



SPARKS

Daytona Section Newsletter
September 2023
<https://r3.ieee.org/daytona>



SEPTEMBER SECTION MEETING

THURSDAY SEPTEMBER 28, 2023
7:00 PM

Lehman Bldg, Rm LB269
Embry-Riddle Aeronautical University
600 Clyde Morris Blvd, Daytona Beach, Florida
(Campus map is shown on page 5)

PRESENTATION

EMI TESTING: A CRITICAL COMPONENT OF LAUNCHING ROCKETS

NASA engineer and EMI expert Roger Lascorz will be giving a talk on the Artemis program and EMI testing. Lascorz will provide an understanding of what EMI testing is and explain in a general way how it supports the development of ground systems for the Artemis program.

He currently works in the Voice Systems Group where he makes prototypes that reduce costs and survive tricky environments that are unique to NASA. Roger, who immigrated to the US from Catalonia when he was 16 to start college, also leads an Employee Resource Group that represents foreign-born and first-generation Americans called New Americans. He has been working for NASA since 2019 and is a Georgia Institute of Technology alumni.

WOMEN IN ENGINEERING AFFINITY GROUP

- Vice Chair Dr. Niure Kandel, in her capacity as Assistant Professor at Embry-Riddle Aeronautical University (ERAU), conducted a WIE STAR activity from 6/12 to 6/15/2023.

The goal of the IEEE Student-Teacher and Research Engineer/Scientist (STAR) Program is to encourage girls to pursue careers in STEM.

The activity targeted area high school students to participate in a project titled “Basic cybersecurity education including how viruses are created, how to protect yourself against cyber-attacks, Introduction to digital forensics, and cryptography.” It was attended by 28 students.

- The WIE Affinity group held three professional leadership development seminars this summer: *How to document accomplishments and successes to aid your career advancement*. The 3-part series was staged as follows: “Coffee and Bagels” on June 7, 2023, moderated by Chair Rebecca DeMarco; “Coffee and Bagels” on July 5, 2023 with guest speaker Dr. Paula Reed, Employee Engagement Coordinator at Embry-Riddle Aeronautical University (ERAU); and a “Lunch and Learn” on July 26, 2023 with guest speaker Dr. Amy Cicchino, Associate Director at the Center for Teaching and Learning Excellence at ERAU.
- The WIE Affinity group is currently conducting a membership drive and extending invitations to potential contributors. The Group plans to host 3-4 events annually with the goal of fostering a supportive network, and to offer valuable tips and recommendations for securing internships and full-time positions in industry. These events are to provide excellent opportunities for skill development while actively promoting diversity and inclusion.
- WIE Affinity Group EXCOM next meeting [virtual]: TBA

SRT PROJECT

During the summer, the location of the SRT computer control system at the Burns STEM Charter School was moved to a new location in the same building.

The move was needed because of a change in classroom usage where the system had been located. The new location is more secure and dedicated to the SRT project. The new location allows communication with classrooms in the new high school on the campus. Dr. Hugh Ward and Al Jusko moved the equipment and ran new wiring to the new location in July. Dr. Ward has been doing testing of the system and is working with the IT staff of the school to activate the system for student use.

Once operational, Dr. Ward and the science staff at the Burns School intend to work with students on astronomy projects that can lead to presentations for the annual Tomoka Science and Engineering Fair held in January.

IEEE SECTIONS CONGRESS

IEEE Sections Congress, the triennial flagship event brings together volunteer leaders from every member country to share ideas and solutions.

Volunteer Section leaders from all ten Regions around the world met in the Shaw Centre, Ottawa, Canada, in August 2023 to exchange ideas and learn about the products and programs IEEE offers to members in their local areas. Section leaders' network, learn and collectively shape the future of IEEE. Next IEEE Sections Congress will be in 2026.

Dr. Xiaohe Wu representing the Daytona Section, participated in the IEEE Sections Congress 2023.

Dr. Wu networked and communicated with other Section delegates from the Florida area. The possibility of hosting a SoutheastCon conference in Daytona Beach was discussed.

Dr. Wu also obtained the SoutheastCon Operations Manual, which provides the guidelines and much useful information about how SoutheastCon operates. Dr. Wu is going to study this document and give a report/presentation at next month's section meeting.

MEETING MINUTES - 8/12/2023

Ottawa, Canada

Dr. Varadraj Gurupur and Dr. Wu

1. Plan to host IEEE SoutheastCon 2028 together with Canaveral, Melbourne, Orlando and West Florida sections.
2. The Daytona Section needs to appoint a representative for the Florida Council meetings.
3. Macaulay Osaisai, Chair of Florida council, expressed interest to be the chair of SouthEastCon 2028, mosaisai@ieee.org.
4. A possible venue is the Hilton hotel on the beach.
5. The Daytona section chair will initiate contact with Dr. Varadraj and Mr. Osaisai,
6. The Council meeting is once every two months, first Saturday of the month, the next one is likely in October.

PE CORNER

The Steps to Professional Licensure, Part 1

So, you want to become a PE? Great! In the next couple of months, I'll review the process to get your PE license. Though there have been several significant changes to the process in recent years, there are still essentially four steps required to get your PE.

First, get an ABET-accredited four-year engineering degree (or equivalent—see below). Second, take the Fundamentals of Engineering (FE) exam, formerly known as the Engineer Intern or Engineer in Training (EIT) Exam. Once you pass, you are an Engineer Intern (EI). Third, an EI

must obtain appropriate experience, typically four years, as defined in the rules. And last, the EI may take the Professional Engineers exam. Passing the exam and having the required experience qualifies the applicant as a Professional Engineer.

Recently, the Florida legislature passed changes to the “equivalent” requirements to take the FE exam related to Engineering Technology Degrees. They also made changes to the experience and timing requirements to take the PE. These will be the subject of a future column.

In Florida, an applicant may apply to take the FE directly with the National Council of Examiners for Engineering and Surveying (NCEES). The process is described on the FBPE website. <https://fbpe.org/licensure/licensure-process/> If the applicant obtained their engineering degree from a foreign institution not subject to ABET accreditation, the Board will typically require that additional information be provided to determinate whether the courses taken are substantially equivalent to a program meeting ABET accreditation standards.

The FE exam has changed in several regards over the years. One thing that has remained consistent, however, is that the exam is administered by NCEES in all fifty states and most US territories. No matter what state you pass the exam in, that passing grade is accepted by every state.

Next, application to take the FE exam, and evidence of educational qualifications, used to be submitted to the Board in the state that the applicant intended to take the exam. Now, application is made directly to NCEES.

In terms of the exam itself, much has changed in recent years. The exam is computer-based and may be taken on any available date at designated testing centers where previously it was only given on two specific dates each year. The exam is one hundred ten questions in length, multiple choice, half in the morning and half in the afternoon with a 6-hour time limit and an optional 25-minute break. Nothing may be brought into the exam room except for pencils and an approved calculator. A list of approved calculators may be found on the NCEES website. An applicant is given a formula reference book provided by NCEES for use during the exam; you can't bring one with you.

Art Nordlinger, PE, Life Senior Member

DAYTONA SECTION SOCIAL MEDIA INFORMATION

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

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

Instagram: @IEEEDaytona

Twitter: @IEEEDaytona

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



ERAU DAYTONA BEACH CAMPUS MAP

The Lehman Building is building 618, indicated with a red circle.

The Citation East lot, color coded in blue, can be used for parking.

2023 DAYTONA SECTION OFFICERS

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

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Student Activities Chair – Open

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