IEEE Advancing Technology for Humanity

Philadelphia Section ALMANACK

Vol. 62, No. 5 May 2017

Almanack

IEEE Philadelphia Section Website

IEEE PHILADELPHIA SECTION
Counties of Membership:
Pennsylvania: **Bucks, Chester, Delaware, Montgomery and Philadelphia.**
New Jersey: **Burlington, Camden and Gloucester**

ALMANACK
Published Monthly, Nine Times per Year, January to May, a Summer issue covering June, July and August and September to December.

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 (ADCOM)
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 the office the Friday before the meeting ***(Phone: 484-270-5136)***.

MAY 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
				* Lighting the World		
7	8	9	10	11	12	13
		* ADCOM				
14	15	16	17	18	19	20
		* IEEE Section Night				
21	22	23	24	25	26	27
					* Summer Inputs Due	
28	29	30	31			
	* Memorial Day					

IEEE Advancing Technology for Humanity

Philadelphia Section ALMANACK

Vol. 62, No. 5 May 2017

INSIDE THE ALMANACK

IEEE SECTION NIGHT

Philadelphia Section Meeting

Tuesday, May 16, 2017

Sponsored by: Power & Energy and Signal Processing Societies

Note: In the event of bad weather please call the Sheraton after 1:00 PM the day of the meeting: 215-387-8000. Ask the front desk if the meeting has been canceled.

Tuesday, May 16, 2017
Dinner at 6:00 PM,
1st Speaker at 7:00 PM.
2nd Speaker at 8:00 PM.
Sheraton University City,
3549 Chestnut St,
Philadelphia, PA 19104,
(215) 387-8000

Meal Cost: $25 (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.

Registration Link

Parking is paid by the IEEE Philadelphia Section, make sure you have your parking ticket stamped at the meeting.

PROFESSIONAL DEVELOPMENT HOURS (PDH)

PDH Certificates are free for IEEE members. For non-members, the cost is $9 per certificate. You can pay during registration or by check at the meeting

IEEE Advancing Technology for Humanity
Philadelphia Section ALMANACK

Vol. 62, No. 5 May 2017

First Talk

The National Electrical Code – People Protection

Joseph F. Maida, PE, P. Eng., LEED^{AP}
Maida Engineering Inc.

Abstract: Electricity is safe as long as it does not use you as an electrical conductor or cause an explosion!

This course will instruct the attendees on how to estimate the danger of electricity and recent changes in the National Electrical Code to provide people protection.

The course will:

- Describe power distribution systems that provide power to homes and factories in the USA.
- Describe "available short circuit current" and how it applies to and effects equipment and people.
- Present the formulas and the methods for calculating "available short circuit current".
- Describe the difference between line short circuit faults and ground short circuit faults.
- Describe how short circuit overcurrent devices operate and how these protect equipment.
- Describe how short circuit overcurrent devices operate and how these protect people.
- Describe NEC required equipment found in homes such as GFCI and AFCI Receptacles.
- Describe NEC required equipment found in factories such as Arc Flash Reduction Systems.
- Discuss the NEC and people friendly electrical systems

Biography: Joseph Maida provides engineering and design services for large and small projects in various markets and over a number of disciplines. Since starting Maida Engineering, Inc. in 1978 he has completed many engineering and design projects for commercial, industrial, governmental design projects and many design/build projects for industrial power and control systems and numerous studies for large power system studies and arc flash analyses.

Large or small, simple or complex, Joseph Maida approaches every project with the same attention to detail and strives to develop or oversee the development of the most feasible designs that meet building codes, that provide a high degree of safety and that will function reliably while meeting the client's budgets ad schedules.

Joseph Maida manages a company that provides harmonious working environments while utilizing the technical and managerial talents of its employees and sub consultants, thus enabling them to provide

the highest quality of engineering and design to its industrial, commercial, government and automation and control clients.

