
[BALTNEWSLETTER] IEEE Baltimore Newsletter - September 2019

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**IEEE Baltimore Section 'Watts New' Newsletter: September 2019****'Multiplexing the Signals of the Monumental City'**

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IEEE Baltimore ExComm Meeting - October 2019

When:
Monday, October 21, 2019
6:30 PM - 8:30 PM

Where:
[1745 W Nursery Road](#)
[Linthicum, Maryland](#)
Building: National Electronics Museum
Room Number: Conference room

Contact Details

r.klein.us@ieee.org
<http://ewh.ieee.org/r2/baltimore/>

The Passing of Former IEEE Baltimore Chair, Gordon Gaertner

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IEEE Baltimore Executive Committee

Gordon Harry Gaertner (IEEE Life Senior Member) and Past Baltimore Section Chair (1991-93) known as Gordie to his friends and colleagues, past away on July 2 at the age of 91. Gordie was employed by Baltimore Gas Electric and for many years hosted Baltimore Section IEEE meetings at the BGE offices in Windsor Mill. Gordie helped Neville Jacobs launch the Baltimore Section Robotic Challenge. Gordie worked with Neville for 2 years developing the design of the Robots coming up with different ideas, which he collaborated on with Neville until they settled on the final design currently in use. And 23 years later, the project is still going strong with over 6000 high school students having participated in the challenge.

Gordie, a resident of Arnold MD, attended Baltimore Polytechnic HS and Johns Hopkins University and retired from BGE. Besides serving as Chairman of the Baltimore Section, he was Commander of the Annapolis Sail and Power Squadron (1993) and was a lifetime member of the Annapolis Yacht Club. Gordie is survived by his wife, Louise Payant Gaertner and a daughter-in-law Sharon Gaertner and 2 grandchildren. Services were private.

[Share a Memory of Gordon](#)

IEEE Baltimore Section 2020 Officer Nominees

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Dave Kisak
Chair,
IEEE Baltimore Officer Nominations

IEEE Baltimore Section Members:

Officer election for Baltimore Section Executive Committee Officers for 2020 is planned to occur in November.

Chair: Barin Nag
Vice Chair: Michael Powers
Treasurer: Benjamin Tsui
Secretary: Don Herres

Voting will take place via web with voting instructions provided at a later date. Ballots are expected to be available around 1 November and remain available through 8 December. The following are brief biographies from each of the nominees. Thank you for your support of IEEE and Baltimore Section.

Barin Nag
Nominated Position – IEEE Baltimore Section Chair

Bio:
Barin N. Nag has been a member of IEEE for over 35 years and a Senior Member for over 10 years. He is presently Chair of the Computer Society of the Baltimore Section and has been active for several years with the Robot Challenge competition. He has been a member of the Communications Society and of the Systems, Man and Cybernetics Society. He has a Ph.D. in Operations Research and Computer Science from the University of Maryland and Bachelors and Masters degrees respectively in Electronics Engineering and Telecommunications, both from the Institute of Radio Physics & Electronics of the

University of Calcutta (Kolkata) India. He has experience in the design and manufacture of electronic devices. He has been a professor for over 30 years with teaching experience in Towson University, Johns Hopkins University, and Monarch University (Switzerland). He has over 50 publications including three books. His research interests have covered various areas of applications of Artificial Intelligence in decision making for scheduling, optimization, and robotic systems.

Position Statement:

My active involvement with the Baltimore Section of the IEEE began with the Robot Challenge and expanded to the Executive Committee and later to restart the dormant Computer Society. It has been a most rewarding experience in the associations I have had with people that I am proud to be associated with and in seeing the commitment of the active members towards the development of the Baltimore Section and its membership. I would like to support and develop the growth of the active membership by increasing the presence in the community and by providing venues for enrichment. IEEE now has online courses available that attract interest across societies. I would like to see more of these presented to wider audiences. We need more speakers and need to promote them to the entire section membership. Educational activities build the future of IEEE. Linking with student chapters is one part of the growth. The Robot Challenge is an excellent vehicle to promote engineering education to high school students. I see a lot of potential in this for the future of the Baltimore Section.

Michael Powers

Nominated Position - IEEE Baltimore Vice-chair

Bio:

I am seeking election as Vice-chair of the Baltimore Section. I am a senior member of the IEEE and have been a member since 2002 when I joined the student branch at UMBC. After serving as student branch chair and earning a B.S. in Computer Engineering, I obtained the M.S. and Ph.D. degrees in Electrical Engineering from the University of Maryland College Park. More recently, I completed a Technical Management certificate at Johns Hopkins. I am currently the Vice President and Chief Innovation and Strategy Officer at First Financial FCU, a large credit union serving the Baltimore area, where I manage strategic-level projects and organizational initiatives. Prior to this career broadening experience I was the leader of the Optical Sensing and Imaging team at the U.S. Army Research Laboratory. I started my career at General Dynamics Robotic Systems, an organization that was an early pioneer of autonomous vehicle technology. My technical specialty and the subject of most of my published research is optics and photonics applied to imaging, chemical detection, and autonomous vehicle perception.

