense Analyses doing research and analysis for the Office of the Secretary of Defense, and later as the Technical Director of its Systems Analysis Group. He also served as the Chief Space Technologist for the Veda/Veridian Corp, and was an independent consultant before joining the ERAU faculty in 2003.

ERAU NEWS

No news this month. Our students and faculty have been on a much needed semester break. All are recovering from finals and end of semester projects. We expect all to return relaxed, unstressed and ready for the spring semester stocked up with Red Bull, various caffeinated beverages and headache relief products.

DECEMBERS PRESENTATION



December's presentation was attended by visitors from the IEEE's North Pole Section



Walter Elden, PE (Ret.) gave a very informative presentation on Engineering Ethics, “How the IEEE Can Play an Important Part of the Process Through its Giving Ethical Advice and Support Early in Employee-Employer Disputes”.

Anyone wishing a copy of the slide presentation of Mr. Elden’s presentation can contact Allan Jusko, Editor, at a.jusko@ieee.org and a copy will be returned via an email attachment.

SECTION NOTES

The IEEE is offering loyalty pins to reflect landmark years of membership for members. If you would be interested in receiving one of these pins, please contact the Section Chair, Jeanette Barott (barottj@erau.edu).

One of the official items which took place at the December meeting was the nomination and election of officers for the upcoming year. Our elected officers for 2016 are:

Jeanette Barott - Chair
Dr. Keith Garfield – Vice Chair
Dr. Jianhua Liu – Treasurer
Ron Gedney – Secretary

The Section would like to thank Charlie Husbands (treasurer) and Roger Grubic (secretary) for their dedication, hard work and service for the Section during the past year. Both will continue to serve our Section in other capacities.

LIFE MEMBER MEETING

Life members will meet at the new Embry-Riddle Science building on Friday, Feb. 5, 2016. A tour of the new science facility is planned for 7:00 p.m. An open house at the new observatory will start at 8:00 p.m. Ron will e-mail additional details to Life Members on his e-mail list. For further information, contact Ron Gedney, Chair, Life Members committee
E-mail: r.gedney@ieee.org; tel: 386-478-1204

ANOTHER TALE FROM THE OLD PROFESSOR

An Engineering Trilogy; Part 3; Powel Crosley Jr.

Part one and two of this trilogy discussed Madman Muntz and Bill Lear; both contributors to the American 20th Century way of life. Both men had no formal education beyond high school. Powel Crosley, Jr. our final subject of the trilogy is the most educated of the three having made it through 2 years of college before deciding to leave his mark without the college degree.

It was the automobile that lured Crosley from his academic studies. He would do anything for the opportunity to drive one; even taking a job as a chauffeur at one time. His passion for automobiles led Powel, in 1907 at the age of 21, to form a company to manufacture an inexpensive automobile for the masses. Having no design or manufacturing experience the company never got off the ground and soon failed. Crosley did, however, find employment in the automotive business and made a decent living until he, along with a partner, started a company to manufacture automotive accessories which was a success.

At the dawn of the “golden age of radio” in 1920, Powel’s young son asked for a radio. Always thrifty, Crosley found the radios of the day too expensive and opted for making his own using mail order parts. He was able to make a radio for his son for about a quarter of the price of a ready-made model.

Crosley saw the opportunity in radio broadcasting and started a company first making radio parts and eventually radio receivers. In only 4 years, in 1924, the Crosley Radio Company was the largest radio manufacturer in the world. The Crosley product line was extensive and in 1930 Crosley produced the “Roamio”, a combination of “roaming” and “radio”. The Roamio was a battery-operated radio that was intended to be installed in boats and cars. This was the second car radio to hit the marketplace with Lear and Galvin’s Motorola being the first.

Crosley figured if he could make money building radio receivers why not make money at both ends of the pipeline by building a broadcast station? In 1922 Crosley’s fifty watt WLW started broadcasting from Cincinnati. Crosley realized the more power a broadcast station transmitted, the greater the listening audience would be and result in more revenue. The higher power would reach greater distances and in the local area the strong signal could be received better on inexpensive receivers than the lower powered competitors. Crosley’s WLW went through a series of power increases and in 1933 WLW operated at an incredible half million watts. WLW operated at this power level for several years on a special waiver, as this power was ten times the normal maximum legal power, from the Federal Radio Commission, FRC. (The FRC predated the current Federal Communications Commission, FCC, which was created by the Communications Act of 1934.)