Joseph Maida has provided project management and overseen or performed engineering services for the following recently completed projects:

The replacement of the motors, drives, lubrication systems and controls for two helicopter blade, 4050 HP dynamic balancing towers; the replacement of an existing wind tunnel's AC wound rotor and DC motors with a 18,000 HP synchronous motor and a 22,000 HP, 36 pulse VFD; the engineering and design for a 6 MW, 13.2 KV Mission Critical Electrical Power Generation and Distribution Systems for the Philadelphia Veterans Medical Center, the conceptual design and code analyses for the replacement of the motor, drives and controls for the Tram systems within the Saint Louis Arch, the installation of 5 MW Standby Power Distribution System and Priority Load Management Control System for a Pharmaceutical R&D campus; a new cement plant's 34.5 KV and 4,160 Volt, 20 MVA power distribution system; a hazardous area analysis for areas containing fossil fuel dust; numerous power system studies including load flow, voltage drop, short circuit, equipment evaluation, TCC Coordination, motor starting, harmonics, and arc flash analyses; the remodeling of numerous commercial kitchens; the power distribution and control of new outdoor and indoor lighting; a new Command Center; the study for upgrading a large data center's standby and interruptible power supplies; and the installations of new services, feeders and branch circuits for pharmaceutical, fiberglass and cement plants and commercial buildings, HVAC/mechanical equipment and renovations to building and processes.

Joseph Maida has overseen and prepared bid and construction documents that have been used by its clients for design/build projects and by Maida Engineering to perform design/build projects utilizing the services of both in-house and outside engineers, fabricators and contractors.

Joseph Maida has extensive experience in the interpretation and application of building and fire codes. He has performed many electrical hazardous areas classification studies within chemical, pharmaceutical and cement plants and within oil refineries. He has contributed to the writing of a section of NFPA 70, National Electrical Code.

Joseph Maida has a BSEE and MSEE from Drexel University (1971 and 1976 respectively). He holds PE Licenses in: PA, NJ, DE, NY, GA, FL, TX, MA, ID, IA, NC, WV, AR, MD, TN, MO, KS, ALBERTA. He is a LEED Accredited Professional (June 2009 to Present) and was appointed to the Pennsylvania Uniform Construction Code Review and Advisory Council (2009-2011).

He is a member of NSPE, PSPE – Philadelphia Chapter, a member of the IEEE and a member of NFPA.

IEEE Advancing Technology for Humanity
Philadelphia Section ALMANACK

Vol. 62, No. 5 May 2017

Second Talk

Using Simulation to Overcome Design Challenges in Electronics Product Development & Electromagnetic Applications

Chris Meisibov
CAE Associates
Senior Project Manager

Abstract: This presentation examines some of the challenges in electronic design and how simulation can enable engineers to predict complex design scenarios. These scenarios may be too difficult to physically test and/or enable engineers to understand exactly why and how a product performs. Applications include high-frequency RF and Microwave, Low-Frequency EM & Power, Power Integrity, Signal Integrity, EMI, thermal management and structural/thermal stress. A number of electromagnetic and coupled physics applications will be used to illustrate how innovative companies are overcoming these design challenges using ANSYS simulation software tools.

Biography: Chris Mesibov is a Senior Project Manager for CAE Associates, the exclusive ANSYS Channel Partner in the Northeast region. He is the lead electrical engineer at CAE and manages all the company's activities for high-frequency electromagnetic applications, including engineering consulting services, training, technical and sales support. Chris has over 30 years of experience in electrical engineering product development, with a strong concentration in signal integrity and analog circuit design. Prior to joining CAE Associates, he worked for Fujitsu Network Communications performing signal integrity analysis and opto-electronic designs for ROADM systems. Chris received his BSEE from Manhattan College and has been awarded three patents in the area of photonics related circuit design. He is an active member of the IEEE CNNNJ section.

IEEE Advancing Technology for Humanity
Philadelphia Section ALMANACK
Vol. 62, No. 5 May 2017

MESSAGE FROM THE Chair

Peter Silverberg, LSM, P.E.

This will be published after the Awards Banquet and we will be thinking a year ahead for the next one. We will try to return banquet time to the early part of April. This year, we ran across conflicts with the Region 2 Meeting, the Region 2 Student Activity Conference, and religious holidays.

Some of you may know that I worked 15 years in the publishing industry. A lot of editing involved fixing mistakes of grammar, units, abbreviations, and graphs. I accepted this as part of the job. I did not have a forum to express my feelings on this common problem. I found an editorial in *Electrical Insulation* that covers the ground. I have permission from IEEE to reprint it – look in this issue. If you write anything, reading and acting on this will improve the result.

I went to Rowan University April 8 to look in the Student Activity Conference. I have lots of praise for the Rowan Branch at organizing this. It was a massive effort. They had to raise $43,000 to put this on. From the program, I counted 40 names in the program booklet. All of them were working in the facility to make this a success.

