



Almanack

[IEEE Philadelphia Section Website](#)

Membership in the Following Counties

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

New Jersey: Burlington, Camden and Gloucester

February 2019

(Entries are Hyperlinked: *point+ctrl+click*)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
		*ADCOM		*DVEW	*DVEW	*DVEW
17	18	19	20	21	22	23
*DVEW	*DVEW	* IEEE Sec- tion Night *DVEW	*DVEW	*DVEW	*DVEW	*DVEW
24	25	26	27	28		
	*IEEE Workshop					



INSIDE THE ALMANACK

(Entries are Hyperlinked: [point+ctrl+click](#))

MESSAGE FROM THE CHAIR

Message from the Chair.....4

CURRENT EVENTS

Delaware Valley Engineers Week (DVEW)...7

National Engineers Week History.....8

IEEE Workshop – Network Automation.....10

RECENT EVENTS

Philadelphia Water Pollution Control Tour.13

Joseph Maida, P.E. Engineer of the Year.... 14

PLANNING EVENTS

Delaware Valley Science Fair.....15

Future City Engineering Fair..... 16

iPraxis.....17

IEEE PHILADELPHIA SECTION

Planning Calendar.....18

Section Notes.....19

Section Sponsorship Program.....20

UPCOMING EVENTS

2019 American Control Conference..... 21

Delaware Valley Engineers Week (DVEW)

DVEW – Announcement..... 22

DVEW – Events.....24

DVEW – Sponsorship..... 25

ALMANACK

Published Monthly Nine Times per Year:

Jan-May, Summer, and Sep-Dec.

Publisher: Emilio M. Salgueiro

Editor: Michael A. Mayor, PE

Section Office: sec.philadelphia@ieee.org

IEEE SECTION NIGHT

Meetings are conducted on the 3rd Tuesday of the Month, eight times per year, January through May and September through November.

ADMINISTRATIVE COMMITTEE

Meetings are conducted on the 2nd Tuesday of the Month: January through June and September through December. Members are welcome to attend the meeting only. Reserve a seat by calling Friday before the meeting. **Phone: 484-270-5136.**

IEEE SECTION NIGHT

Philadelphia Section Meeting

Sponsored by:

The Computer (C) and Professional Communications (PC) Societies Chapters

When:

Tuesday, February 19, 2019

Dinner at 6:00 PM,

1st Speaker at 7:00 PM.

There is only one speaker in February

Where:

Sheraton University City,

3549 Chestnut St,

Philadelphia, PA 19104

(215) 387-8000

Note: In the event of bad weather please call the Sheraton after 1:00 PM the day of the meeting and ask the front desk if the meeting has been canceled.

- Meal Cost: \$25 online registration, \$30 at the door. (students \$15). The meal cost is \$40 but it is subsidized by the IEEE Philadelphia Section.
- You can attend the talks only for free (with no dinner), however, we ask that you register.
- Parking is paid by the IEEE Philadelphia Section, make sure you have your parking ticket stamped at the meeting.

Registration Link

Or call (484) 270-5136 or email the section office: sec.philadelphia@ieee.org

PROFESSIONAL DEVELOPMENT HOURS (PDH)

PDH Certificates are free for IEEE members. For non-members, the cost is \$9 per certificate.



First Speaker

Benjamin Franklin, First Double E

Dr. Robert (Bob) Swayne

Electrical Engineer Consultant (R)

Abstract: Benjamin Franklin, born January, 1706, passed April, 1790, Benjamin Franklin was one of the Founding Fathers of the United States. Moving to Philadelphia at age 17, Franklin became a printer, politician, postmaster, author, scientist, inventor, humorist, civic activist, statesman, and diplomat. As a scientist, he was a major figure in the American Enlightenment and the history of physics for his discoveries and theories regarding electricity. As an inventor, he is known for the lightning rod, bifocals, and the Franklin stove, among many other inventions. He founded civic organizations such as the Library Company, American Philosophical Society, Philadelphia's first fire department, and the University of Pennsylvania.

This presentation will cover a time line of Franklin's life focusing on his years experimenting and documenting his work with static electricity and the study of lightning. Today we take this type study for granted but it was considered heresy by many in the mid-18th century as it meddled with the Gods and natural order. Franklin was undeterred by controversy, and with his invention and endorsement of the lighting rod, he became an international figure

which later proved to be invaluable in America's conduct in the revolutionary war.

Bob Swayne will review static electricity including the Triboelectric series which ranks material by their ease in giving up electrons and examine Coulomb's law of charges along with a few equations.

There will also be a live demonstration of Franklin's kite experiment by using a static electricity generator and applying its charge to a kite built and strung per Franklin's documented specifications. We will then pass judgment on the question, "Is Franklin's kite experiment history or myth"?

Join us this Engineer's Week and pay tribute one of Philadelphia's most honored citizens. Don't miss this shocking presentation. (12-6-2018)

Biography: Robert (Bob) Swayne. Bob retired in 2017 after an electrical engineering and consulting career in a variety of industries including steel, aerospace, commercial, industrial, and transportation. Project types included low and medium voltage power distribution systems, substations, power studies, emergency/standby generator systems, life safety systems, lighting systems, power monitoring and SCADA systems.





A graduate of Drexel University with BS and MS in Electrical Power Engineering, Bob is a licensed professional engineer in Pennsylvania, New Jersey and California.

Bob has served positions on IEEE local and national societies including the Philadelphia Power & Energy - Industry Applications Joint Chapter, National Electrical Code panels, and IEEE standards committees.

He was 2013 Delaware Valley IEEE Electrical Engineer of the Year and now a Senior Life IEEE member.

Bob's interest in Benjamin Franklin was sparked by his volunteer work at The Franklin Institute. Through readings, internet resources, and Yale University's *The Papers of Benjamin Franklin*, Bob has combined all with his electrical experience and Franklin's spice of life for an entertaining and thought provoking presentation.



