



## IEEE Baltimore Section 'Watts New' Newsletter: March 2018

### 'Multiplexing the Signals of the Monumental City'

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[r.klein.us@ieee.org](mailto:r.klein.us@ieee.org)  
<http://ewh.ieee.org/r2/baltimore/>

#### 22nd Robot Challenge: Judges Needed

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The members of the Baltimore Section of the Institute of Electrical and Electronics Engineers (IEEE) has organized this annual event to give students a taste of what it's like to be an engineer.

##### When:

Written Report Judging: April 9th, 6pm at Northrop Grumman  
Robot Challenge 2018: April 15th, 10 am to 5 pm at Baltimore Museum of Industry

##### Abstract:

The Robot Challenge will be held this year on Sunday, April 15 from 10 AM to 5:00 PM at the Baltimore Museum of Industry, at [1415 Key Highway](#), near the Baltimore Inner Harbor. From 10:15 to 11:00 AM judges are asked to take part in a short training session, while the actual competition will start at 11:00 am

We hope many members who have joined us in previous years will come again, but we're always in need of new volunteers, especially this year, when we plan to have it on one day only. Please e-mail Neville at [nevilleed@aol.com](mailto:nevilleed@aol.com) if you would like to participate. Engineers taking part in the event have commented that the experience has been very rewarding with most wanting to judge in the following years competitions. And the high school students truly learn earn a lot from their interaction with "real" engineers. Please indicate if you think you might be available, on one or both dates, and whether you have any preferences. Choices can be Any, Track Judge, Oral Presentation Judge, Administration, Robot Repairs, or Photographer. We're looking for 85 people.

We also need 26 judges for Written Reports to be done April 9 at Northrop Grumman at 6 PM. Candidates need to have been a Robot Challenge judge at least once to be able to participate in the written portion of the competition.

Please contact Neville with the following information if interested in being a part of the 22nd Annual Robot Challenge:

Re: IEEE Robot Challenge 2018 JUDGES

Name: Home/cell Phone:

Have you previously been a Judge, or involved in any other capacity: Yes/No

Available: Sunday 4/15 Yes/No (Possible 4/14 Yes/No?)

Veteran Judges only: Willing to judge Written Reports, Monday, April 9 Yes/No

Any Preferences:

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## The Application of Lithium-ion Batteries into Data Centers [\(Back to Top\)](#)

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Members of the IEEE Baltimore Industry-Application Society

**When:**

Wednesday, March 21st, 2018 from 6:00 to 9:30 pm

**Abstract:**

Lithium-Ion batteries (LIB) are displaying promising benefits when used in conjunction with uninterruptible power supply (UPS) systems. However, professionals question the installation and safety aspects of LIB utilization when compared with the traditional valve-regulated lead acid batteries. Along with weighing the pros and cons, professionals have to consider the codes and regulations introduced in effectively embracing LIB technologies.

The presenter will discuss how UL standards and the recent NFPA 2018 fire code, including a new section, 5.23 on how to safely deploy LIB for data center applications. Attendees will be invited to look closer at LIB performance as an energy storage and hear pertinent insight on their application.

**About the Presenter:**

Director, Strategic Sales- AC Power, Vertiv Corporation Mayo has 43 years experience in electrical power systems for Data Centers with the last 36 years as Liebert which evolved to Emerson Network Power and now to Vertiv. His unique, in-the-field knowledge, working with key market segments and customers in the Northeast United States, including the Washington DC government, Colo, Cloud and NYC Financial markets, has been in constant demand. Tabb has conducted extensive training in battery systems, monitoring, PDU, UPS systems and other electrical technologies providing AC power to the Data Center at numerous seminars and events. He has been heavily involved with the early and continuing adaption of the Lithium-Ion battery to the Data Center.

Mayo has a BS in Engineering from the University of Virginia, a Master's of Business Administration from Wake Forest University, and has spent his entire career in the computer power protection industry. Mayo is an active sailor on the Chesapeake Bay racing circuit and is involved in its administration for the past 15 years with PHRF.

**Where:**

Olive Grove Restaurant  
[705 North Hammonds Ferry Road](#)  
[Linthicum, Maryland 21090](#)

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## Apply for the IEEE Baltimore IAS Student Scholarship

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Members of the IEEE Baltimore Industry-Application Society

The Institute of Electrical and Electronics Engineers (IEEE) Student Scholarship is funded through donations and fundraising efforts provided by locals Baltimore members of the Industry Applications Society. The award is given annually to the graduating high school senior from the greater Baltimore area who best demonstrates their academic ability and desire to pursue excellence in the electrical engineering community. This is a cash gift of \$1,000 per year for up to four years, and is intended to provide cash assistance for books, materials, IT equipment or other necessary items to complete their college education. Students, once awarded, are required to maintain active full time enrollment in an undergraduate electrical engineering or related curriculum. Annually, students must submit proof of enrollment at an accredited engineering academic institution and proof of student membership in IEEE.

An application with the 2018 submission dates will be updated shortly; however, please review the 2017 scholarship application for more information.

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**Have an Idea for a Continuing Education Course?** [\(Back to Top\)](#)

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Boris Gramatikov, Ph.D.  
Director, Continuing Education Program

If you have any suggestions for course material please contact our director for Continuing EE Education (CEEE), Boris Gramatikov ([bgramat@jhmi.edu](mailto:bgramat@jhmi.edu)).

The Continuing Education group encourages professional development by offering presentations that foster the sharing of knowledge and experience. Presentations also provide networking opportunities for members as well as professional development hours vital to career advancement. While attending discussions can help one with career goals, leading the discussion will inspire confidence in the presented material and strengthen public speaking skills.

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**Sixty Years in Amateur Radio - From Low Power Morse Code to Sophisticated 21st Century Technologies** [\(Back to Top\)](#)

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Steven D'Ambrosio,  
Secretary,  
Baltimore COMSOC  
[steven.dambrosio@jhuapl.edu](mailto:steven.dambrosio@jhuapl.edu)

When:  
March 20th from 5:30 to 7:00pm

Abstract:  
Frank presents an overview of major technical advancements in amateur radio over his 60 years in the hobby, beginning with low power manual Morse Code and rudimentary HF antennas and culminating in his sophisticated station in western Howard County. He also presents a video tour of his station and a tour of the National Electronics Museum's amateur radio station.

Biography:  
Frank's amateur radio career began as a twelve year old at the Providence Radio Association's 1959 Field Day on a hilltop two miles from his home in Providence, Rhode Island. Soon afterwards he began to slowly build his own small amateur radio station on 1/10th acre in a densely populated urban neighborhood.

Immediately after college, 2nd Lieutenant Frank Donovan's first military assignment was as an electronic engineer at the National Security Agency. After completing his military obligation he was hired as civilian electronic engineer at NSA in 1973. His 30 year career at NSA, CIA and the National Reconnaissance Office focused on electronic engineering and systems engineering.

He retired seven years ago as a Chief Engineer at General Dynamics Corporation after a 45 year career in electronics and systems engineering.

Where:  
National Electronics Museum  
[1745 W. Nursery Road](#)  
[Linthicum, Maryland](#)  
[United States 21090](#)

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