The paragraphs below are for our members who have Professional Engineer Licenses. Every state now has a continuing education requirement spelled out in the range 12 – 18 hours per year. There are two types in this definition. One is a Professional Development Hour (PDH) and mostly these are the ones required by the state. The other is Continuing Education Unit (CEU) and this is bigger. The equation is 1 CEU = 10 PDH. The CEU is earned by taking university courses or longer seminars (at least a day), or offered by some online companies.

You earn a PDH by attending a meeting with a technical talk that lasts an hour, and asking for a certificate. Our regular section nights have two of these lectures. At the end you fill out a little questionnaire and the IEEE processes it. A certificate is made up and PDH credits are assigned. The certificate alternately allows 0.1 CEU. IEEE processed these at no charge in 2016. In 2017, an administrative charge of $9 was imposed. The IEEE has costs besides printing, mostly to comply with PE regulation in New York and Florida. Without going into detail, a New York CEU is stringent and so is accepted in PA and NJ. IEEE keeps a record for seven years.

IEEE Advancing Technology for Humanity
Philadelphia Section ALMANACK

Vol. 62, No. 5 May 2017

The section has decided that we want to encourage our PE members to come to section meetings. Our treasury will absorb the $9 as long as you are an IEEE member. Visitors will still have to pay the $9. This will be an incentive to join IEEE. If you are not a PE, you do not need to collect certificates. Chapters will establish their own criteria for meetings that are not joint with the section on IEEE Night.

It was not easy to determine the requirements for PDH and CEU. I have my license from Ohio. I thought that I needed 15 CEU a year to meet the regulation. As a result, I have an overflow of 13.5 CEU (135 PDH). I can't carry it beyond 2018. It's my mistake and a doozy, but maybe you can learn from me to find efficient uses for money and time. Still, I did learn a few things outside my special interests, so it wasn't a complete waste.

GUEST EDITORIAL

by Professor Shesha Jayaram
Department of Electrical and Computer Engineering
University of Waterloo, Canada

Awkwardness or Acceptance

Writing is a part of our profession, and many of us are not only writers but also "editors". I use the term editors for educators / researchers for whom editing others' work has become common practice. We are not professional editors *per se* who have established careers in the skill, such as editors for magazines and newspapers, but as supervisors and committee members, we do in fact edit works such as research proposals, papers, theses, and reports in addition to reviewing. What I would like to share here with readers is how to help reduce some of the editorial burden. I am not trying to correct anyone's writing; I wish to simply raise concern about the misuse of units, notations, significant figures in measurement and reporting, and improper citations. Although taught in schools/colleges, accompanied by standards that outline guidelines, these mistakes are often ignored or even overlooked.

Let us look at units first. In scientific work symbols notating units named after a person (for instance, a great scientist) must be identified in upper case. For example, the unit of electrical potential – the volt – is named after Alessandro Volta; the symbol representing the volt is V.

Likewise, the notations A for ampere, W for watt, H for henry, etc., are case sensitive. Next, we should look at multipliers – kilovolts or megavolts; many of us have edited KV at some point. I have noticed that many people forget that kilo is represented

IEEE Advancing Technology for Humanity
Philadelphia Section ALMANACK

Vol. 62, No. 5 May 2017

by a lowercase letter k as in kV (10^3 V). These days, even communiques and literature distributed by large companies often ignore the difference and use KV for kV. Am I too picky? It is after all just a letter k. On the other hand, if this happens for millivolt (mV) and megavolt (MV), then it is not just a difference between lower and upper case, rather it is a difference of nine orders of magnitude.

Another commonly found mistake is in the inconsistent use of decimal place values in the positional notation system. In a single table, even within a column representing the same variable or parameter, I have seen data presented with two decimal places to the right of a decimal point, and other data presented using three to four decimal places. Data is being reported verbatim; it is based on what a computer or calculator displays, rather than paying attention to the physical meaning. How awkward it would be to say, today's temperature is 28.007 ^{o}C!

This improper use does not end with data presented in tabular forms, it occurs in graphs and plots as well. For instance, it is easier to present a dataset demonstrating distance using millimeters, rather than using a basic unit meter to three decimal places. Similarly, within a single paper either scientific notation, $m\times10^n$ or E-notation mE^n, can be used, but not both. It takes a few extra steps to fix such oddities and errors in tables and figures, but they are integral corrections to ensure a well-written scientific paper.