MESSAGE FROM THE CHAIR

Emilio M. Salgueiro, Chair, IEEE Philadelphia Section



Dear fellow IEEE Philadelphia Section members, it is amazing how time flies, especially when you have as much fun as I have by serving as Chair of the one of the largest Sections. Our student branches are becoming very active, and conversations about funding are well underway. My congratulations to all Student branches that have submitted their proposals, if you are Student Chapter Chair that is just starting to work on this, please get in touch with Christopher Dietsch, our Vice Chair for Student Activities.

Another fun activity I am proud to report is the Future City 2019 event. This year the event took place at Archbishop John Carroll High School in Wayne, PA. 38 local schools turned out teams that engineered a city able to recover from natural disasters rapidly in 2019. Our past Chair Peter Silverberg, and the Student Chapters Chair Barney Adler were judges during this huge competition and there is no doubt that they had their hands full. The first two places were won by Middle schools in the Downingtown School District and the third place was awarded to students of the St. Andrew's School in Drexel Hill, PA. My thanks

to Peter and Barney for your time and an outstanding job. More participation from our IEEE Philadelphia Section members would be desirable, as we are the largest technical Society in the Delaware Valley.

Now I would like to turn the topic to discuss about Computer Science education. In "The Viewpoint Article, CACM July 2009" questions if CS Education in the US is heading in the wrong direction. Robert Dewar's points are that CS curricula are being dumbed down, partly for enrollment. Java is bad: it hides too much, far too much magic. Provides assembly language example for debugging, fancy visuals do not compensate for deep understanding. While Owen Astrahan counterpoints that Java is only the first language, points out that Dewar's arguments are based on fear, uncertainty and doubt, also indicates that large software systems are inherently complex, etc.

The top down vs. bottom up approach analogy is for example in Karate, why do they start with elementary moves? In music, why do they start with basic skills? In football, why all the drills before first practice? In CS&E most start at the top. Why?

According to Dr. Yale Patt Professor at UT in Austin, TX possible explanations are a misunderstanding between design vs. learning.



Design is top down (after you understand the components), it is easier to find instructors for Java, the want adds ask for Java programmers. When these freshman students graduate it could potentially be C#, then four years from now we will be teaching C#, and when these students graduate it will be D-flat. He concludes that chasing the want ads should be an avoidable mistake. Object oriented should be seen as a productivity enhancer as there is little time to understand detail (Architecture, OS, Compilers: boring)

A quote from Dr. C.V. Ravishankar, professor of Computer Science at UC, Riverside states: “Information hiding is all very good, but students need to first have some information before they can start hiding it.”

Some of the evidence we see today is that faculty is unhappy because students were not getting a grasp of the fundamentals. Pointer variables are hard because students don’t understand how memory works, Recursion is magic because students don’t understand the linkage between function calls and activation records. Dr Patt’s objectives for a first course are: first get rid of magic, pointer variables, recursion; second Build a strong foundation by continually raising the level of abstraction. In

order to prove his point Dr. Patt wrote this book: “Introduction to computing systems: from bits and gates to C and beyond,” with Sanjay Jeram Patel McGraw-Hill, 2nd edition, c/2004, and now he is working on the 3 editions of his book.

The book emphasizes in starting with basic transistor as a light switch, no quantum mechanics, then the choosing of a computer model that is simple, but still rich, continually building in what they know and increasing their level of abstraction.

In my view, whether you pick this book or any other similar, the point is to take a bottoms up approach and not the other way around, avoiding the introduction of magic.

I am very interested in hearing from our members. I plan to have an open link in our website to hear from you, also I am available thru email:

emsalgueiro@ieee.org

or you can email the IEEE Section office:

sec.philadelphia@ieee.org



Delaware Valley Engineers Week (DVEW)



Engineers' Club of Philadelphia

Founded in 1877

February 16-24, 2019 – Engineers Week

The Delaware Valley Engineers Week Committee of the

[Engineers' Club of Philadelphia](#)

sponsors Delaware Valley Engineers Week on behalf of the engineering and technical societies.

The events are supported by area corporations, universities, individuals, and participating societies.

The committee members are volunteers, several having volunteered their time for many years, supported by Club staff and consultants. We thank all the members and their employers for their support of the program.

Events:

Kickoff Luncheon

Friday, February 16, 2018

Sofitel

120 S. 17th Street (at Sansom Street)

Philadelphia, PA

Young Engineers Social

Tuesday, February 20, 2018

U-Bahn

1320 Chestnut Street

Philadelphia, PA

Awards Reception / Student Showcase

Thursday, February 22, 2018

IATSE Ballroom

2401 S. Swanson Street

Philadelphia, PA

For More Information Follow the Links:

- [Announcement](#)
- [Events](#)
- [Sponsorship](#)



National Engineers Week History

National Engineers Week is celebrated the week in February which encompasses George Washington's actual birthday, February 22. It is observed by more than 70 engineering, education, and cultural societies, and more than 50 corporations and government agencies. The purpose of National Engineers Week is to call attention to the contributions to society that engineers make. It is also a time for engineers to emphasize the importance of learning math, science, and technical skills.

The celebration of National Engineers Week was started in 1951 by the National Society of Professional Engineers in conjunction with President George Washington's birthday. President Washington is considered as the nation's first engineer, notably for his survey work. Prior to the start of National Engineers Week, the University of Missouri College of Engineering began celebrating the world's first Engineers' Week in 1903, 48 years before the National Society of Professional Engineers, with St. Patrick as the patron Saint of engineers.

George Washington was an avid land surveyor throughout his life. As a rigorous outdoorsman, Washington was naturally suited to the challenges presented by laying lines and charting tracts in the Virginia backcountry. Surveying was a respectable profession in

eighteenth-century America and held the promise of social and financial advancement.



George Washington's surveying gear (Mount Vernon Ladies' Association)

George Washington's experiences as a surveyor began at a young age. During his early teenage years, he was exposed to school exercises that taught the basics of surveying and land measuring. The educational training that Washington received was complemented by practical experience in the field. His first attempts at measuring land occurred in familiar territory at Mount Vernon.

