



# The Beacon



The Newsletter of the IEEE Maine Section

December 17, 2019

[www.ieee.org/maine](http://www.ieee.org/maine)



The IEEE Maine ExCom wishes all of you and your families a wonderful holiday season and bounteous New Year!



## IT'S ELECTION TIME!

There's just a few hours left, so if you haven't yet voted, please do so. Electronic voting is quick and easy. It's your section, so please take a minute to vote. (It doesn't take much more than a minute!!)

## MAINE EXCOM STRATEGY SESSION

The IEEE Maine Section executive committee held a strategy session on November 23, hosted by Ron Brown in Portland. The objective of this session was to discuss strategies and methods by which the IEEE Maine Section may better serve the section's membership, provide greater visibility for IEEE in the state, attract new members, and more efficiently share the responsibilities of the various committees. With this in mind, the meeting addressed three overarching themes:

- Automate and consolidate,
- IEEE Maine Section events, and
- IEEE Maine Section events.

A complete report of the strategy session is at the end of this **Beacon**.

## MAINE SECTION & PES/IAS CHAPTER YEAR END EVENT

This will be held December 20<sup>th</sup> at the Hilton Garden in Freeport. Ryan Newell, Supervisor of Substation Automation and Integration Engineering, TRC, will be recognized as the recipient of the 2019 IEEE PES Outstanding Engineer Award. Dr. Betina Tagle, Assistant Professor of Cyber and CIS at the University of Maine Augusta will discuss the **Why and How of Cyber for Industrial Control Systems (ICS) and Supervisory Control and Data Acquisition (SCADA)**. Please join us to recognize Ryan's accomplishments and hear Betina's important presentation. To register go to: <https://events.vtools.ieee.org/m/211191>

## IEEE DAY AT USM

Walter Rawle presented a talk entitled **So you want to build a Quadcopter! Terrific – Let's Do It** at the John Mitchell Engineering Building. Walter's presentation stimulated many questions. Of course, there was pizza too.

## ED/SSC CHAPTER MEETING

The Maine ED/SSC Chapter met on October 4 at ON Semiconductor. Dr. Ed Wu, IEEE Fellow and IBM Technical Fellow presented a talk on **The Fundamentals of Dielectric Breakdown**.

## **UMO IEEE Student Branch**

The University of Maine at Orono IEEE branch is off to a great start with many new members. Kay Atkin from Introspective systems gave a talk on the electrical grid on October 15th.

## **IEEE Maine COM/CS Joint Chapter Event: Lecture on Privacy**

The IEEE Maine COM/CS Chapter presented **A Privacy-Compliant Framework for Mobile and Smart Applications**, a lecture by Dr. Sepideh Ghanavati (University of Maine School of Computing and Info Sciences), on Wednesday November 13, 2019 at 4:00pm at Kominsky Auditorium, Peabody Hall, Husson University. CEU/PDH were available and pizza was provided by IEEE.

## **IEEE EDS/SSC Chapter lecture on Machine Learning**

The Maine Chapter of the Electron Device and Solid State Circuits Societies of the IEEE presented **Artificial Neural Networks and their Industrial Applications**, a lecture by Professor Mohamad Musavi of University of Maine, Orono, on Friday 15<sup>th</sup> at ON Semiconductor in South Portland.

## **Career Day at Oxford Elementary School**

On November 15<sup>th</sup> Ron Brown represented the engineering profession at the annual Oxford Elementary School. To the younger students he presented what in general engineers do. To the older ones he presented the myriad of different career trajectories engineers can take.

## **WEB SITE**

The ExCom recognized that our web site has become our face to the world. We reaching out to IEEE USA and MGA to investigating ways to make it more user friendly so we can better keep it up to date and better get information out to our members. What would you like to see on our web site? Let us know so we can better meet your needs.

## **DR. CARYL JOHNSON**

The IEEE Maine Section lost a loyal supporter and dear friend on November 29, 2019. Dr. Caryl Johnson, Founder and Chief Innovation Officer, Introspective Systems, passed away at the Maine Medical Center from complications associated with cancer. Caryl was well known in the IEEE community, both from the presentation of her work at the 2017 Joint IEEE Maine Section/PES Year End Event and Engineer of the Year Presentation, and more recently from her active participation in the newly established IEEE Maine Section Artificial Intelligence and Autonomous Systems Working Group. Caryl, although educated in areas of earth science, always expressed her keen interest in speaking with engineers, who stimulated her thinking around a wide diversity of real world problems.

Dr. Johnson was born in Marshalltown, Iowa, graduated with bachelor's and master's degrees from the Massachusetts Institute of Technology, and obtained her PhD from the California Institute of Technology. Her early work focused on seismology and volcanology; she then transitioned into the military industry working on intelligence, surveillance, and reconnaissance problems for most recently BAE Systems; and then, in 2012, moved to Portland Maine to establish Introspective Systems. With her partner, Kay Aiken, Caryl established a global presence with her work in transactive electrical energy systems.