I will admit my eyes are getting older and font size is becoming more of a concern. Unfortunately, these days, the assumption is that everyone uses large monitors to read articles, and it is easy to zoom-in. This is simply not true. Many documents are archived in print, and some individuals like myself, prefer to read hardcopies. We need authors to be kind on our tired eyes and use an appropriate font size. Unless journal/magazine editors request a specific typeset font or ask for resubmission with such specific corrections, this problem will continue. This may sound inconsequential to some, but remember that all elements of illustrations, including letters, numbers, and symbols, must be legible at their final size in print, not only on screen. This particular issue is an on-going struggle for me with my young research engineers (hey guys, you might be upset with me, but this is true).

The discussion would be incomplete if I did not talk about the poor use of references. Incomplete citation information, not following formats required by specific journals, and inadequate or lack of referencing published work are not uncommon. I am unhappy to see such bad practices from researchers who have extensive publication records. Sometimes you even see authors citing only their group's work. Also for young students, remember that IEEE Xplore is not a sole source of scientific information. Science exists beyond IEEE.

Lastly, the ways in which abbreviations are defined seems to be of less importance these days. For example, scanning electron microscope (SEM) *vs* Scanning Electron Microscope (SEM). Which one is correct? I think the former usage is correct.

IEEE Advancing Technology for Humanity
Philadelphia Section ALMANACK

Vol. 62, No. 5 May 2017

On a related note, another commonly found omission is failure to expand abbreviations upon first mention within a text, as well as failure to identify trademarks or registered marks. Having seen these types of omissions often, I ask myself, do we really need to pay attention? I would like to think we should; if research is not presented and articulated carefully and precisely, shouldn't the reader question the credibility of the research itself? As a final thought, just like they say the "cure for littering is you", the solution for the concerns expressed is "us".

2017 TechGirlz Arduino Summer Camp

July 10-14th Villanova University

Arduino Summer Camp Needs Teaching Assistant (TA)

During the Arduino Summer Camp, middle school girls will be learning to program and build an Arduino-controlled car. The Arduino camp TA will be responsible for guiding their group of girls through the programming and building process. Each TA will be assigned to a group of 5 girls and is responsible for keeping the girls on task, enforcing the camp safety rules and escorting the girls when needed. The TAs should be supportive of the girls' ideas and suggestions as well as keeping all the girls engaged. Most importantly, the TAs should be great role models.

The TAs should be familiar and comfortable with Arduino programming and robotics. Attendance is required for each day of camp as well as training and practice sessions. This is a paid position.

If you are interested in this opportunity, please contact:

Donna Cusimano donna@techgirlz.org or

Kate McDevitt at Kmtr1011@yahoo.com

The Teaching Assistant job description for anyone interested in working for the entire week can make an application here:

Here is the application for that position.

I am also looking for volunteers to help the girls during the week. We will build and program the robots on Wednesday July 12 and Thursday July 13th. The have robot demos will be on Friday July 14th. We will need the most help on those days.

IEEE Advancing Technology for Humanity
Philadelphia Section ALMANACK
Vol. 62, No. 5 May 2017

2017 Delaware Valley Science Fair (DVSF)

The 69th Delaware Valley Science Fair was held at the Greater Philadelphia Expo Center in Oaks, PA on April 5th – 7th.

Students participating in the Delaware Valley Science Fairs (DVSF) are involved in sophisticated research projects that focus on STEM (Science, Technology, Engineering, and Mathematics) topics in 13 different categories, Team Projects, and (for 6th – 8th grades) Consumer Science

Each year, more than 1,000 students in grades 6th through 12th from Pennsylvania, Southern New Jersey and Delaware, make new discoveries that could change their lives forever as they participate in the Delaware Valley Science Fairs (DVSF). Nearly $2 million in scholarship and prize money is awarded to students winners. DVSF takes top high-school winners to the Intel International Science and Engineering Fair (ISEF) competition in May to compete for more than $4 million in scholarships and awards.

Top middle-school winners go on to the Broadcom MASTERS national competition.

Founded in 1949, The Delaware Valley Science Fairs (DVSF) is a non-profit organization sponsored by area companies, universities and individual donors. It is one of the oldest and largest Fairs in the country. DVSF's philosophy is that students learn science by doing science. In the process, students learn how to think and develop critical problem solving skills that they will need for careers, college and citizenship. Our mission is to bring parents, teachers and industry together to stimulate and nurture young people so that they can grow and develop into contributing members of the community by providing the scientific work force needed for the future. We provide mentoring and teacher training to facilitate participation in this activity.