Washington's big break as a surveyor came in 1748 when he was invited to join a survey party organized by his neighbor and friend George William Fairfax of Belvoir. Fairfax assembled an experienced team to layout lots within a large land tract along the western edge



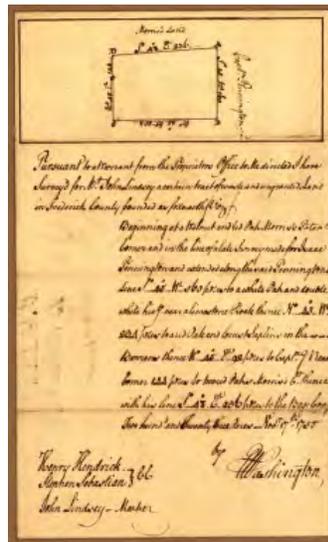
of Virginia. In addition to closely observing the work over the course of one month, Washington gained important experience living in the West.

Washington's career as a professional surveyor began in 1749. He received a commission from the College of William and Mary to become surveyor for the newly formed Culpeper County. Washington immediately traveled to Culpeper, the county seat, to be sworn in. Washington completed his first survey within two days, measuring a tract of 400 acres. At seventeen years of age, he was well on his way to a lucrative career.

In October 1750, Washington abandoned his position as an official surveyor, though he continued to work diligently over the next three years at his new profession. He continued to survey professionally for two more years, mostly in Frederick County before receiving a military appointment as adjutant for southern Virginia. Although Washington did not survey professionally after this date, he continued to utilize his surveying skills. He completed at least fifty more surveys, often for the purpose of acquiring new land for himself, defending his property boundaries, or dividing his holdings into profitable farms.

By 1752, Washington completed nearly 200 surveys totaling more than 60,000 acres. In the field, Washington's basic equipment included a "circumferentor," or plain surveying compass, a brass encased magnetic compass with perpendicular sights attached mounted on a Jacob's staff or tripod, with one or more survey chains. The circumferentor was used by Washington to determine the bearings of boundary lines.

At one time Washington owned nearly 70,000 acres between the Potomac and Ohio Rivers. He continued to survey as late as November 5, 1799. Washington's death five weeks later at the age of 67 was the conclusion of a remarkable and experienced surveying career spanning a half-century.



One of George Washington's surveys (Library of Congress)



IEEE Workshop on Network Automation

February 25, 2019, 8:30 am – 6:30 pm

Ericsson

1 Ericsson Dr, Piscataway Township, NJ 08854

Registration Link: <http://www.ieeeonaworkshop.org/>

ComSoc Members Attend Free, Limited Seats

Registered Attendees Eligible to Receive Continuing Education Credits (CEUs)

Network Disaggregation and Network Softwarization is radically changing the way Networks are Designed, Deployed, Managed and Operated. The goal of End-to-End Network Automation is to help Service Providers achieve their desired target of “Zero Touch Provisioning” across the entire Network, spanning physical and virtual domains, and covering the Transport and Data Center Networks. The increased maturity in SDN and NFV technologies and adoption of Open Source and DevOps principles is contributing towards an Open End-to-End Network Automation framework. Intent-based Networking is driving the need for higher level of Network abstraction, while Network Slicing – especially in the context of 5G - is requiring automation to be supported at the granular level of Slices.

Finally, Service Providers are leveraging Artificial Intelligence to improve Network efficiency, lower their operating costs, and improve both the quality of service and customer experience.

Underpinning these trends and advances, the IEEE Workshop on Network Automation is bringing together leading experts from telecom service providers, cable service providers, mobile service providers, software service providers, open source network automation projects and industry consortiums as well as leading researchers from academia to discuss the latest technical innovations, opportunities and challenges in Network Automation.

This single-day workshop is being co-sponsored by IEEE Communications Society and IEEE Princeton Central Jersey Section. This will provide a unique forum for Architects, Developers, Testers, and Business Leaders as well as students and researchers from academia to be informed about the evolving landscape of Network Automation technologies, deployment use cases and business models and an opportunity to network and share their learnings and experiences.



The following industries, open source projects, industry consortiums and academia are scheduled to present:

- AT&T
- Comcast
- Verizon
- Ericsson
- Nokia
- Fujitsu
- Ciena
- Juniper Networks
- Cisco
- NIKSUN
- Lumina Networks
- ONAP
- ONOS
- ORAN
- ODL
- ETSI IFA
- MEF
- IAB-IETF
- P4
- Cornell University
- University of Washington in St. Louis,
- University of Texas in Austin

Following speakers are confirmed:

- Nate Foster (Cornell University, Barefoot Networks)
- Marina Thottan (VP, Nokia Bell Labs)
- Robert Howald (VP, Comcast)
- Sunil Maloo (AVP, AT&T)
- Raj Jain (Professor, University of Washington, St. Louis)
- Gustavo de Veciana (Professor, University of Texas, Austin)
- Richard Dunsmore (Director, Fujitsu Network Communications)
- Walter Willinger (CTO, NIKSUN)
- Steven Wright (Chair VNF Project, ONAP)
- Jeff Tantsura (IAB, CTO Apstra)
- Balaji Subramaniam (Director, Ciena)
- Raquel Morera (Fellow, Verizon)
- Stuart Mackie (Director, Juniper Networks)
- Brian Freeman (Fellow, AT&T)
- Mehmet Toy (Fellow, Verizon)
- Shaleen Saxena (Principal, Lumina Networks)

Registration Rates

- **ComSoc members FREE**
- **IEEE members \$69**
- **Nonmembers \$199**
- **IEEE Student members \$19**
- **Student nonmembers \$59**

Registered attendees of this day-long workshop are eligible for IEEE Continuing Education Credits (CEUs), an extra charge \$5 for the Certificate is requested.



Date and Time

- Start time: **Monday, February 25, 2019 08:00 AM**
- End time: **Monday, February 25, 2019 06:30 PM**
- All times are US/Eastern

Location

Ericsson

1 Ericsson Drive
Piscataway, NJ 08854

Contact

Deepak Kataria

Deepak.Kataria@ip-junction.com

IEEE Princeton Central Jersey Section

Registration

Admission fee applies

<http://www.ieeeonaworkshop.org/>

Ends **February 25, 2019 3:00 PM**

All times are US/Eastern



Philadelphia Southeast Water Pollution Control Plant Course/Tour

Organized by: *Joseph F. Maida, PE, P.Eng. LEED AP*

January 3, 2018

If you ever wanted to know where it goes and how water flows,
you should have joined us.



