



Almanack

[IEEE Philadelphia Section Website](#)

Membership in the Following Counties

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

New Jersey: Burlington, Camden and Gloucester

May 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	17	18
	*WIE Meeting	*ADCOM				*SDR Workshop
19	20	21	22	23	24	25
		* IEEE Section Night				
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ALMANACK

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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 Chapters of:

The Professional Communications (PC) and
Engineering in Medicine and Biology Societies
Chapters

When:

Tuesday, May 21st, 2019

Dinner at 6:00 PM,

1st Speaker at 7:00 PM

2nd Speaker at 8:00 PM

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, \$35 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

Reimagining What a University Press Can Be: Books, Journals, and Beyond

Jessica Pellien

MIT Press

Abstract: The MIT Press is a leader in scholarly book and journal publishing. Historically they were known for publishing beautifully designed books and journals with a science and technology core. However, in recent years, their business model has shifted, and this has impacted not only what they publish, but how they publish it. Jessica Pellien, executive publicist and communications manager for the Press, will introduce the Press and describe how new technologies, innovations, and collaborations are bringing its scholarship to a global audience.

Biography: Jessica Pellien is the executive publicist and communications manager for the MIT Press. In this role, she manages book publicity campaigns and internal and external messaging about the Press. She has worked in academic publishing and communications for twenty years, with various roles at Rutgers University Press, Princeton University Press, and Georgetown University Press.





Second Speaker

Smart Biomaterials + Smart Scaffolds = Smart Regenerative Engineering

Peter I. Lelkes, PhD

Fellow, American Institute for Medical & Biological Engineering,

Laura H. Carnell Professor Temple University, Philadelphia, PA USA

Chair, Dept. Bioengineering, College of Engineering,

Director, Temple Institute for Regenerative Medicine and Engineering (TIME),

Professor of Surgery, Temple School of Medicine, Department of Surgery,

Professor of Regenerative Endodontics, Kornberg School of Dentistry,

Professor of Cancer Biology, Fox Chase Cancer Center

Abstract: The current dogma of regenerative tissue engineering relies on the combined action of exogenous cells, scaffolds and growth factors to “restore, maintain, or improve or regenerate functions“ In this context, synthetic polymers have found widespread application as permissive scaffolding biomaterials to support three-dimensional tissue constructs, which upon maturation *ex vivo* can be implanted into the recipient host . In this presentation I want to discuss an alternative regenerative approach using smart engineered natural biomaterials, as is, or as nano-composites, that show regenerative capacity without the need for added exogenous (stem) cells or growth factors. This approach is based on two principles that have recently emerged as key components for regenerative engineering:

1. Natural biomaterials, or their degradation products, contain inductive biological cues, which are frequently missing in synthetic polymers.

2. The surface topography, specifically the nanoscale surface roughness of biological scaffolds can act as a physical tool to direct cell differentiation (fate decision) *in vitro* and/or induce the regenerative process *in vivo*.

In this presentation, I will first give an overview of the 4 generations of biomaterials and scaffolds with examples for each of the generations from inert to smart materials and scaffolds. Focusing on smart biomaterials and scaffolds, I will then describe novel biomanufacturing processes for turning smart biomaterial into smart, regenerative scaffolds. Specifically, I will highlight electro processing as a platform technology for generating nanofibrous scaffolds from a variety of natural and composite biomaterials and discuss some of the inductive cues entailed in electrospun fibrous scaffolds that mimic the nano-topography of the natural extracellular matrix. I will present several case studies from our laboratory that might provide



cell-free regenerative solutions to unmet clinical problems, such as repair of critical size calvarial bone defects, cutaneous wound healing, and regenerative endodontics. The availability “cell-free” bioactive, biological systems, in which bioactive scaffolds can be manufactured, sterilized, transported, stored, and

applied without the precautions required for systems containing live cells is of great translational advantage. Finally, I will address the question, how smart a smart regenerative scaffold system has to be, to actually be of clinical and translational relevance.