The IEEE Philadelphia Section provides prizes and judges to support the DVSF, this year's judges were:

- Peter Silverberg,
- John Iannuzzi and
- Robert Lawson.

The prizes and awardees are:

1st Place Plaque $300.- Cash Certificate **Project# B1205** ***A Determination of a Novel Heat Zone to Optimize Absorption during Optic Fiber Splicing.*** **Eric He; Grade 11; Age 16** erhe@ctemc.org Teacher: Michael Roche School: High Technology High School P. O. Box 119 Lincroft, NJ 07738 (732) 842-8444	**2nd Place** $300.- Cash Certificate **Project#: B1205** ***SCIN: A Smart Adaptive Machine Learning Application to Detect and Diagnose Human Medical Conditions and Plant Diseases and Disorders*** **Neil Deshmukh; Grade 9** neil.nitin.de@gmail.com Teacher: Gabriella Dee School: Moravian Academy 4313 Green Pond Road Bethlehem, PA 18020 (610) 691-1600 gdee@moravianacademy.org
3rd Place $100.- Cash Certificate **Project#: B0709 Designing a Quadrotor Helicopter Hybrid** **Dominic Adamo; Grade 11; Age 17** Cheezit.dom@hotmail.com Teacher: Karen Wolf School: Souderton Area High School 625 Lower Road Souderton, PA 18964 (215) 723-2808	**Honorable Mention (HM)** $50.- Cash Certificate **Project#: T1420** ***The Neo-Sole Accelerometer based Remote Communications Fail Detection Device*** **Surab Shah; Grade 10; Age 15** brooksybook@gmail.com Teacher: Aileen Constans School: Cherry Hill High School East 1750 Kresson Road Cherry Hill, 08003 (856) 424-2222

IEEE Advancing Technology for Humanity
Philadelphia Section ALMANACK

Vol. 62, No. 5 May 2017

2017 MATE PA Regional ROV Competition

Saturday April 15th, Villanova University

The Marine Advanced Technology Education (MATE) Center is a national partnership of organizations working to improve marine technical education and in this way, help to prepare America's future workforce for ocean occupations.

Headquartered at Monterey Peninsula College (MPC) in Monterey, California, the MATE Center has been funded as a National Science Foundation (NSF) Advanced Technological Education (ATE) Center of Excellence since 1997. The MATE Center also receives funding from NSFs Innovative Technology Experiences for Students and Teachers (ITEST) program and the Research Experiences for Undergraduates (REU) program. Additional support comes from industry sponsorships and SeaMATE Store sales.

MATE is an international student underwater robotics Remotely Operated Vehicle (ROV) competition. The 8th Annual MATE PA Regional ROV Competition was held on Saturday, April 15th, at Villanova University. The MATE competition is sponsored by Marinetech

The MATE Competition Network currently consists of 30 regional events that take place across the U.S. and around the world (Canada, Hong Kong, Scotland, Egypt, Russia, Turkey, Puerto Rico and Bermuda). The top two teams from each regional competition advances to MATE International.

Each year a regional/state or country hosts MATE International. This year MATE International will be held at Long Beach Community College in Long Beach, California on June 22-25, 2017.

The product demonstrations were held at the Villanova University pool.

Michael Mayor, P.E. served as a judge at the Villanova University competition.

Overall Winners & Moving onto MATE International to be held in Long Beach, California on June 22-25, 2017 are:

- ***1st Place--Mount Laurel Township Hydro Tech***
- ***2nd Place--HMS (Ranger) SeaBots***

IEEE Advancing Technology for Humanity
Philadelphia Section ALMANACK

Vol. 62, No. 5 May 2017

Ranger and Scout Class Winners

	Demonstration	Presentation	Marketing	Documentation
Ranger Class				
1st	MYL, Hydro Tech	Maret, Siphono-phore	MTL Hydro Tech	Sidwell Friends, Focus Ring
2nd	HMS SeaBots-R	Mt. Olive HS, Loggerheads	Sidwell Friends, Focus Ring	MTL Hydro Tech
3rd	Hill School, Sea Rams	Owen J. Roberts, Sea Dawgs	Maret, Siphonophore	Hill School, Sea Rams
Scout Class – Overall Scout Class Winner – HMS SeaBots-S				
1st	HMS SeaBots-S	HMS SeaBots-S	Neat Aquamarine Engineers	South Fayette Li-ons
2nd	Neat Aquama-rine Engineers, Vortex	Neat Aquamarine Engineers	HMS SeaBots-S	Hackley School, I.R.S. Mission
3rd	St. Louis Catho-lic Aqua Knights	South Fayette Li-ons	Neutral Buoyancy Zone	Hackley School, Whirlpool