Drew Brown from the Philadelphia Water Department was both our tour guide and instructor for the 90-minute tour during which we saw the equipment and refuge, learned the difference between scum and sludge, and were briefed on the latest Federal Clean Water Act.

Even though the water was still brown at the end of the process, we were assured that it was safe to put it back into the Delaware River and given what was being delivered to the plant from city sewers, was far better than what was dumped into the river not so very long ago.

A detailed description of the process which included a review of flow diagrams, was followed by the tour showing and describing each piece of equipment and seeing the sewage water during the process, the refuge from the process (no money was found), the settling tanks, and finally the clean water.

Many thanks to the Philadelphia Water Department for a wonderful tour, which provided 1 PDH for continuing education for all states, and for making the Delaware River clean again for all of us in the Delaware Valley.



Engineer of the Year

Joseph F. Maida, P.E.

Joseph F. Maida, PE, has been named PSPE 2018 Engineer of the Year.

Joe Maida has been a strong PSPE advocate since joining NSPE and PSPE in 1976. Mr. Maida knows firsthand the training and leadership regimen found in PSPE. He served as a Board Member and Chapter President in two of PSPE's chapters, Valley Forge and Philadelphia. Mr. Maida has encouraged his employees to not only join NSPE and PSPE but also to be active in these organizations. Maida Engineering has had four PSPE chapter presidents, PSPE board members, a PSPE state president, an NSPE board member and an NSPE president...all with his support and encouragement.

Mr. Maida has made presentations at PSPE annual conferences and continuing education events. In addition, he is active in NYSSPE's Practicing Institute of Engineering (PIE) and regularly reviews presentations to assess if they qualify for PDH credit for engineers licensed in New York. He has been instrumental in the success of the PSPE Education Committee. Mr. Maida is a member of the Philadelphia Section of the IEEE and has presented many programs at local meetings on a variety of professional and technical topics. Mr. Maida is a member of the Engineers Club of Philadelphia, for which he served on its board for several years.

Published in the National Society of Professional Engineers (NSPE) website.



Delaware Valley Science Fairs (DVSF)

Learn More About Volunteering for DVSF

Call for Nominations-2019 Engineer of the Year

Kickoff event – Thursday, February 14

Young Engineers Social – Tuesday, February 19

Nominations must be submitted by one of the technical and professional societies in the Delaware Valley by Friday, October 20, 2018.

[Click here for more information on 2019 Engineer of the Year Nominations](#)

Call for Nominations – 2019 Young Engineer of the Year

*Do you know an outstanding young engineer deserving of recognition?
Then YOU are invited to submit nominees for the 2019 Young Engineer of the Year (YEOY)
Award.*

[Click here for more information on 2019 Young Engineer of the Year Nominations](#)



Website: <https://futurecity.org/>

Email Address: volunteer@futurecityphilly.org

The Future City Competition is a project-based learning program for 6th through 8th grade students around country that introduces them to the principles of engineering while allowing them to use teamwork and creativity to solve problems that face the world. The program helps advance STEM learning in Middle Schools in our region and encourages students

to consider careers in engineering in the future. In recent years the regional competition has grown to include over 500 participating students and teachers in the Philadelphia area, but we are short on volunteer mentors. This is a great way to give back to the community and share your experience with the next generation of engineers!

Future City 2019 By Peter Silverberg

It was a cold and cloudy January 19 when the Future City competition was held at Archbishop John Carroll High School in Wayne PA. 38 local schools turned out teams that engineered a city able to recover from natural disasters rapidly in 2119.

I was the judge in the morning competition, which decided the IEEE Philadelphia Section Special Award. The winner was from

- 1st Place Downingtown Middle School, Downingtown PA
- 2nd Place Lionville Middle School, Exton PA
- 3rd Place St. Andrew School, Drexel Hill PA

Beverly Hills Middle School of Upper Darby PA. The teacher in charge was Kevin Stephan. The city is called Vista Bay and is located in Puerto Rico.

Dr. Barney Adler (Student Chapters Chair of the section) was one of the four final judges who had to pick schools to go on to national competition. Winners were:

The IEEE Philadelphia Section supports Future City, but with only two volunteers. More participation for the 2020 contests would be desirable, as ours is the largest technical society in the Delaware Valley.



iPraxis

THE POWER OF VOLUNTEERING!

Through in-class mentoring, project-based learning, science fairs, and after-school programs, our iPraxis volunteers (Sciunteers) help to increase knowledge and understanding of STEM subjects and the opportunities they provide.

iPraxis works to inspire middle school aged students in underserved Philadelphia communities to explore science, technology, engineering, and mathematics (STEM) by connecting them with professional scientists and providing hands-on learning experiences.

Our commitment to STEM education is the foundation of our programs and initiatives. We believe all students, regardless of their backgrounds, should be given the opportunity

to learn how to investigate, problem solve, and create by putting their ideas into action. iPraxis brings together experts and students to explore how STEM is fundamental to everyday living and our future well-being -- from protecting the environment to curing illnesses.

iPraxis relies on volunteer STEM professionals and students, on donors and supporters, and on teachers, parents, and students to fulfill its mission.

iPraxis Website



PHILADELPHIA SECTION PLANNING CALENDAR

Current Month: February 2019

Date	Activity
DATE	ACTIVITY
February	
Feb 12	ADCOM
Feb 14	Engineers Week kickoff event
Feb 19	Delaware Valley Engineers Week - Engineers Social
Feb 19	IEEE Night
Feb 28	Treasurer's Report to IEEE
March	
March 12	ADCOM
March 19	IEEE Night
April	
April 3	Science Fair judging (Oaks PA)
April 9	ADCOM
April 13	Awards Banquet
April 16	IEEE Night
May	
May 1	New members get 8 months for the price of 6
May 14	ADCOM
May 21	IEEE Night
June 11	ADCOM
June	
	To be provided
July	
July 10-12	American Control Conference



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.

