

Almanack

IEEE Philadelphia Section

Membership in the following counties:

Pennsylvania: Bucks, Chester, Delaware, Montgomery,
and Philadelphia

New Jersey: Burlington, Camden, and Gloucester



October 2019



Chair's Message

By Emilio Salgueiro

Dear fellow IEEE Philadelphia Section members, I am happy to report that effective 9/10/2019 Chris Dietsch has accepted to be the new Student Activities Chair and will also take the responsibility of the administration of the Merrill W. Buckley, Jr., IEEE Student-Branch Leadership Scholarship Program. I want to express my appreciation to Barney Adler for his valuable contributions to the Section and wish him well in his future endeavors.

On September 17, we had our traditional IEEE Philadelphia Section Night with a couple of outstanding presentations. The first was a *Representation of Numbers in a New Natural*

Volume 64, Number 8

Non-Orthogonal Geometry. The presenter, Dr. John J. Sudano introduced the concept of a natural alternative geometrical space with non-orthogonal basis rays. The second presentation was about *Overload* in higher education. This talk by Donald McEachron was sponsored by the Engineering in Medicine and Biology chapter.

On September 24th, Kate McDewitt, our Membership Chair held a Senior Member Elevation Night at the Sheraton, University City. The attendance was good, we had many candidates, and the attendance of a handful of Section Senior Members to help sponsor the candidates.

Dr. Li Bai reported that he is now working with Jim Beck, the Awards and Recognition Region 2 Chair to find a solution of hosting a web site that would allow successful submissions of candidates in a very user-friendly manner allowing access to all members to submit nominations.

Peter Silverberg is now getting some needed help from Zizi Elgamel, a new young volunteer to help with the Almanack and our website. Again, thank you, Peter, you are an asset to our section.

I am very interested in hearing from our members. I am available thru email: emsalgueiro@ieee.org, or you can email the IEEE Section office.

Highlights Inside
Calendar page 3
IEEE Night pages 3 & 4
CASS pages 5 & 6
ElectricExpo page 9
Maker Faire page 16

Here are some pictures from this summer's camp STEM program using App Inventor to create mobile apps.

Submitted by Mark Soffa

STEM CONTESTANTS



STEM INSTRUCTOR



STUDENT SECOND PLACE WINNERS

**STEM STUDENTS AND TEACHERS
STEM STUDENTS AND HELPERS**



| October 2019 | | | | | | |
|--|--------------------|-----------------------------|---------------------|-----|--|-----|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | | 1 IEEE Day | 2 | 3 | 4 | 5 |
| 6 Mini Maker Faire | 7 WIE Monthly | 8 Yom Kippur | 9 | 10 | 11 | 12 |
| 13 | 14 Columbus Day | 15 Adcom & IEEE Night | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 Electric Expo | 23 Electric Expo | 24 | 24 CASS Drexel and CASS Villanova | 25 |
| 26 Future City Engineering Fair | 27 | 28 | 29 | 30 | 31 Halloween | |

IEEE Night Program

October 15, 2019

Sheraton University City

Chestnut and 36th stree, Philadelphia

Dinner at 6. Members \$25, Student \$15

Speakers at 7 and 8

Reserve with our office.

Sponsored by Computer Society and
Reliability Society

On Educating Tomorrow's Cyber Physical Security Professionals

Presentation by Shianling Wu



Abstract

There is Cyber Security (CS) and there is Cyber Physical Security (CPS).

While news on CS breaches pop up almost daily with no end in

sight, how secure is our physical infrastructures such as water, power (electric), energy (oil, nuclear), transportation, communication, and manufacturing facilities, and soon to be ubiquitous internet-of-“every”things? Today’s cyber-connected physical systems are equally vulnerable to attacks but with far more devastating consequences. Processes of such infrastructure and facility use industry control systems (ICS) in conjunction with centralized, distributed supervisory control and data acquisition (SCADA) systems and subsystems. Security information and event management (SIEM) then provides an integrated solution. Note that some protocols used in SCACA today were defined in late 1970’s and have been used “as is” ever since, before the internet was populated! Therefore, the system’s security component has its own unique set of constraints.

This presentation provides an overview of CS and CPS, SCADA and SIEM, and case studies of attacks. Most importantly, we will brainstorm on CPS challenges; and where university curriculum needs to evolve.