IEEE Advancing Technology for Humanity
Philadelphia Section ALMANACK
Vol. 62, No. 5 May 2017

ACHIEVEMENT PROGRAM

Pennsylvania Society of Professional Engineers, Philadelphia Chapter

Outstanding Engineering Achievement
3000 HP Wind Tunnel System Maida Engineering

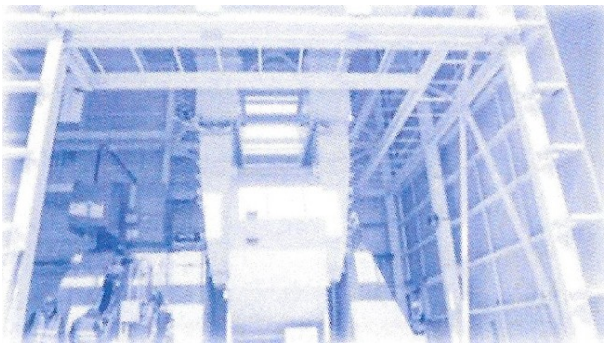
Maida Engineering served as a design consultant and subcontractor to Aerolab to provide a "Turnkey" open-jet wind tunnel air delivery system for Honeywell. Maida was responsible for the project from the conceptual phase through full commissioning, including engineering, design and system integration.

The system was designed at Maida's office in Philadelphia and constructed in Mexicali, Mexico. It consists of a 415,000 CFM blower with dampers and silencers, a 3,000 HP medium voltage motor, drive train coupling, a 3,000 HP medium voltage variable frequency drive, and a PLC-based monitoring and control system.

Key criteria for consideration of an effort for the Outstanding Engineering Achievement award are its demonstration of engineering challenges and innovative solutions and its importance to the engineering profession.

The project demonstrates engineering challenges and innovative solutions, including the integration of a blower, motor and VFD that will perform as required under harsh conditions with no mistakes, thereby enabling Honeywell to maintain its commitments, and the modification of commercially available equipment to meet the operational requirements of the wind tunnel.

The project's importance to the engineering profession to society is demonstrated through the function of the wind tunnel, which will be used for performance and endurance testing of equipment enhancing the safety of large commercial and military aircraft. Additionally, the wind tunnel would not be able to exist without the blower, motor, VFD and PLC System which are engineered products and systems.



IEEE Advancing Technology for Humanity

Philadelphia Section ALMANACK

Vol. 62, No. 5 **May 2017**

PHILADELPHIA SECTION NOTES

IEEE PHILADELPHIA SECTION OFFICERS

Chair: Peter M. Silverberg, P.E.: psilverberg3@comcast.net
Vice Chair: Mark Soffa: msoffa@kns.com
Treasurer: Robert Johnston: rlj1620@gmail.com
Secretary: Chris Vaile: cvaile@burns-group.com
Past Chair: Philip Gonski, P.E.: philip.m.gonski@ieee.org

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.

DIECTORIES

Link to ADCOM Members **Link to SECTION Chapters**

ALMANACK STAFF

Publisher: Peter Silverberg, P.E.: psilverberg3@comcast.net
Editor: Michael Mayor, P.E.: michael.mayor.pe@ieee.org
Assistant Editor:
News and notices contact: michael.mayor.pe@ieee.org

IEEE Philadelphia Section Main Office:

11 Bala Avenue, Bala Cynwyd PA 19004, Phone: 484.270.5136
sec.philadelphia@ieee.org

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

Almanack

Monthly Rates – Full Page: $100; Half Page: $50; Quarter Page: $25

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.

Email Blasts

Cost is $100 for one-time blast, and $250 for four blasts.

We send emails every week, one each week for a month. The advertisement should be the same for the four times.

Website: http://sites.ieee.org/philadelphia/

Cost is $100 for one month or $200 for three months.