DIRECTORIES

[ADCOM Members](#) [SECTION Chapters](#) [Chapter Chairs Responsibilities](#)

ALMANACK STAFF

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

Editor: Michael Mayor, P.E.: michael.mayor.pe@ieee.org

News and notices contact: michael.mayor.pe@ieee.org

IEEE Philadelphia Section Main Office:

Bala Pointe Centre, c/o Greater Philadelphia Association Management Group
111 Presidential Blvd., Suite 231, Bala Cynwyd, PA 1004, Phone: 484.270.5136

sec.philadelphia@ieee.org

ADVERTISEMENTS – Contact: michael.mayor.pe@ieee.org.

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 SPONSORSHIP PROGRAM

Contact: sec.philadelphia@ieee.org

	Platinum	Gold	Silver	Bronze
Cost per Year	\$3,500	\$2,500	\$2,000	\$1,000
Awards Banquet¹	<ul style="list-style-type: none"> • Full Table-10 tickets • Full page Awards Brochure • 6-ft Exhibit Table 	<ul style="list-style-type: none"> • 6 tickets • Half page Awards Brochure • 6-ft Exhibit Table 	<ul style="list-style-type: none"> • 4 tickets • Quarter page Awards Brochure • 6-ft Exhibit Table 	<ul style="list-style-type: none"> • 2 tickets • Quarter page Awards Brochure
IEEE Almanack²	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.

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.



2019 American Control Conference: Call for Papers

July 10-12, 2019, Philadelphia Marriott Downtown, Philadelphia, PA (USA) (<http://acc2019.a2c2.org/>)

Operating Committee

General Chair

Douglas A. Lawrence
Ohio University
dal@ohio.edu

Program Chair

Andrea Serrani
The Ohio State University
serrani.1@osu.edu

Finance Chair

Randal W. Beard
Brigham Young University
beard@byu.edu

Local Arrangements Chair

Garrett M. Clayton
Villanova University
garrett.clayton@villanova.edu

Publications Chair

Elisa Franco
University of California, Riverside
efranco@engr.ucr.edu

Publicity Chair

Sérgio Pequito
Rensselaer Polytechnic Institute
gongcas@rpi.edu

Registration Chair

Se Young Yoon
University of New Hampshire
SeYoung.Yoon@unh.edu

Workshops Chair

Wei Zhang
The Ohio State University
zhang.491@osu.edu

Exhibits Chair

Dennis Williams
LyondellBasell
dennis.williams@lyondellbasell.com

Vice-Chair: Special Sessions

Rafael Fierro
University of New Mexico
rfierro@unm.edu

Vice-Chair: Invited Sessions

Aranya Chakraborty
North Carolina State University
achakra2@ncsu.edu

Vice-Chair: Industry & Applications

Stefano Di Cairano
Mitsubishi Electric Research Laboratories
dicairano@ieee.org

Vice-Chair: Student Affairs

Anouck Girard
University of Michigan
anouck@umich.edu

The 2019 American Control Conference will be held Wednesday through Friday, July 10–12, at the Philadelphia Marriott Downtown, located in the heart of Center City, Philadelphia. Philadelphia is the birthplace of American democracy, and the home to the creation and signing of the Declaration of Independence and the Constitution. It is also the City of Brotherly Love and considered one of the most European-like cities in the USA, captured by the cross-the-street Reading Market and little Italy neighborhood. The city features a cultural diversity of food (and also the original cheesesteak), exhibitions, and museums for all tastes throughout the year, as well as outdoor concerts and festivals during summer.

The ACC is the annual conference of the American Automatic Control Council ([AACC](#)), the U.S. national member organization of the International Federation of Automatic Control ([IFAC](#)). Society co-sponsors of the ACC are the American Institute of Aeronautics and Astronautics ([AIAA](#)), American Institute of Chemical Engineers ([AIChE](#)), American Society of Civil Engineers ([ASCE](#)), American Society of Mechanical Engineers ([ASME](#)), IEEE Control Systems Society ([IEEE-CSS](#)), Institute for Operations Research and the Management Sciences Applied Probability Society ([INFORMS-APS](#)), International Society of Automation ([ISA](#)), Society for Modeling & Simulation International ([SCS](#)), and Society for Industrial & Applied Mathematics ([SIAM](#)).

The 2019 ACC technical program will comprise presentations in regular and invited sessions, tutorial sessions, and special sessions along with workshops and exhibits. Submissions are encouraged in all areas of the theory and practice of automatic control.

KEY DATES

Manuscript Submission: September 17, 2018
Acceptance/Rejection Notice: January 31, 2019
Final Manuscript Submission: March 15, 2019

Call for Contributed Papers: Papers are invited in the form of regular manuscripts. There is no separate short paper format. Papers must conform to the submission policy, detailed on the conference web page. All manuscripts should be written in English, be in a 2-column format, and be 6–8 pages in length, with additional page charges applicable for pages 7 and 8.

Call for Invited Sessions: Invited sessions consist of 6 papers presenting a unifying theme from a diversity of viewpoints. Proposals must clearly describe the motivation and relevance of the session. Proposals must be accompanied by full versions of each paper, which will be individually reviewed together with the proposal itself.

Call for Tutorial Sessions: Tutorial sessions are a special category of invited sessions organized to provide an introduction to a topic of interest. The format is structured around the main tutorial paper (up to 12 pages) and talk (60 minutes) to bring the participants up to speed, followed by three 20-minute presentations (with or without papers of up to 6 pages each) to give a picture of the state of the art. Tutorial sessions involving strong industry and academic collaboration are highly encouraged.

Call for Special Sessions: Special sessions are focused events to spotlight emerging research areas, funding opportunities, and other topics of broad interest to the conference attendees. Examples include industry-led, research sponsor-led, education-themed, and history sessions.

Call for Workshops: Workshops to be held prior to the conference are solicited on all related topics. Proposals for workshops addressing novel control methodologies and nonstandard control applications, as well as workshops with strong tutorial value are encouraged.

Exhibits: Exhibitors are invited to showcase, demonstrate and market control-related publications, software tools, prototypes, educational products, services, and jobs. Exhibits are open throughout the conference to all attendees of the ACC.