Presenter

Shianling Wu is the Director of Professional Science Master's program on Computer and Systems Security (PSM-CSS) at Electrical and Computer Engineering Department, Temple University. The program focuses on the physical and hardware aspects of the Cyber Security paradigm for both undergraduate and graduate educations. Her industry expertise before the academia was in Electronics Design Automation (EDA) tools for semiconductor Integrated Circuit (IC) Design-for-Test, -quality, -manufacturability, specializing in Built-in Self-Test for device logic and memories. Her industry experience includes leading and managing R&D teams to build over 15 EDA tools for IC testability and supporting worldwide EDA users. She is also a certified project manager experienced in managing multinational projects. She has 13 patents, 6 journal papers, 21 publications, and 1 book chapter. She is a Senior IEEE member, the recipient of IEEE Meritorious Service Award and a Best Panel Session Award from IEEE International Test Conference (ITC). Representing her companies, she was a member of SEMATECH on Test, ITC Program Committee, and IEEE1500 Standards Committee, a contributor to the Asian Test Symposium, and an industry liaison to the North Atlantic Test Workshop.

Her current quest is to educate next generation design-for-security experts, applying her design-for-test experience.

CPA & CPC

Presentation by Emilio Salgueiro

Abstract

The importance of Computer Performance Analysis and Capacity Planning for large computing environments.

Many Fortune 500 and Global 2000 companies trust big data analytics and

visualization platform to identify resource bottlenecks and dramatically reduce mean time to identification and resolution. Establish performance thresholds, maintain service delivery levels and help customers save millions of dollars in outages and downtime by fixing underlying issues instead of just symptoms.

Presenter

Emilio Salgueiro's technical interests are in Computer Architecture, Performance, and Capacity Planning of large complex computer systems. He is Adjunct Faculty of Electrical and Computer Engineering at Temple University. He retired from Unisys Corporation after working very successfully as a Consulting Engineer for the System Analysis, Modeling and Measurement Performance Group. His area of expertise is in the private industry as well as Academia. As a Consulting Engineer Emilio worked in the System Performance Analysis and Capacity Planning. Manager in the System Analysis Modeling and Measurement department, and acted Director of Performance Engineering. Published MIPS ratings for all Unisys Mainframes. He has been a very active in IEEE. He currently holds the position of Chairman of the Philadelphia Section, Chairman of IEEE-USA Career and Development and Co-Chair of the Computer Society Philadelphia Chapter.





IEEE PHILADELPHIA CHAPTER OF CIRCUITS AND SYSTEMS SOCIETY
AND
ELECTRICAL AND COMPUTER ENGINEERING DEPARTMENT, DREXEL UNIVERSITY
PRESENT

DEEP LEARNING AND NEUROMORPHIC COMPUTING – TECHNOLOGY, HARDWARE AND IMPLEMENTATION

BY

DR. HAI “HELEN” LI

DISTINGUISHED LECTURER, IEEE CIRCUITS AND SYSTEMS SOCIETY
CLARE BOOTHE LUCE ASSOCIATE PROFESSOR, DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING AT
DUKE UNIVERSITY.

**October 24, 2019: 1:30 – 2:30 PM; Rm. 302, Bossone Research Enterprise Center, Drexel University, 3140 Market St,
Philadelphia, PA 19104**

Abstract: Following the technological advances in high performance computational systems and the fast growth of data acquisition, machine learning, especially deep learning, has had remarkable success in many research areas and applications. Such a success, to a great extent, is enabled by developing large-scale deep neural networks (DNN) that learn from a huge volume of data. The deployment of such a model, however, is both computationally intensive and memory intensive. Although hardware acceleration for neural networks has been extensively studied, the progress of hardware development still falls far behind the upscaling of DNN models at the software level. We envision that hardware/software co-design for performance acceleration of deep neural networks is necessary. In this presentation, I will begin with trends in machine learning research in both academia and industry, followed by describing our work on executing sparse and low-precision neural networks, as well as discussing our research on memristor-based computing engines.

Biography: Dr. Hai “Helen” Li is a Clare Boothe Luce Associate Professor with the Department of Electrical and Computer Engineering at Duke University. She received her B.S and M.S. from Tsinghua University and Ph.D. from Purdue University. At Duke, she co-directs the Duke University Center for Computational Evolutionary Intelligence. Her research interests include machine learning acceleration and security, neuromorphic circuit and systems for brain-inspired computing, conventional and emerging memory design and architecture, and software and hardware co-design. She received the NSF CAREER Award (2012), the DARPA Young Faculty Award (2013), TUM-IAS Hans Fisher Fellowship from Germany (2017), seven best paper awards, and another eight best paper nominations. Dr. Li is a fellow of the IEEE and a distinguished member of the ACM. For more information, please refer to her webpage at <http://cei.pratt.duke.edu/>.