THE FRANKLIN INSTITUTE *Awards*

Drexel UNIVERSITY

IEEE

LIGHTING THE WORLD

Honoring **Nick Holonyak, Jr.**
Recipient of the 2017 Benjamin Franklin Medal in Electrical Engineering

The visible light emitting diode (LED) has affected the quality of life of over 1.5 billion people worldwide, with photonic devices such as lasers and LEDs providing the backbone of the internet. Distinguished speakers discuss the influence the work of Nick Holonyak, Jr. whose inventions have helped literally light the world and produce the engine of the information age.

Awards Week is generously underwritten by

TE connectivity

MAY 4, 2017
9:00 AM – 12:00 PM
Mitchell Auditorium
Bossone Research Enterprise Center
3120-40 Market Street
Philadelphia, PA 19104

SPEAKERS:

M. GEORGE CRAFORD, Ph.D.
CTO, Philips Lumileds Lighting Company (retired)
2015 NAE Charles Stark Draper Prize Awardee

RUSSELL DUPUIS, Ph.D.
Steve W. Chaddick Endowed Chair in Electro-Optics
Georgia Institute of Technology
2015 NAE Charles Stark Draper Prize Awardee

FRED KISH, Ph.D.
Senior VP, Infinera Corp
Member of National Academy of Engineering

SHUJI NAKAMURA, Ph.D.
Cree Distinguished Professor, UC Santa Barbara
2002 Benjamin Franklin Medal in Engineering Awardee
2014 Nobel Laureate

PRICE: *Free, registration required:* Registration Link

CONTACT: *Prof. Bahram Nabet*

nabetb@drexel.edu +1 215 895 6761

THE FRANKLIN INSTITUTE
proudly presents
THE FRANKLIN INSTITUTE AWARDS

For more than 190 years, The Franklin Institute has honored the greatest minds in science, engineering, technology, and business. The Franklin Institute Awards are amongst the oldest and most prestigious comprehensive science awards in the world. Recognizing these brilliant men and women from around the world is one important way that the Institute preserves Benjamin Franklin's legacy. They are the Franklins of today; they will inspire the Franklins of tomorrow.

IEEE Student-Branch Leadership Scholarship Program
Philadelphia Section

IEEE Philadelphia Section Office
11 Bala Avenue
Bala Cynwyd, PA 19004
Tel: 484-270-5136
E-Mail: sec.philadelphia@ieee.org

Description

The Leadership Scholarship Program recognizes IEEE Student Members who have made significant contributions to the development, operation, outreach, and/or continuing vitality of their respective Student Branches. This scholarship is awarded for excellence in Student-Branch (or Student-Branch Chapter or Affiliation Group) leadership in the promotion of technical, professional, educational, and personal development of its student members in IEEE-related fields of interest.

The Leadership Scholarship

Three $6,000 scholarships are available for each academic year beginning in September, paid in two installments (as early as August and January). The scholarship is awarded to an exceptional applicant to assist in the pursuit of academic goals. If, in any year, there are no exceptional applicants, no scholarship will be awarded.

Eligibility

An applicant must: (1) have demonstrated exceptional leadership qualities in the development of some aspect of an exemplary Student Branch, Student-Branch Chapter, or Student-Branch Affiliation Group; (2) be an IEEE Student Member of at least six-months standing, with the intention to remain an active member for the duration of the scholarship; (3) have at least one academic year of full-time undergraduate study remaining before graduation in a discipline that qualifies for membership in the IEEE; (4) be attending a college or university with an IEEE Student Branch in the Philadelphia Section; and (5) have a cumulative undergraduate grade-point average of 2.70 or higher on a 4.0 scale.

A highly qualified applicant can win an IEEE Student-Branch Leadership Scholarship of the Philadelphia Section for a second year if he or she has also clearly played a mentoring role in qualifying at least one current applicant for a Leadership Scholarship. Up to two highly qualified applicants from the same Student Branch can win Leadership Scholarships in the same year.

Basis for Judging

Selection as a recipient of the Student-Branch Leadership Scholarship is based on a review of the following submissions: (1) A completed Leadership Scholarship Application Form; (2) An official copy of the applicant's latest Academic Transcript; and (3) Up to three one-page Letters of Reference from persons familiar with the applicant's activities in the Student Branch, the Philadelphia Section, or the Community at Large. The Scholarship Selection Panel will be composed of three senior engineering executives from government or industry. All will be free of any close affiliation with a college or university with an IEEE Student Branch in the IEEE Philadelphia Section.

Deadline for Application Submission

All applications and supporting letters must be received by the Office of the IEEE Philadelphia Section by **Monday, May 29, 2017**.