Papers and session and workshop proposals must be submitted through the submission website. Submissions must conform to policies given on the conference website: <http://acc2019.a2c2.org/>



Philadelphia
Engineering Foundation
Promoting Engineering's Future



2019

DELAWARE VALLEY ENGINEERS WEEK FEBRUARY 14-23, 2019

***** NEW EVENT FORMAT *****

JOIN US FOR THIS YEAR'S EVENTS

2019 DELAWARE VALLEY ENGINEER OF THE YEAR JOHN J. PEIRCE, JR., PE

With over 45 years of design-build, civil, geo-structural, and construction engineering experience, **John Peirce** is well-equipped to provide to his clients a wide range of engineering services needed for their building, highway, bridge, and marine projects. Besides being a founder, owner, and officer of Peirce Engineering, Inc., his responsibilities include engineering design of various types of structures for both his contractor clients and for other engineering firms, including temporary and permanent earth retaining walls, soil and rock anchors, bearing piles, micropiles, drilled shafts, underpinning, soil nail walls, bridges, and sheet pile bulkheads and cofferdams. His combination of construction and engineering experience has enabled him to provide his clients with several thousand, safe, successful, and economical designs. In addition to his design duties, he is responsible for mentoring and training the firm's engineers and for providing quality control and review for all of its engineering work.

John graduated from Drexel University in 1973 with a Bachelor's Degree in Soil Mechanics and Construction Management. As an undergraduate, he was a member of Drexel's first-ever concrete canoe team which utilized recycled, crushed glass as the concrete mix's aggregate. In 1978, he earned his Masters Degree in Geotechnical Engineering from Drexel. He is a licensed professional engineer in five states and a licensed professional land surveyor (retired) in Pennsylvania.

After working at positions with a contractor and a consultant, John co-founded Peirce Engineering, Inc. in 1992. He has been an integral part of numerous local projects as well as efforts in New York and New Jersey, primarily performing construction and geo-structural engineering for contractors that did not have in-house engineering capability and/or expertise, and has assisted clients in the performance of other types of work which they had previously assigned to specialty contractors.

Over the years, John has prepared technical papers and presented technical sessions to various State Departments of Transportation and to technical and industry groups. He is co-author of Chapter 7, Earth Retaining Structures, in *Handbook of Temporary Structures in Construction*, 3rd Edition, 2012, McGraw-Hill. He was awarded U.S. Patent No. 4,911,582 for repair or improvement of retaining walls using post tensioned tieback anchors. In 2016, he became an Adjunct Professor at Villanova University's College of Civil and Environmental Engineering where he developed and teaches the graduate-level course, Foundation Engineering.



2019 DELAWARE VALLEY YOUNG ENGINEER OF THE YEAR ELEANOR F. SMALL, PhD

Eleanor Small is a Principal Scientist with Johnson & Johnson Consumer, Inc., with the firm's Consumer Wound Care Product Development, supporting J&J's iconic brands with a \$500-million-dollar portfolio. She is a global technical lead responsible for development, claims support, scale up, and launch of new products. She also leads one of the department's early stage research platforms focusing on infection prevention. She leads global cross functional teams responsible for product creation, guiding marketing concepts, designing and executing in vitro, clinical, and consumer studies, as well as managing design controls for class 1 and class 2 medical devices. She started her career at the firm six years ago as a post-doctoral scientist supporting new product development, and was responsible for the formulation, claims support, and global launch of its first peroxide-free whitening mouthwash.

After earning her Bachelors of Science Degree in chemical and biomolecular engineering from the Johns Hopkins University in 2006, Ellie completed her doctorate at Drexel University in 2012, also in chemical and biological engineering. Her doctoral work focused on mapping release kinetics of ultrasound aided drug delivery to the phase behavior of lipid-based drug carrying particles. During her graduate studies she was twice awarded an NSF GK-12 fellowship. The fellowship paired her with Philadelphia public high school teachers to enhance STEM curricula through the development and teaching of hands-on activities to drive student engagement of classroom topics.

STEM education is a passion for Ellie. Upon starting at J&J, she joined the Women In Science and Engineering (WISE) employee group, bringing her experience from the GK-12 Fellowship in STEM curricula development. The vision of WISE is to inspire 6th to 9th grade students to pursue careers in science, technology, engineering, and math. She has helped to grow WISE, doubling the leadership team members by establishing a leadership model based on key partnerships as pillars. She firmly believes education does not end at graduation, which is why she has been actively involved with multiple professional societies including the Delaware Valley Engineers Week and the International Society of Pharmaceutical Engineers, where she currently serves as the Delaware Valley Chapter's Executive Vice President.

One of Ellie's favorite mentoring moments is reminding that the secret to success is building great and supporting partnerships. Her number one supporter and main partner is her college sweetheart and husband, David, who is also a chemical engineer. If you cannot find these two side by side on their computers, or debating the best way to trouble shoot a process challenge, they are probably on the dance floor, pursuing their common hobby of ballroom dance.



The Philadelphia Section of the American Society of Civil Engineers selected John as its 2002 Philadelphia Civil Engineer of the Year, its highest honor. He is a Life Member and Fellow of ASCE. In 2011, he was elected as a Diplomate of the Academy of Geo-Professionals. He is a Life Member, Past President (1999-2000) and Board Member of the Delaware Valley Section of the American Society of Highway Engineers. As a Fellow and Member of the Eng-Tips Round Table, he is an advisor to engineering forums management on site operations and proposed programming enhancements for this international, on-line, engineering resource. He is a member of The Moles, a highly recognized association of individuals engaged in heavy construction, as well as the International Association of Foundation Drilling, the American Railway Engineering and Maintenance-of-Way Association, the Pile Driving Contractors Association, and the Ports of Philadelphia Maritime Association.

John and his firm have supported charitable organizations such as Small Steps in Speech (founded in honor of a family friend, Green Beret Medic Staff Sgt. Marc Small, who lost his life in action in Afghanistan), the Norristown Hospitality Center, and Father Chuck's Challenge. When not at work, he spends his time sailing his boat, *Knot at Work*, on the Chesapeake Bay with his wife, Beth. When they are not sailing, their six grandchildren keep him very busy – and young!