Biography: Peter I. Lelkes, PhD is, since January 1, 2012, the Laura H. Carnell Professor and Founding Chair of the Department of Bioengineering in the College of Engineering at Temple University and the Inaugural Director of the Institute for Regenerative Medicine



and Engineering (TIME) at Temple University’s School of Medicine. At Temple University, Dr. Lelkes is also a Professor of Mechanical Engineering (Dept. Mechanical Engineering), Regenerative Endodontics (School of Dentistry), Surgery (School of Medicine) and Cancer Biology (Fox Chase Cancer Center). From 2000-2011 he was the Calhoun Chair Professor for Cellular Tissue Engineering in the School of Biomedical Engineering, Science and Health Systems at Drexel University in Philadelphia.

Dr. Lelkes obtained his PhD in Biophysics in 1977 from the Technical University (RWTH) Aachen, Germany, one of Europe’s Elite Universities. From 1977-1983 he was a

postdoctoral fellow and then staff scientist in the Department of Membrane Research at the Weizmann Institute of Science, Rehovot, Israel, working on membrane fusion, exocytosis, and mechanisms of neurosecretion. He continued his studies as Visiting Scientist in the Laboratory of Cell Biology and Genetics, NIDDK (NIH) from 1983-1988, focusing on heterotypic interactions between endocrine cells and endothelial cells. From 1988-2000, as Director of the Laboratory of Cell Biology in the Department of Medicine, University of Wisconsin, Dr. Lelkes developed a new program in vascular biology and biotechnology, focusing on the endothelialization of artificial cardiovascular devices. From 2000-2011 he was the Calhoun Chair Professor in the School of Biomedical Engineering, Science and Health Systems at Drexel University in Philadelphia.

At Temple University, Prof. Lelkes directs an interdisciplinary program in tissue engineering and regenerative medicine, focusing on nanotechnology-based smart biomaterials and smart scaffolds and for engineering diverse issues, such as bone, lung and skin. In his approach to



regenerative engineering, Dr. Lelkes and his colleagues employ developmental biological principles and advanced bioreactor technology to direct and optimize the tissue-specific differentiation of embryonic and adult pluripotent stem cells.

Dr. Lelkes' basic and translational research has been supported by federal (NIH, NSF, NASA, DOE) and state funding agencies (NTI and PA Dept of Commerce, Tobacco Settlement Funds) as well as by private foundations, including the Nielsen Foundation and the Coulter Foundation. At Drexel, Dr. Lelkes served as Director of the Surgical Engineering Enterprise, one of the major initiatives of the strategic plan of Drexel University's College of Medicine. In addition, Dr. Lelkes has been the team leader for tissue engineering at the Nanotechnology Institute of Southeastern Pennsylvania (NTI). He was also the Co-Director of PATRIC, the Pennsylvania Advanced Textile Research and Innovation Center, focusing on BioNanoTextiles and Stem Cell Biology. Dr. Lelkes has organized several Keystone conferences. He has published more than 200 peer-

reviewed papers, edited several books, authored more than 65 book chapters, and made more than 500 presentations nationally and internationally. Over his career, Dr. Lelkes has been awarded more than 18 Million \$ in research funding.

Dr. Lelkes has been received numerous honors and awards, nationally and internationally. Amongst them a Forchheimer Visiting Fellowship at the Hebrew University, Jerusalem, Honorary Professorships at The University of Applied Sciences Aachen, Germany and the Changchun Institute of Polymer Chemistry and Physics, Chinese Academy of Sciences, and a Distinguished Visiting Fellowship of the Royal Academy of Engineering at Imperial College, London, UK. In 2011 he was inducted as a Fellow of the AIMBE (American Institute for Medical and Biological Engineering) and received the 2012 Ben Franklin Key Award from IEEE, the Institute of Electrical and Electronics Engineers.

In his "free-time" Dr. Lelkes is an active chamber musician and likes to hike in the mountains.