A memorial service was held for Dr. Johnson on December 14, 2019, 4 pm, at the offices of Introspective Systems, 148 Middle St., Portland ME. Walter Rawle, Chair, IEEE Maine Section delivered a short message of condolence and appreciation for Dr. Johnson's active participation in our local IEEE community. Donations to the Maine Medical Center, in Dr. Johnson's memory, would be greatly appreciated.

# Resetting the IEEE Maine Section Executive Committee

W. D. Rawle, PhD  
Chair, IEEE Maine Section

The IEEE Maine Section executive committee held a strategy session on November 23, hosted by Ron Brown in Portland. The objective of this session was to discuss strategies and methods by which the IEEE Maine Section may better serve the section's membership, provide greater visibility for IEEE in the state, attract new members, and more efficiently share the responsibilities of the various committees. With this in mind, the meeting addressed three overarching themes:

- Automate and consolidate: Experience over the last two years has shown that a few core executive committee members share the vast majority of tasks associated with actually administering the section. The discussion focused on reducing the number of members on the executive committee, re-aligning expectations and work share, and automating many of the tasks that are currently performed manually
- IEEE Maine Section events – to provide a service to existing members or to market IEEE to prospective new members: Given the mixed response to IEEE events in the state, the discussion explored the questions around whether IEEE Maine section events should be of a technical nature, to serve the professional development of current members, or serve as a marketing tool to attract and interest new members in the IEEE, in general, and to Maine section event, specifically.
- IEEE Maine Section executive committee succession planning: The IEEE Maine section has experienced mixed results in the area of officer succession. Unfortunately, a few newer members elected/ratified to the executive committee have quickly lost interest and “dropped off the radar”. In other instances, section officers have dropped their IEEE membership without advising anyone locally. The strategy session addressed this issue by exploring options for requesting greater commitment from prospective officers and committee leaders- specifically with respect to meeting attendance, training, and work share participation.

Strategy session participants discussed all three themes in detail and developed a series of recommendations for implementation during the next two year executive committee cycle.

First, with respect to automation and consolidation, session participants agreed that the current executive committee structure is inefficient and leads to unequal distribution of required effort. It was agreed that the structure of the executive committee should be revamped with the number of participants reduced; more formal roles, with appropriate training, introduced; and automation such as website content management software implemented to increase efficiency of volunteer resource commitment. This smaller executive committee would more formally delegate local activities and responsibilities to “child” technical societies and affinity groups within the section's geographical area, as defined by IEEE MGA. These local societies and affinity groups will be required to provide yearly budgets, operating plans, and monthly reports to be included in executive committee minutes. And these local societies and affinity groups will be encouraged to provide more technically oriented events and educational materials for the benefit of all IEEE members in the section.

Second, with respect to activities and events, strategy session participants agreed that IEEE Maine Section activities should be developed along themes of a general nature and provide opportunity for non IEEE members to attend. The IEEE USA briefing on congressional activities, held on May 23, 2019, was identified as a particularly appropriate example of section organized activities. Probing

questions were brought forward during the discussion of the section's role in organizing and holding events: What motivates an individual to attend an IEEE event? Would online or webinar based events be more efficient and attractive to the section's membership, given its geographical distribution? Does the provisioning of a meal increase the cost of an event to where individuals are dissuaded from attending? Further research and data collection in response to these questions will serve to increase the efficiency of section operations and use of volunteer resources.

Third, strategy session participants recognized the difficulties associated with succession planning and recruitment for executive committee positions. It was, in general, acknowledged that recent engineering graduates have very little time for volunteer activities. Early career development and associated life priorities leave very little time for IEEE leadership training, Vtools operations study, and committee participation. It was further acknowledged that a commitment to the IEEE executive committee is simply not of a one or two year duration. It was noted that, in other sections, a commitment of seven years is generally required, so that newly accepted members are available to rotate through the various positions and then serve as mentors for future participants. Given these challenges, session participants agreed that an appropriate strategy may be to identify prospective executive committee members, formally interview them to establish their potential for success in executive committee positions, sponsor their participation in IEEE leadership and Vtools training, and then monitor their level of commitment in order to ensure continuity. Implementing this strategy, along with consolidating responsibilities and automating committee tasking, it was agreed, should lead to greater efficiency in section executive committee operations and allow the committee to provide greater service to the general IEEE Maine membership.

The strategy session participants formulated a new executive committee structure which will be implemented with the commencement of the 2020-2021 operations cycle. The new structure is as follows:

- Chair
- Vice Chair
- Secretary
- Treasurer
- Member Services Committee Leader (Awards & Recognition, Recruiting, Communications)
- Events Committee Leader (PACE, Events Planning, Educational Activities)
- Student Activity Committee Leader
- Past Chair (Financial Audits and Elections)

The Chair, Vice Chair, Secretary, and Treasurer shall be elected by the IEEE membership via Vtools polling. Committee Leaders shall be nominated and ratified by the elected executive committee members during the February executive committee meeting.