CELEBRATING INNOVATION AND ENGINEERING SOLUTIONS

ENGINEERS WEEK OPENING CEREMONY THURSDAY, FEBRUARY 14

DoubleTree Philadelphia Hotel
237 S. Broad Street (at Locust Street), Center City
5:00 PM Networking/Awards and Affiliates Showcase
6:00 PM Dinner
Awards Following Dinner

2019 Engineers Week in the Delaware Valley kicks off with the Opening Ceremony dinner in the spacious and elegant Symphony Ballroom at the DoubleTree Hotel.

Formal festivities will begin with networking, featuring a cash bar, at 5:00 PM. Recipients of various Engineers Week awards and scholarships and sponsoring affiliate societies will be on hand with display boards during the networking session to showcase their honors and groups.

2019 Delaware Valley Engineer of the Year **John Peirce** will be formally introduced at the Opening Ceremony. Mr. Peirce and the 2019 Delaware Valley Young Engineer of the Year, **Eleanor Small**, will make brief remarks and kick off the celebration of Engineers Week in the Delaware Valley.

In addition to the Engineer of the Year and Young Engineer of the Year, we will recognize other recipients of Engineers Week honors:

- Outstanding Service to Engineering Award
- Engineers Week Scholarships
- Student Paper Competition winners
- Outstanding High School Students
- Delaware Valley Science Fairs Award winners
- Outstanding High School Teachers Award recipients

Individual and project award recipients honored in the past year by the various engineering and technical societies in the Delaware Valley will be cited in the event PowerPoint and program.

Price - \$80 for reservations received on or before February 6 (\$60 for government agency employees and students). *Prices increase for reservations made on February 7 and after.*

Tables of 10 are available at \$750. Please indicate each attendee's name and meal choice when making reservations.

An affiliate society sponsorship rate is also available. Please see the website for more information and details on this.

Meal selections are available as follows:

- Wild salmon with grilled asparagus, jasmine rice and brown garlic scallions
- Crispy airline chicken breast with maple mustard, brandied cherries, pommes puree and spicy broccoli crowns
- Creamy butternut squash risotto (vegetarian)

Discount parking is available in the hotel garage. Validation will be available at the registration table at the event. Please note the garage is a CASH ONLY facility.

YOUNG ENGINEERS SOCIAL TUESDAY, FEBRUARY 19

Ladder 15
1528 Sansom Street, Center City
6:00 PM to 9:00 PM

This event is geared specifically to young engineers (both in age and at heart) to socialize, catch up, network and enjoy finger foods and drinks in an informal setting in a former working firehouse.

As part of the evening's festivities, **Eleanor Small**, the 2019 Delaware Valley Young Engineer of the Year, will be recognized and make brief remarks.

Price - \$36 for reservations received on or before February 6 (\$25 for government agency employees and students). *Prices increase for reservations made on February 7 and after.*



FOR RESERVATIONS:

OPENING CEREMONY

[www.engrclub.org/
registerDVEW](http://www.engrclub.org/registerDVEW)

or scan the QR code at right



YOUNG ENGINEERS SOCIAL

[www.engrclub.org/
registerYES](http://www.engrclub.org/registerYES)

or scan the QR code at right



As a reminder, reservations are due for each event by February 6. Prices will increase for reservations made on February 7 and after and will be on a space-available basis.

Payment can be made electronically as part of the registration process or separately by check. Please make checks payable to **Engineers' Club of Philadelphia**

Checks can be brought to the event or mailed in advance. Mail should be directed to
Engineers' Club of Philadelphia
PO Box 38561
Philadelphia, PA 19104

If you have any questions on this or require additional information, please contact us at engineersclubofphiladelphia@gmail.com.

Payment will be expected for all reservations regardless of attendance.

Please visit www.engrclub.org and select the DVEW tab for more information on award recipients, events, directions and parking.

Please provide names for all attendees at least two days prior to the event. Pre-printed name tags will be available at the event registration tables.

Please keep in mind that certain levels of contributions to Engineers Week include complimentary event ticket(s). More information is provided on the Engineers Week Sponsorship brochure, available at www.engrclub.org. Contributions to Engineers Week are accepted, encouraged and appreciated.





DELAWARE VALLEY ENGINEERS WEEK EVENTS

Annual Golf Outing - Monday, October 8, 2018

The Philadelphia Engineering Foundation, the charitable arm of the Club, hosted our 19th annual Golf Outing/Mulford Classic on October 8th at Bala Golf Club to support the scholarships and other student awards presented at the Delaware Valley Engineers Week celebrations, as well as other student outreach activities.



Engineers Week Opening Dinner – Thursday, February 14, 2019

Delaware Valley Engineers Week will kick off with the Opening Dinner. The incoming Delaware Valley Engineer of the Year and Young Engineer of the Year will be introduced and will provide brief remarks. Awards that recognize and promote the engineering profession and local significant accomplishments will be presented, including the Delaware Valley Engineering Hall of Fame and Outstanding Service Awards. Students and educators will be recognized with awards including Engineers Week Scholarships, Student Paper Competition prizes, Delaware Valley Science Fairs awardees, and Outstanding Math/Science Teachers recipients. Awardees will be on hand to network and interact with event attendees during the social hour prior to the formal dinner/festivities.



Young Engineers Social – Tuesday, February 19, 2019

This event is geared specifically to young engineers (both in age and at heart) to socialize, catch up, network and enjoy finger foods and drinks in an informal setting.

As part of the evening's festivities, the Delaware Valley Young Engineer of the Year will be recognized and make brief remarks.



Engineers Week awards and scholarships include:

- ◆ *Engineer of the Year*
- ◆ *Young Engineer of the Year*
- ◆ *Delaware Valley Engineering Hall of Fame*
- ◆ *Outstanding Service Award*
- ◆ *Affiliate Society Award Recognition*
- ◆ *College Student Papers*
- ◆ *College Scholarships*
- ◆ *Outstanding Teachers*
- ◆ *Outstanding High School Students*
- ◆ *Delaware Valley Science Fairs Awards*

We need your help in supporting the scholarships, awards and programs of Delaware Valley Engineers Week and in making the upcoming Engineers Week a success.