Position Statement:

As Vice-chair I will support the Section in efforts to increase the appeal of membership. In particular, I would like to strengthen the role of the IEEE as a home base for those whose current employment or unemployment would otherwise leave them disconnected from their technical background.

Benjamin Tsui, Ph.D.

Nominated Position – Baltimore Section Treasurer

Bio:

I am seeking election as Treasurer for the Baltimore Section of IEEE. I have been a member of IEEE for over 36 years and am currently a Life Fellow of the Nuclear and Plasma Science Society (NPSS). In my educational background is a B.S. in Physics, 1970, The Chinese University of Hong Kong, A.M. in physics, 1982, Dartmouth College, and Ph.D. in Medical Physics, University of Chicago. I am a Professor of Radiology, Biomedical Engineering (BME), and Electrical & Computer Engineering (ECE), at Johns Hopkins University. My research interests have been focused on clinical and pre-clinical biomedical imaging, especially in SPECT, PET and CT. I am a Fellow of the IEEE, IOP and AIMBE and member of SNMMI and AAPM. I am well published in scientific journals and have advised a substantial number of M.S. and Ph.D. students in BME and ECE. I have served on scientific review committees of federal agencies and foundations, and as a reviewer for numerous professional journals. I also have served on IEEE NPSS subcommittees and conference committees. I was the MIC program chair of the IEEE Nuclear Science Symposium (NPS) and Medical Imaging Conference (MIC) in 2001 and the General Chair in 2007.

Position Statement:

Engineering sciences continue to lead major technological advances that have growing impact on our daily lives. Research and professional engineers are in great demand to fill the needs of many research and educational institutions, governmental agencies, and industrial companies. The IEEE is an important organization promoting the research, education, application and dissemination of various engineering sciences. The Baltimore Section of the IEEE can play a useful role in coordinating, motivating and mobilizing grassroots efforts to promote IEEE's missions. If elected, I will try my best to continue and enhance the past efforts in introducing the engineering sciences, especially biomedical engineering, to high school students. I have constructed and administered numerous project and conference budgets and look forward to the opportunity to providing careful fiscal stewardship of the Baltimore section's resources.

Don Herres

Nominated Position – Baltimore Section Secretary

Bio:

Don Herres is currently IEEE Region 2 East Area Chair (although Baltimore is in the Southern Area). I moved to Ellicott City at the end of 2018 having formerly

lived in Mountain Top, PA where I was Lehigh Valley Section Chair from 2016 until August 2018. Prior to that, I spent my career in the Syracuse Area until 2013. I was Section Chair there in 1992 - 1993 and again in 2010 - 2011. I also served in a number of other Section and Chapter offices including a couple of stints as Secretary.

I am a past member of the IEEE-USA Career Equality Committee, Employment Assistance Committee, Professional Activities Committee, and Employment & Career Services Committee (until 2013). If you do not recognize all of these, it is because I am adept at moving forward during reorganizations, both at IEEE and professionally. I am a Licensed Professional Engineer in NY and PA. I earned a BSEE from University of Buffalo and MSEE from Syracuse University. I retired as an electronics design engineer from Marquardt Switches in Cazenovia, NY in 2013 and have done some consulting and contract design work since.

Position Statement:

The Section exists to be the local contact and support for the members. This is primarily through meetings, workshops, and conferences. The Executive Committee meets to facilitate these by providing indirect Chapter Support (including funds) and also planning Section activities. A key element is to help recharge and develop chapter officers, volunteers and identify potential volunteers. The Secretary is responsible for keeping minutes, submitting annual Officer Reports, and ensuring meetings are reported to IEEE (necessary for Section and Chapter funding). Beyond this, I expect to help support the other members in their activities.

[Find Out More](#)

**Baltimore Colloquium on Next Gen Technologies [\(Back to Top\)](#)
for 5G and Beyond**

Baltimore Chapter of Electron Devices and Solid-State Circuits

When:

Wednesday October 9th, 2019,
9am to 5pm

Where:

One Physics Ellipse
College Park, Maryland
United States 20740
Building: American Center for Physics
Room Number: Conference Room A

The Baltimore Chapter of Electron Devices and Solid-State Circuits will be hosting its seventh Fall Colloquium on October 9, 2019. The theme of this year's meeting is Next Gen Technologies for 5G and Beyond. This one-day event features a panel of Distinguished Lecturers from IEEE EDS and local experts in the field. Attendance is open to industry, government, and academia, including students. The venue is the American Center for Physics (Conference Room A), one mile southeast of the University of Maryland College Park campus. For location and directions see <http://www.acp.org/directions-american-center-physics>.

Admission and parking are free, but registration is required. Complimentary lunch will be provided for those who register by October 4. Attendance is limited to 50; if you are unable to register online, contact the chapter secretary papotyraj@ieee.org.

Co-sponsored by Washington DC / NoVa EDS.