Registration: free (<https://meetings.vtools.ieee.org/m/204622>)



IEEE PHILADELPHIA CHAPTER OF CIRCUITS AND SYSTEMS SOCIETY
AND
VILLANOVA CENTER FOR ANALYTICS OF DYNAMIC SYSTEMS ([VCADS](#))
PRESENT

BRAIN INSPIRED COMPUTING: THE EXTRAORDINARY VOYAGES IN KNOWN AND UNKNOWN WORLDS

BY

DR. HAI “HELEN” LI

DISTINGUISHED LECTURER, IEEE CIRCUITS AND SYSTEMS SOCIETY
CLARE BOOTHE LUCE ASSOCIATE PROFESSOR, DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING AT
DUKE UNIVERSITY.

October 24, 2019: 7-8 PM; Tolentine Hall, Rm. 215, Villanova University, 800 Lancaster Ave., Villanova, PA

Abstract: Human brain is the most sophisticated organ that nature ever built. Building a machine that can function like a human brain, indubitably, is the ultimate dream of a computer architect. Although we have not yet fully understood the working mechanism of human brains, the part that we have learned in past seventy years already guided us to many remarkable successes in computing applications, e.g., artificial neural network and machine learning. Inspired by the working mechanism of human brain, neuromorphic system naturally possesses a massively parallel architecture with closely coupled memory, offering a great opportunity to break the "memory wall" in von Neumann architecture. The talk will start with a background introduction of neuromorphic computing, followed by examples of hardware acceleration schemes of learning and neural network algorithms and memristor-based computing engine. I will also share our prospects on the future technology challenges and advances of neuromorphic computing.

Biography: Dr. Hai “Helen” Li is a Clare Boothe Luce Associate Professor with the Department of Electrical and Computer Engineering at Duke University. She received her B.S and M.S. from Tsinghua University and Ph.D. from Purdue University. At Duke, she co-directs the Duke University Center for Computational Evolutionary Intelligence. Her research interests include machine learning acceleration and security, neuromorphic circuit and systems for brain-inspired computing, conventional and emerging memory design and architecture, and software and hardware co-design. She received the NSF CAREER Award (2012), the DARPA Young Faculty Award (2013), TUM-IAS Hans Fisher Fellowship from Germany (2017), seven best paper awards, and another eight best paper nominations. Dr. Li is a fellow of the IEEE and a distinguished member of the ACM. For more information, please refer to her webpage at <http://cei.pratt.duke.edu/>.

Registration: free (<https://meetings.vtools.ieee.org/m/204625>).

ENGINEERING FAIR

Where: SAP America
3999 West Chester Pike
Newtown Square, PA 19073
When: October 26, 2019
9 am to 12 pm

Check in begins at 7:30

The Future City Philadelphia Regional Steering Committee is hosting an Engineering Fair to introduce students to Regional the Future City Competition and to help educators get started with the program.

Help Future City Philadelphia inspire students to design!



We were able to let our creativity come out and work together building the city.”

~ Future City Student

To register, go to futurecityphilly.org and select the Engineering Fair link.

For more information, contact:

Companies & Tech/Prof Societies: Susan Best, susanbest54@gmail.com

Colleges, Universities and Governmental

Agencies: Ken Golkin, ken.golkin@gmail.com

There is no charge to be an exhibitor.

We are looking for engineering firms, technical societies and universities to be exhibitors! Come join us to provide a fun filled morning of hands-on activities, games, and demonstrations that will inform and inspire students about engineering!

Future City® Competition is a hands-on, project experience for 6th, 7th, and 8th graders to learn how engineers shape the world we live in today and will live in tomorrow

Students work as a team with an educator and engineer mentor to:

- Design cities using SimCity™ software;
- Research and write solutions to an engineering problem;
- Build tabletop scale models with recycled materials;
- Present their ideas before judges at the Regional Competition in January.



Engineers Club Affiliation Items

Submitted by Christopher J. Holliday, P.E.