Besides monetary donations, we recognize other ways of contributing. We always welcome individuals who are interested in volunteering their time to lead or assist in any of the Engineers Week programs. We also encourage your company's participation in activities that celebrate and promote the engineering profession, not just during Engineers Week, but throughout the year.

If you have any questions or would like to receive further information concerning any of our Engineers Week activities, please visit our website at www.engrclub.org.

The Engineers Week Committee of the Engineers' Club of Philadelphia sponsors the Delaware Valley Engineers Week programs on behalf of the area's engineering and technical societies. The events and activities are supported by major corporations and individuals as well as participating societies and universities. **All Committee members are volunteers.**





Delaware
Valley
Engineers
Week

SPONSORSHIP BROCHURE

FEBRUARY 14 - 23, 2019



2018 Delaware Valley Engineer of the Year Deborah L. Grubbe, P.E.

In February the Engineers' Club of Philadelphia (ECP) will introduce the 2019 Delaware Valley Engineer of the Year and the Young Engineer of the Year. As you may be aware, an engineer transforms science and technology into useful products that improve our standard of living, quality of life and our health and well-being. Every day, engineers are contributing to the vibrancy of our current regional economic growth.

Please join me in contributing to support this yearly celebration.

Our region still has an organization (ECP) that brings all engineering disciplines together to promote and to support one primary engine of our local economy.

ECP is committed to execute a multi-year project to put engineers into contact with students at all educational levels. ECP will lend its support and leadership towards growing STEM career awareness among our local educators and their students. We need your support to help to make the connections to "put us to work." By collaborating with existing efforts, and by supporting the deployment of "our regional engineering army," we will work together to introduce engineering to many of our area students. We will hold a meeting in January of interested leaders, and a detailed plan will be discussed at that time. We will be hosting leaders from across the spectrum. If you or your organization is interested in working with us, please contact me at deb@opsandss.com.

A strong alliance of business, academic and technical leadership will make our region strong for decades to come. Thank you for joining us to make an investment in this multi-year effort.

Our collective future depends on us working collaboratively to make the tri-state region even more successful. It has been an honor to represent my colleagues as 2018 Engineer of the Year, and, with your support, I am looking forward towards being personally involved in more STEM outreach.



DELAWARE VALLEY ENGINEERS WEEK SPONSORSHIP PACKAGES



	Pocket Protector	Slide Rule	Baxter	Washington	Edison	Franklin	President's Circle	1877 Club
BENEFITS								
Pledge Range	\$50 to \$149	\$150 to \$249	\$250 to \$499	\$500 to \$999	\$1,000 to \$1,999	\$2,000 to \$3,499	\$3,500 to \$4,999	\$5,000 or More
Name listed in the Engineers Week events program (Pledge received by February 2)	◆	◆	◆	◆	◆	◆	◆	◆
Name displayed at the Engineers Week events (Pledge received 5 days before event)		◆	◆	◆	◆	◆	◆	◆
Name listed in Philadelphia Business Journal—Engineers Week Supplement (Pledge received by January 18)			◆	◆	◆	◆	◆	◆
1 ticket to your choice of one of the Engineers Week events				◆				
Name to appear in press releases for Engineers Week events (Pledge received by January 18)					◆	◆	◆	◆
2 tickets to your choice of one of the Engineers Week events					◆			
1/16 page advertisement (B&W) in Philadelphia Business Journal—Engineers Week Supplement (Pledge received by January 18)						◆		
2 tickets to each of the Engineers Week events						◆		
1/8 page advertisement (B&W) in Philadelphia Business Journal - Engineers Week Supplement (Pledge received by January 18)							◆	
4 tickets to each of the Engineers Week events							◆	◆
1/4 page advertisement (B&W) in Philadelphia Business Journal - Engineers Week Supplement (Pledge received by January 18)								◆
Be a Title Sponsor for one of the Engineers Week Events								◆

Information on the Engineers Week events is provided on page 4.

Please visit the Engineers' Club website (www.engrclub.org) for more details and updates.



The Engineers' Club offers individual, student, agency and corporate memberships to further the goals of coalescing the engineering community in the Delaware Valley, working with affiliated engineering and technical societies, and student outreach.

Check the Club's website at www.engrclub.org for more information.

PACKAGE DETAILS & RESPONSE FORM



ADDITIONAL RECOGNITION SPONSORSHIP OPPORTUNITIES

In addition to, or in place of, the Sponsorship Packages, you can select among several recognition opportunities, such as bar sponsor, program sponsor, and several other options. This sponsorship will be cited in the event program and at Delaware Valley Engineers Week events. These range in cost from \$250-\$500.

You will also have the opportunity to donate a door prize of your choice to be awarded via a raffle at our Luncheon. If you are interested, please visit our website (www.engrclub.org) for additional details and availability.

NOTE: These sponsorships are only available as general DVEW donations.

DELAWARE VALLEY ENGINEERS WEEK SPONSORSHIP RESPONSE FORM

DVEW Sponsorship Package

_____ \$

Additional Recognition Sponsorship Opportunities (specify)

_____ \$

_____ \$

TOTAL PLEDGE \$ _____

Check here if you wish to be a 3-year sustaining sponsor at this level or above for DVEW 2020-2022

Choose payment option: _____ Check enclosed
 _____ Check to follow once invoiced

Please make checks payable to:
ENGINEERS' CLUB OF PHILADELPHIA.

Please visit www.engrclub.org for electronic payment details.

DONOR INFORMATION

Name: _____

Primary Contact: _____

Company/Organization _____

Sponsor Name (as you want it to appear in materials):

Address:

City, State, Zip:

Telephone: _____

Email: _____

Please note type of contribution:

<input type="checkbox"/> Corporate	<input type="checkbox"/> Technical Society
<input type="checkbox"/> Personal	<input type="checkbox"/> Institutional / Non-profit

Send Completed Form and Contributions to the address below c/o DVEW Sponsorship. Questions? Visit the Engineers' Club website (www.engrclub.org).

Philadelphia Engineering Foundation, PO Box 38561, Philadelphia, PA 19104
 (Pay Pal is available for donations—visit www.engrclub.org for details.)