MESSAGE FROM THE CHAIR

Emilio M. Salgueiro, Chair, IEEE Philadelphia Section

Dear fellow IEEE Philadelphia Section members, The Annual Awards Banquet & Gala held on April 13, 2019 was a major success. The Past Chair Award, recipient was Peter Silverberg for his contributions to the Section.



While Section Chair, the Section earned the 2018 Outstanding Section Membership Recruitment and Retention Performance Award.

The Merrill Buckley Jr. Student Project Award went to Alexandra Hagger, Rowan University IEEE Woman in Engineering Affinity Group President for Wearable Electronics.

The Alan L. Kirsch Award for Outstanding IEEE Student Member went to Olga Koturlash for her special regard to the qualities of leadership, dedication, peer impact, originality, perceptiveness and scholarship.

The Chapter of the Year Award went to Signal Processing, Broadcast Technology, Consumer Electronic Societies. The recipient was Chair, Michael A Mayor, Michael works very hard to publish our monthly publication of the Almanack.

The Philadelphia Section Member Award went to two outstanding members, Michael Mayor

and Marvin Weilerstein for their outstanding contributions to the Section.

The prestigious Benjamin Franklin Key Award for outstanding technical innovations and technological contributions that have had significant practical applications went to two recipients. Wilbur Lew for his leadership and innovation, instrumental in the progressive maturation of DNV technology, starting with basic research to increase the sensitivity of the diamond's material properties while also developing the sensor applications in parallel and Steve Poserina for being recognized for designing and leading the development of CATE Geospatial Analytics that federates Radar, Optical and AIS Satellites for locating non-compliant dark objects and asymmetric treats.

The Corporate Technology Innovation Award, for pioneering commercial innovation in space situational awareness, ensuring that spacecraft operators and government organizations can meet mission critical needs and assure flight safety in the space domain. Kudos for AGI Commercial Space Operations Center. Bob Hall, the current Director of Operations for ComSpOC accepted the award. Next was the Delaware Valley Young Electrical Engineer of the Year is granted to an engineer under 35 years of age, it emphasizes creative important and widely recognized work. This year the



award recipient was Joseph Spada for his technical prowess, coupled with his ability to thrive in a collaborative environment and his drive to teach others.

The Delaware Valley Young Electrical Engineer of the Year went to Sunny Wong, for having designed and led a team of engineers to develop a robust enterprise application platform. The Delaware Engineer of the Year was granted to Thomas P. Santarelli for significant accomplishments in the fields of Augmented Reality, Artificial Intelligence and Machine Learning.

Yimin Daniel Zhang, Associate Professor, Department of Electrical and Computer Engineering at Temple University was recognized for the ultimate milestone in IEEE membership, that is IEEE Fellow for his contributions to high-resolution direction finding and radar signal processing.

Kudos to all the award recipients. I want to commend the hard work of everyone in the Awards Committee for an outstanding job selecting these candidates. Thank you to our sponsors AGI and Boeing, and the tremendous work our Section's Office, without their help this wouldn't have been possible.

The IEEE Philadelphia Section has well over 3000 members. I challenge every one of the members to submit your nominations for our next event. For now, you can send your

nominations to the Section office. We are also actively looking for sponsors to this prestigious event.

The featured speakers at this year event were Jim Thompson, Engineering Vice-President & Chef Engineer and Brittney Burchett, Engineering Director, both from Unisys. The theme was Innovation: Beyond the Buzzword. For a company to have history, it means it has to constantly reinvent itself or it ceases to exist. This theme touched close to most engineers and was very inspirational. Thank you, Jim and Brittney, for providing such a wonderful speech.

But the excitement doesn't stop here, I am happy to report that our Section participated of the Science Fair on April 3. The committee of judges for our section was composed of J. Iannuzzi, R. Lawson, Paist, and P. Silverberg. Three awards and an Honorary Mention were granted to outstanding middle and high school students. 900 students participated of this event.