President - Engineers Club of Philadelphia

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O: 215 832-3520

C: 215 275-0787

Mulford Classic Golf Outing

Now is the time to register your sponsorship, foursome or golfers for this event because we play on **October 14, 2019**. This event will take place at the handy and challenging Bala Course in the nearby Winnfield section of Philadelphia. Which of our affiliate societies will be the inaugural champion of this perpetual recognition? Please register your organization at this link: Please register TODAY

https://www.engrclub.org/content.aspx?page_id=4002&club_id=386597&item_id=1048683 .!

Delaware Valley Engineer of the Year -

It is that time of year once again: We are looking for your groups' nominees for the Delaware Valley Engineer of the Year. Does your group select an "Engineer of the Year" within your specialty? If so, we hope you will put that person forward and nominate them for the DVEOY. Has your group nominated someone in the past who was not selected? If yes, we hope that you will nominate that person again for DVEOY. You can download the application form for nominating your candidate here

[https://s3.amazonaws.com/ClubExpressClubFiles/386597/documents/DVEW_2020_EOY_Nomination_Package_1515673802.pdf?](https://s3.amazonaws.com/ClubExpressClubFiles/386597/documents/DVEW_2020_EOY_Nomination_Package_1515673802.pdf)

[AWSAccessKeyId=AKIAIB6I23VLJX7E4J7Q&Expires=1568643291&response-content-](https://s3.amazonaws.com/ClubExpressClubFiles/386597/documents/DVEW_2020_EOY_Nomination_Package_1515673802.pdf?AWSAccessKeyId=AKIAIB6I23VLJX7E4J7Q&Expires=1568643291&response-content-disposition=inline%3B%20filename%3DDVEW_2020_EOY_Nomination_Package.pdf&Signature=BEYv180pAJH6d0imx)

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[OyF3fs1SR8%3D](https://s3.amazonaws.com/ClubExpressClubFiles/386597/documents/DVEW_2020_EOY_Nomination_Package_1515673802.pdf?AWSAccessKeyId=AKIAIB6I23VLJX7E4J7Q&Expires=1568643291&response-content-disposition=inline%3B%20filename%3DDVEW_2020_EOY_Nomination_Package.pdf&Signature=BEYv180pAJH6d0imx). We sincerely hope that you will nominate an accomplished engineer from your society for Delaware Valley Engineer of the Year. Deadline for receipt of applications is October 25, 2019.

2019 Multi Society Event: December 10, 2019

Please mark your group's event calendars for the evening of December 10, 2019. Our Multi-Society Meeting (MSM) is the one we hope that you will promote to all of your society's members as your groups Holiday season December event. For this year, we are putting together another panel discussion, for this year, the topic will be "Resilience in a Time of Transition". We will present a panel of Subject Matter Experts (SME) who will explore how we are preparing to make our in-place infrastructure and systems capable of withstanding massive on-coming shifts due to climate change, the transition to electrified and autonomous vehicles at a time when urban populations are growing robustly. *We are exploring making breakout rooms available in or near the venue for those affiliate groups who would like to hold board, business or membership meetings just before the start of the MSM.* If having access to a breakout room would enable your group to more easily participate and support the MSM, please reach out to me and we will see what we can do.

Scholarship Applications

ECP has scholarship funding available and we would like to see our affiliates benefit from them. The information and links to the applications can be found here:

https://www.engrclub.org/content.aspx?page_id=22&club_id=386597&module_id=316482.

Does *your* organization have scholarships that you would like to share with the engineering community?

If so, let us include the information on them on our Scholarship resource page. Let us help you find and share with deserving scholars.

Engineer Day Celebration -

Please join us on February 22nd, 2020 to celebrate Engineer Day! Engineer Day is a regional grade 4-12 outreach event during DVEW to inspire the next generation of engineers! This event will take place at the Franklin Institute on Saturday, February 22nd from 10 AM - 3PM. This is a great opportunity to showcase your organization to the public and your engineering discipline to young students in attendance! We are inviting all affiliates to fill out [this form](#) and volunteer for Engineer Day. Simply bring a basic engineering activity or two that pertain to your discipline, your organization gear, and enthusiasm to inspire future engineers! Once a representative from your organization fills out the volunteer form, we will send all the materials you need for the event and to make your booth a success! Thank you for all you do for the Philadelphia engineering community!



The Section is exhibiting. To volunteer to be in our booth, contact the office or Kate McDevitt at kmtr1011@gmail.com

Show Hours:

October 22: 1:00 p.m. – 7:00 p.m.

October 23: 10:00 a.m. – 5:00 p.m.

Mentors Wanted

Delaware Valley Science Fairs needs mentors in all categories so that we can match students with mentors who have the expertise needed for the science project.