In addition to automobiles, Crosley was fascinated by aircraft and in 1928 produced an aircraft called the “Moonbeam”. There were several iterations of the Moonbeam. The first, the C1, was a monoplane and the final iteration was the C3, a biplane. Always interested in products for the masses, Crosley had a small French design aircraft constructed from plans but with modifications. Crosley’s aircraft was dubbed the Crosley Flea and was successfully flown in several air shows in 1935. The French name for this aircraft is Mignet HM.14 Pou du Ciel "La Cucaracha". It is left to the reader as an exercise to explore the Spanish song “La Cucaracha” and the exact meaning of the title.

Interesting factoid: Crosley flew his first Moonbeam, the C1, from Lunken Airport near Cincinnati in April 1929. A few years before, December 1925, at the same airport, John Paul Riddle and T. Higbee Embry formed the Embry-Riddle Company.



The Crosley C3

La Cucaracha

Although Crosley was a very wealthy man from his broadcast empire his desire to manufacture an affordable automobile never faded. In 1939 Crosley formed a company to manufacture inexpensive cars but the entrance of the United States in WWII in 1941 put an end to all automotive manufacturing and the Crosley companies produced electronics and automotive parts for the War.

After the War Crosley returned to manufacturing of small inexpensive vehicles but expanded his appliance line to include refrigerators and other home appliances. The Crosley “Shelvador” was the first refrigerator to feature shelves in the door.

Another interesting factoid from the Old Professor: The Daytona Tortugas is associated with the Cincinnati Reds. Crosley owned the team from 1934 to 1961, the longest any person or group has owned the Reds. (His ownership ended at his death.) He installed electric lights at the ballpark and the Reds were the first major league team to play night games. He also initiated regular play-by-play broadcasts; another first, from one of Crosley’s radio stations; of course!

Even though Crosley has left us, his name lives on in a line of retro style electronics. The “new” Crosley Radio Company produces a line of retro style radios, juke boxes, and vinyl phonograph records and a line of record players to play the discs.

Epilogue:

Our trilogy chronicled three “engineers” that made a huge mark on the 20th century. Not one had a degree in engineering. They shared interests in automobiles, broadcasting, home appliances and aviation. They were passionate, indefatigable visionaries and not afraid to deviate from conventional wisdom. As teachers and mentors it is up to us to imbue those qualities in our students so the 21st century can experience the progress the last century did.

Al Helfrick

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 \$29, 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

Indicate shirt size and name and grade if desired. Shirts must be paid for before ordering, typical turn-around time is 2 weeks. Arrangements can be made to pick up shirts or have them shipped to you.

DAYTONA SECTION COFFEE MUGS



The Daytona Section has available coffee mugs with the IEEE Daytona Section Logo and are available for \$7.00. Purchase one or more to show you support and pride in our Section.

Contact Ron Gedney at 386-478-1204
or r.gedney@ieee.org for more information.

EDITORS NOTES

The **SPARKS** newsletter is also available on our website <http://www.ieee.org/go/daytona>

Region 3 website
<http://www.ewh.ieee.org/reg/3/>

Melbourne Section website
www.ieeemelbourne.org

Orlando Section website
www.ieee.org/orlando

FUTURE MEETING DATES:

The remaining meeting dates for the 2016 spring and fall sessions are: Feb 24*, Mar 24, Apr 28, Sep 22, Oct 27, Dec 1. * **February's meeting will take place at Embry-Riddle**

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JANUARY 2016 MEETING

Thursday January 28th 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

TOPIC – Systems Thinking: Apple Pie and
the Sorcerer’s Apprentice

SPEAKER - Dr. Tony Hagar, ERAU

AGENDA

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

Dinner Menu

Chicken Parmesan - Tender, lightly breaded chicken breast seared and served with melted provolone cheese over spaghetti with homemade basil marinara sauce.

Beef Stir-fry - Beef strips marinated with teriyaki and pineapple, sautéed with scallions, garlic and ginger, served over egg noodles with broccoli and toasted almonds.

Cajun Tilapia - Pan seared filets dusted with a mixture of Cajun spices and served with sautéed snap peas and roasted Creole potatoes.

Unless noted, dinner entrées are \$20.00 each. Students \$10.00 each
The dinner price includes roll and butter, salad, dinner, coffee or tea, gratuity and tax

A Veggie plate is available on request for \$10

Please contact Allan Jusko by Wednesday the 27th at noon
to give us a count for dinner or for further information

If you make reservations and are unable to attend, call at least 12 hrs prior to the event to cancel.

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

Allan Jusko

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