(Updated April 26, 2017)

IEEE Student-Branch Leadership Scholarship Application – 2017-18
IEEE Philadelphia Section

Your Name _____
Last (Family) *First* *Middle*

_____
Current Undergrad Year (Fresh, Soph, Junior) College/University Anticipated Degree / Year Cumulative GPA

Your Local Address_____
Number & Street City & State ZIP Code

Your Home Address _____
Number & Street City & State ZIP Code

Preferred Mailing Address: Local _____ or Home _____

Telephone No. _____ E-mail Address: _____

Birth Date _____ IEEE Student Member No. _____ Member Since _____
(MM/YYYY)

Education:

High School or College	Location	Degree / Honors	Year

Name of and Contact Information for your current IEEE Student Branch Counselor:

Name_____ E-Mail Address _____

Telephone No. _____

This Scholarship Application is made for the full academic year beginning: _____
(MM/YYYY)

****

Part A Please describe your basic view of the IEEE and your approach to making the most of what the IEEE has to offer. *(Max. 150 words)*

Part B On this single page, please briefly describe three to six of your activities or projects in your IEEE Student Branch that have had (or are having) a notable positive impact in terms of: (a) The relevance of technical or professional program to members and larger college community; (b) The effectiveness, growth, and vitality of the Student Branch; (c) The outreach of your Student Branch beyond your college to the Philadelphia Section, the broader IEEE membership, and/or the larger community; and/or (d) Some other valuable aspect of the IEEE affiliation.

Activity/Project_____Date(s) _____

Description / Your Role / Outcome:

Activity/Project_____Date(s) _____

Description / Your Role / Outcome:

Activity/Project_____Date(s) _____

Description / Your Role / Outcome:

*
*
*

Please provide a brief outline of your plans for the 2017-18 academic year relative to the IEEE, and to the larger community.

Please detail any awards or recognitions that you have received as a result of your efforts on behalf of the IEEE.

Please have this page reviewed and endorsed first by your IEEE Student Branch Counselor, and then by your Department Chair, affirming that your accomplishments are accurately and adequately represented.

_____ _____ _____ _____
(IEEE Student Branch Counselor) (Date) (Department Chair) (Date)

Part C Please summarize any non-IEEE activities that have helped you to be a more effective member of your IEEE Student Branch. *(Max 150 words)*

Part D Letters of Reference

List the name and affiliation of two or three individuals each of whom has agreed to write a **one-page** letter in support of your application for an IEEE Student Branch Leadership Scholarship of the Philadelphia Section. At least one of these referees must be a current IEEE Member. These letters should be delivered to the "Leadership Scholarship Application Committee" at the address below (with this application or separately) in an envelope sealed and signed by the referee. Alternatively, the signed letter may be scanned and e-mailed by the referee to sec.philadelphia@ieee.org. These letters should be received by the Leadership Scholarship Application Committee by **May 29, 2017**.

1.

2.

3.

Part E Endorsement of Your Scholarship Application (Optional)

This application may be endorsed by an individual representing a technical entity of the IEEE (e.g., a Technical Society) with whom you have interacted. This endorsement may not exceed **one page** and should also be delivered directly to the Leadership Scholarship Application Committee at the address below.

Name of the individual and associated technical organization providing endorsement: _____

Part F Official Copy of Current Academic Transcript

An official copy of the applicant's current academic transcript must either be submitted with this signed scholarship application, or mailed separately to the Leadership Scholarship Application Committee at the address below, by the application deadline of **May 29, 2017**.

Part G Signature of Applicant and Date

_____ _____
(Date)

All materials are to be delivered, by the application deadline, to:

Leadership Scholarship Application Committee
IEEE Philadelphia Section Office
11 Bala Avenue
Bala Cynwyd, PA 19004

Telephone: 484-270-5136
E-mail: sec.philadelphia@ieee.org

(Updated 4/26/2017)

WOMEN IN ENGINEERING

IEEE WIE FORUM ON

INSPIRING AND EMPOWERING WOMEN IN TECHNOLOGY

IEEE WIE FORUM USA EAST 2017

NOV 30 – DEC 2, 2017

BALTIMORE, MD

IEEE Women in Engineering

Call for presentations open – See website for more information

SITES.IEEE.ORG/WIE-FORUM-USA-EAST

IEEE

IEEE-USA

SAVE THE DATE