Mentor requests are made after a sponsor has approved the student's research proposal, and mentors have an opportunity to review each request before accepting it. Most mentors are able to provide advice by email, so location is not an issue. Willingness to give assistance to our future scientists is key. Volunteer today at DVSF.org.

Complex Adaptive Systems Conference

November 13 – 15, 2019 | Malvern, PA

Conference Theme:

Leveraging AI and Machine Learning for Societal Challenges

Complex adaptive systems evolve to address uncertainty and changes in operational environment, social values, and technological advances. Growing human populations and growing demand for limited natural resources necessitate sustainable cities that require efficient and effective energy generation, water management, and transportation infrastructures. Autonomous vehicles within a networked infrastructure, Smart Grid, Smart city, and many other Cyber physical system applications are evolving to address these societal challenges. Healthcare systems are changing as well. Smart medical devices, wearable sensors, connected home monitoring systems are all part of the modern healthcare systems. Artificial Intelligence (AI), machine learning algorithms, pervasive sensing and actuating capabilities, real time control, cloud computing, and data science and analytics are some of the key enablers for these systems.

Complex Adaptive Systems Conference 2019 will bring together researchers from academia, industry and government to discuss recent work in these areas with a special focus on leveraging AI and machine learning for solving societal challenges.

Papers are invited on theories, methodologies, and applications of Complex Adaptive Systems with special emphasis on applications to the following areas:

- Artificial Intelligence and Machine Learning
- Explainable AI
- Trusted AI: Robustness, Security, and Testability of AI systems
- Ethics in AI
- Collective Social Intelligence
- Mobile Cloud Computing
- Data Analytics
- Cyber Security
- Safety, Reliability and Building Resilient Systems
- Modeling and Analysis of Socio-Technical Systems
- Cyber Physical Systems: IoT, Smart Cities, Smart Grids
- Blockchain

Proceedings of the Complex Adaptive Systems Conference 2019 will be published in Procedia Computer Science Elsevier (ISSN:1877-0509)

Conference Tracks & Topics

Track: Artificial Intelligence and Machine Learning

Topics include, but are not limited to applications and theoretical models of supervised learning, unsupervised learning, pattern recognition, computer vision, statistical learning, clustering algorithms, time series prediction, and optimization methods

Track: Explainable AI

Topics include, but are not limited to studies on algorithmic transparency, fairness in machine learning, and bias in AI systems

Track: Trusted AI

Topics include, but are not limited to robustness, security, and testability of AI systems

Track: Ethics in AI

Topics include, but are not limited to use cases and practical applications of ethics in AI systems from a multidisciplinary perspective

Track: Collective Social Intelligence

Topics include, but are not limited to social media analytics, semantic perception, semantic social web, citizen-sensor network, people-content network analysis, real-time social media analysis

Track: Mobile Cloud Computing

Topics include, but are not limited to mobile computing, ubiquitous and pervasive software, cloud computing, security of mobile applications, MCC architecture, context-aware mobile applications

Track: Data Analytics

Topics include, but are not limited to data classification and regression, data warehouse, big data, datasets and evaluation, data visualization, natural language processing, bioinformatics, high performance computing and scalable computing, knowledge discovery integration and transformation, statistical methods, sentiment and emotion classification

Track: Cyber Security

Topics include, but are not limited to information security, computer network security, application security, web services security, mobile security, software security, sensor network security, security management, security operations, digital trust and reputation

Track: Safety, Reliability and Building Resilient Systems

Topics include, but are not limited to resilience and systemic risk, models of safety and reliability in engineering systems

Track: Modeling and Analysis of Socio-Technical Systems

Topics include, but are not limited to models and methods for designing socio-technical systems including architecture, policy and governance of socio-technical systems

Track: Cyber Physical Systems

Topics include, but are not limited to applications of IoT, Smart Cities, and Smart Grids

Track: Blockchain

Topics include, but are not limited to applications of blockchain, blockchain architecture, smart contracts, blockchain security, open consensus protocols, and scalable consensus protocols

For general conference information, contact:

Lee Dougherty

Conference Planning Services at Penn State Great Valley

30 E. Swedesford Rd.

Malvern PA, 19355

Email: complexsystems@psu.edu

Grace Hopper Milestone

by Editor

Planning is going on to dedicate an IEEE Milestone Plaque for the contributions to software engineering by Grace Hopper. Scheduled for April 6, 2020 at 447 N. Broad Street, Philadelphia. Put this in your calendar.