[Read More](#)

IEEE Baltimore Section 2019 Annual Picnic [\(Back to Top\)](#)

IEEE Baltimore Executive Committee

When:

October 12th, 2019
11:00 am to 3:00 pm

Where:

Hammond Park
[10700 Glen Hannah Drive](#)
[Laurel, Maryland](#)
[United States 20723](#)

Baltimore Section Members,

Please come join us with your families at Hammond Park in Laurel, Maryland for our annual picnic as we eat, socialize, and celebrate IEEE day (IEEE day actual observance is Oct 1). There will be burgers, hot dogs, and other treats.

The event is free to members and their families but registration is needed so that we know how much food to bring.

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Generator Docking Stations and the National Electric Code

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IEEE Baltimore Industry Application Society

When: Wednesday, October 16th, 2019
6:00 PM - 9:30 PM

Abstract:

Generator Docking Stations have become an integral part of Emergency Systems. We will explore what Generator Docking Stations are and how they are implemented. We will discuss article 700 and touch on 700.3, 700.3(E.) Our discussion will dive deep into the recent change in the 2017 NEC revolving around 700.3(F) Temporary source of power maintenance or repair of the alternate source of power and how to comply with the new code.

About the Speaker:

Jonathan Sunde is a highly skilled Master Electrician with a strong background in the National Electrical Code, Laws and Statutes. Currently Jon is the Supervising Manager of both the Engineering and Electrical departments at Trystar Inc. Jon holds Master Electricians licenses in six states throughout the US. Jon is a Certified Master Electrical Inspector and member of the International Association of Electrical Inspectors. He also sits on the UL 1691 committee. Aside from being part of the Electrical and Engineering team at TrystarInc., Jon is a certified instructor for the MN Department of Labor and Industry as well as other states for continuing education courses. Jon is fascinated by all things electrical and thrives on teaching electricians how to apply the code book to their careers

[Find Out More](#)

Power Electronics for Power Engineers Workshop [\(Back to Top\)](#)

IEEE Power Electronics Society

When:
Saturday, October 26th, 2019
09:45 AM to 02:00 PM

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

Abstract:

Application of power electronics is widespread in everyday life. However, there is a gap in the knowledge of power electronics among power engineers. This half-day course is designed to bridge the gap. Also covered is advanced topic, such as SMART Controller that today's grid requires for voltage regulation, power factor regulation, unbalance voltage/current regulation, harmonic elimination and so on. A SMART Controller that is based on functional requirements and cost-effective solutions is derived from utilizing the best features of all the technical concepts that are developed until now. Final year students of electrical engineering undergraduate curriculum, post graduate students, researchers, academicians and utility engineers will benefit from attending this course. The participants will hear from an expert who actually designed and commissioned a few utility-grade SMART controllers since their inception in the 1990s.

Highlighted Topics Include:

Introduction: Circuit Theory, Per Unit Model, Error Regulator (PID Regulator)
DC-to-DC Converter: Buck Converter, Boost Converter
Pulse Width Modulation (sawtooth and triangular)
Regulation in an AC Circuit
Examples of implementing SMART Controllers

About the Speaker:

Dr. Kalyan Sen is the Chief Technology Officer of Sen Engineering Solutions, Inc. that specializes in developing SMART Controllers—functional requirements-based and cost-effective solutions. Dr. Sen spent 32 years in academia and industry and became a Westinghouse Fellow Engineer. He was a key member of the Flexible Alternating Current Transmission Systems (FACTS) development team at the Westinghouse Science & Technology Center in Pittsburgh. He contributed in all aspects (conception, simulation, design, and commissioning) of FACTS projects at Westinghouse. Dr. Sen conceived some of the basic concepts in FACTS technology. He has authored or coauthored more than 25 peer-reviewed publications, 8 issued patents, a book and 4 book chapters in the areas

of FACTS and power electronics. He is the coauthor of the book titled, Introduction to FACTS Controllers: Theory, Modeling, and Applications, IEEE Press and John Wiley & Sons, Inc. 2009, which is also published in Chinese and Indian paperback editions. He is the co-inventor of Sen Transformer. He received BEE, MSEE, and PhD degrees, all in Electrical Engineering, from Jadavpur University, India, Tuskegee University, USA, and Worcester Polytechnic Institute, USA, respectively. He also received an MBA from Robert Morris University, USA. He is a licensed Professional Engineer in the Commonwealth of Pennsylvania. He also served as a Fulbright Scholar (sponsored by U.S. Government) and GIAN scholar (sponsored by Indian Government). He is a Distinguished Toastmaster who led District 13 of Toastmasters International as its Governor to be the 10th-ranking District in the world in 2007-8.

Dr. Sen has been serving as an IEEE Power & Energy Society Distinguished Lecturer since 2002. In that capacity, he has given presentations on power flow control technology more than 150 times in 15 countries.

[Learn More](#)

Institute for Electronics and Electrical Engineers - Baltimore Section - 'Watts New' Newsletter

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