WIE Affinity Group

Meeting October 7, at Penn State Brandywine, 201 Tomezsko Building

25 Yearsley Road, Media, PA 6:30 pm. Waiting program details.

5th Anniversary
2019 IEEE WIE Forum USA East
21- 23 November 2019 | Ritz Carlton Pentagon City, Arlington, VA

Dear IEEE Members:

We are excited to bring you updates on the 2019 IEEE Women In Engineering (WIE) Forum USA East on November 21- November 23, 2019 in Arlington, VA (DC area), which will focus on developing and improving leadership skills and driving innovation for individuals at all stages of their careers. Attendees will have the opportunity to be educated, inspired, and empowered by presentations given by successful leaders from the IEEE-USA North-East region. Attendees will also experience the sights and sounds of Washington DC by participating in our tours and activities.

We would like to sponsor at least 10 students to attend the IEEE WIE Forum USA East 2019 in Arlington, VA from November 21-23. If your OU would be interested in sponsoring a student to attend, please let me know at your earliest convenience

Sincerely,

Neeta Basantkumar & Felicia Harlow, General Co-Chairs
2019 IEEE WIE Forum USA East

Dr. Charlotte Blair & Maryam Rahmani, CISSP, Program Co-Chairs
2019 IEEE WIE Forum USA East

CONTACT US

R1R2WIEForum@gmail.com

Please visit our website for more info: <http://attend.ieee.org/wie-forum-usa-east-2019>

PHILADELPHIA SECTION

NOTES

IEEE PHILADELPHIA SECTION OFFICERS

Chair: Emilio M. Salgueiro: emiliosalgueiro@ieee.org

Vice Chair: Mark Soffa: msoffa@kns.com

Treasurer: Robert Johnston: rlj1620@gmail.com

Secretary: J.J. Gingerich, Jr: jjgingerich@gmail.com

Past Chair: Peter Silverberg: psilverberg3@comcast.net

ADMINISTRATIVE COMMITTEE (ADCOM)

ADCOM meets the second Tuesday of the month at the Sheraton University City, 3549 Chestnut St, Philadelphia, PA 19104. Members are welcome to attend. If you want to attend, reserve a seat by calling the IEEE Section Office by the Friday before the meeting.

DIETORIES

ADCOM MEMBERS

SECTION CHAPTERS CHAPTER CHAIRS RESPONSIBILITIES

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SEC.PHILADELPHIA@IEEE.ORG

ADVERTISEMENTS – Contact: psilverberg3@comcast.net.

The IEEE Philadelphia Section encourages placement of technical, professional, promotional and commercial advertisements. The Almanack is published ten times a year and is read by approximately 4,000 members in over 150 key industries.

The following rates are designed for the occasional advertisers. A more comprehensive set of benefits is offered in the Sponsorship Program (next page).

Almanack, Website, Email Blasts

One Month Full Page: \$200.-

Three Months Full Page: \$400.-

PHILADELPHIA SECTION PLANNING CALENDAR

Current Month: October 2019

| Date | Activity |
|----------------|---|
| October 1 | IEEE DAY |
| October 3 | P.E. Courses |
| October 6 | Mini Maker Faire |
| October 7 | WIE |
| October 15 | Adcom 5 pm, IEEE Section Night 6 pm |
| October 22 | Electric Expo |
| October 23 | Electric Expo |
| October 24 | CASS Drexel 130 pm |
| October 24 | CASS Villanova 7pm |
| October 26 | Future City Engineering Fair |
| November 12 | Adcom |
| November 13-15 | Complex Adaptive Systems Conference |
| November 19 | IEEE Section Night |
| November 21-23 | WIE Forum USA East |
| December 7 | Signal Processing in Medicine and Biology |
| April 6 | Grace Hopper Milestone |

PHILADELPHIA SECTION

SPONSORSHIP PROGRAM AWARDS BANQUET

Contact: sec.philadelphia@ieee.org

| | Platinum | Gold | Silver | Bronze |
|-------------------------------------|--|--|---|---|
| Cost per Year | \$3,500 | \$2,500 | \$2,000 | \$1,000 |
| Awards Banquet¹ | Full Table-10 tickets Full page Awards Brochure 6-ft Exhibit Table | 6 tickets Half page Awards Brochure 6-ft Exhibit Table | 4 tickets Quarter page Awards Brochure 6-ft Exhibit Table | 2 tickets Quarter page Awards Brochure |
| IEEE Almanac | 12 Months Full Page | 9 Months Full Page | 6 Months Full Page | 3 Months Full Page |
| IEEE Website² | 12 Months Full Page | 9 Months Full Page | 6 Months Full Page | 3 Months Full Page |
| IEEE Email Blast² | 12 Months 4 Times / month Full Page | 9 Months 4 Times / month Full Page | 6 Months 2 Times / month Full Page | 3 Months 1 Time / month Full Page |

NOTES

¹ **The Awards Banquet is held annually at the prestigious Union League of Philadelphia.** The Awards Banquet is a major social occasion, recognizing those honored by the Institute & the Section for their contributions & those honored by organizations with mutual interests of IEEE. Plan ahead for April 4, 2020.

² **Advertisement(s) are prepared by the Sponsor and can contain links to the Sponsor's website and/or specific events.** Advertisement(s) can be different one for each month of benefit or the same for one or more months.



IEEE Collabratec is engineered to help you discover, connect and collaborate. Over the past several months we've listened to what you have said and acted on your feedback. We're proud to announce some recent changes, such as simplified navigation, improved search, and a refreshed look. Take a look...

Streamlined and Simplified Navigation

The new navigation simplifies the top menu bar highlighting the key areas of IEEE Collabratec; People, Communities and Workspaces.

IEEE Members can find membership information and certificates within a few clicks.

Search Across IEEE for Deeper Results

You can now use the search bar to dig deeper into IEEE. Access results filtered by people, posts, communities, workspaces and more. Use the "breadcrumb trail" to see and undo previous search and filter steps.

Refreshed Look

You will find an easier to read site with the use of new fonts and color palette. Scrolling has been reduced and the width of the desktop version helps to provide a level of consistency regardless of the monitor size.

Dashboard for Quick Access

Access the content that matters most to you by selecting the Dashboard icon in the upper right corner. The dashboard allows for quick access to your notifications, communities, network, opportunities, workspaces and library.

Drag and Drop Images

Use the new streamlined posting area to drag and drop images into your feed. From your mobile device, you can use your camera to easily upload images.

Thank you for your continued feedback and support of IEEE Collabratec. To get started with these new features and advance your professional presence within the IEEE technical community, launch IEEE Collabratec today.

[Sign in to IEEE Collabratec](#)

Editorial

by Peter Silverberg

CHAPTERS and IEEE NIGHT

Chapters within the section can be confusing. They represent a cross between technical societies and the geographic unit. We happen to have 22 of varying sizes. The large ones hold meetings on an independent schedule. The small ones have a problem of holding the required two a year. We devised a workaround under the umbrella of IEEE Night.

Our advance schedule is to hold IEEE Night for the whole section every third Tuesday of eight months. We skip June, July, August, and December. The Section counts as the sponsor of the dinner. Two chapters are supposed to provide programs which count as one of their meetings. These take place at 7 pm and 8 pm and are very often lectures. Do a little math, and this allows 16 chapters to achieve one meeting. Chairs of these chapters now only have to find another meeting to meet quota. Also, the section has a financial incentive — IEEE sends \$200 for each chapter that meets quota. If your chapter is not holding enough meetings, please act before November 30.

This notice was received September 27, and is quite clear:

Please be advised that IEEE gauges the vitality of a chapter by tracking how many meetings are reported during the year through vTools. If a chapter reports "0" meetings for three consecutive years, the chapter is placed on a dissolution list that is reviewed at the November Board Meeting. After this list is approved, a chapter has only 60 days to reach out to MGA to be removed from this list. After 60 days a new petition will be needed to revitalize the chapter.

The same works for our affinity groups but they are not short any meetings. But, an odd question deserves and answer. Life Member activities are sponsored by LM, but any of our members can join the activity unless otherwise stated.

Welcome Makers!

The section is exhibiting at Maker Faire. We can use some volunteers from the section. Key contact: **John Iannuzzi**

Principal Engineer
Core Technology Group
140 Independence Lane, Suite #3
Chalfont, PA 18914, USA
215-822-0120, Ext. 11
FAX 215-997-5544
jfiannuzzi@coretechgroup.com

Date and Location

Sunday October 6th, 2019 Pennovation Works
3401 Grays Ferry Ave. Philadelphia, PA 19146

Exhibitor Load-in: 7am – 9am
Exhibitor Set up: 7am – 10am (unloading vehicles should be out by 9am)
Showtime: 10am – 5pm
Load Out: 5pm – 9pm

Future City Mentoring

What is a Mentor? – A Future City Mentor is a volunteer who is an engineer, planner or student who shares their experience, advice, guidance, and technical assistance to a group of students who are working towards completing the competition deliverables (SimCity virtual city, essay, model construction, and presentation). For more information about your role as a mentor go to: <https://futurecity.org/participants/mentors>.

2. Where are Mentors Needed? - Mentors are needed at Middle Schools throughout the Greater Philadelphia region. Currently, the following schools are in need of mentors:

- Central Jersey Prep - Somerset, NJ
- Eisenhower Science and Technology Leadership Academy - Norristown, PA
- French Creek Elementary - Pottstown, PA
- Holy Angels - Newark, DE
- Holy Rosary Regional School - Plymouth Meeting, PA
- Keith Valley Middle School - Horsham, PA
- KIPP West Philadelphia Prep - Philadelphia, PA

- Lansdowne Friends School - Lansdowne, PA
- Lehigh Area Middle School - Lehigh, PA
- Lenape Middle School - Doylestown, PA
- Penn Wood Middle School - Darby, PA
- St. Frances De Sales School - Philadelphia, PA
- St. Anastasia School - Newtown Square, PA
- St. Jane Frances de Chantal School - Easton, PA
- St. Katherine of Siena School - Philadelphia, PA
- Stewart Middle School - Norristown, PA
- The Anderson School - Eagleville, PA

3. **Time Commitment** - The schools in need of mentors could use any help you can offer! There are plenty of ways to help, including meeting with the class in person, using technology such as Skype or GoToMeeting for virtual meetings, or corresponding via email. Normally, the teachers could use help every other week for the first month or two, then more frequently as the deadlines approach.

4. **Schedule** – Mentors are needed as soon as possible, as these schools are already working towards their first deliverables in mid-December. The competition will be held in on January 18, 2020 at Archbishop Carroll High School in Radnor, PA. Mentors are assigned on a first-come, first-served basis. Please let us know if you have a preference.

5. **Spread the Word** – These schools are in desperate need of help from engineers and planners! Please share this email with friends/ coworkers who may be interested. And please feel free to partner up with a colleague, coworker, or friend to work as a team in serving as co-mentors.

For more information on mentoring, please contact: Mike McAtee at mjmcatee@urbanengineers.com. There are also volunteer opportunities on the day of the competition (January 18, 2020), including special awards evaluator, preliminary judge, and general volunteer. We also have a need for volunteers in advance of the competition, including virtual city judge and city essay judge. If you are interested in getting involved, please visit <http://www.futurecityphilly.org/fcvolops.html> to sign up.

Any questions please contact me via e-mail or phone. Please feel free to forward this e-mail to your friends, co-workers, and technical society members.

Karen R. McManuels, PE
 Philadelphia Regional Volunteer Coordinator
kmcmanuels@aeceng.net
 610-688-3980 x132

The Engineers Club of Philadelphia &
 Pennsylvania Society of Professional Engineers
 Philadelphia Chapter
 Pizza, Course, Presentation and Networking

Thursday, October 3, 2019

Registration & Pizza: 5:30 PM to 6:00 PM

Course #1: 6:00 PM to 7:00 PM

Power Plants 101

Presented by

Doug Kriebel, PE

Principal at Anchor Pump and Engineered Equipment
 (previously Kriebel Engineered Equipment, Ltd.)

This course will discuss how a steam power plant works, the heat cycle, the major equipment, and design concepts along with the evolution of the power industry and challenges of the future.

Course #2: 7:00 PM to 8:00 PM

Sky Diving Wind Tunnel – Power, Drive & Controls

Presented by

Joseph F. Maida, PE

Maida Engineering, Inc.
 Philadelphia, PA

The course will provide an overview of the patent pending motor and drive train design which is more efficient, more reliable, safer and costs substantially less to build and operate than systems designed using the traditional approach.

The Pennsylvania Society of Professional Engineers, through PIE, has evaluated and approved these "courses" as meeting the continuing education license requirements for 1.0 Professional Development Hour in New York State. PSPE believes the "courses" will be accepted for credit in PA, NJ and other National Model states where courses do not require pre-approval.

Pennoni Associates

1900 Market St
 Suite 300
 Philadelphia, PA 19103

Price using Paypal - \$25.00

FOR RESERVATIONS GO TO:

<http://www.pspe-philly.org>