On April 2 and 3 Dennis Silage, Tom Fagan, Edwin John, Ryan Mallgrave and I attended the Science, Engineering and Technology Congressional Visits Day (SET CVD) representing the IEEE Philadelphia Section. This is an annual two-day event that brings scientists, engineers, mathematicians, researchers, educators, and technology executives to Washington to raise visibility and support for science,



engineering, and technology. Uniquely multi-sector and multi-disciplinary, the SET CVD is coordinated by a coalition of professional societies, companies and educational institutions. It is open to all who support science and technology, especially federal support for STEM research. The program consists of a series of briefings and meetings, culminating with a full day of visits with your Congressional delegates. SET CVD raises awareness of the long-term importance of science, engineering and technology to the nation through face-to-face meetings with Members of Congress, congressional staff, key Administration officials and

other decision-makers. It is an awesome experience, the program consists of a series of briefings and meetings, culminating with a full day of visits with your Congressional delegates.

I am very interested in hearing from our members. I am available thru email:

emsalgueiro@ieee.org

or you can email the IEEE Section office.

sec.philadelphia@ieee.org



**IEEE PHILADELPHIA SECTION &
CIRCUIT AND SYSTEMS SOCIETY
PRESENTS**

**SOFTWARE DEFINED RADIO WORKSHOP FEA-
TURING THE RTL-SDR USB RADIO**

by

DR. DENNIS SILAGE

PROFESSOR, ELECTRICAL AND
COMPUTER ENGINEERING TEMPLE
UNIVERSITY

**Saturday, May 18, 2019: 8AM to 4PM;
Room E301, 3rd Floor, Engineering Building, Temple University,
1947 N. 12th St., Philadelphia, PA 19122.**

Note: The cost of the hardware and text will be included in the class fee and are yet to be determined.

Abstract: A Software Defined Radio (SDR) is a communications system that uses software to define its functionality. Traditional communications systems utilize hardware to define its principal function, while software provides a user interface and various support functions. This brings about a limitation because to

change system functionality requires different hardware. An SDR overcomes this limitation, by providing the flexibility to change system functionality by simply modifying or replacing software programs. In other words, an SDR allows easy upgrade to new functionality and improved performance without the need to



replace hardware. SDRs can also be easily modified to accommodate individual applications. Additionally, advances in modern computing, increased speed and efficient digital

signal processing techniques, radio components such as modulators, demodulators, tuners, etc. can all be implemented in software instead. Hence the term, software defined radio.

This workshop will introduce students to the concepts of SDR and demonstrate digital signal processing techniques using the low cost, RTL-SDR USB Dongle along with MATLAB/Simulink and the communications toolbox. Students will perform hands-on simulation activities using the installed MATLAB/Simulink in the ECE lab at Temple University.

The course modules include:

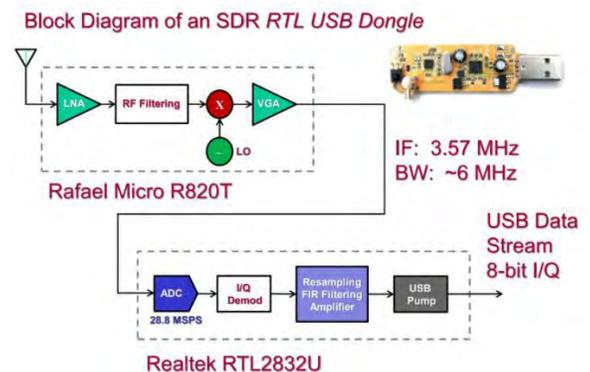
- introduction to ADC, I/Q demodulator and digital signal sampling theory,
- integration of RTL SDR into MATLAB/Simulink
- reception of Several “wireless” signals generated by AM and FM broadcast stations and others within the lab,
- continued study of I/Q demodulation of binary and M-ary digital signals,
- Introduction of take-home applications of free software,
- Discussions on home-brew antenna construction and bandwidth considerations.
- GNU radio will be described with a "show and tell" and handout links to continue after the workshop.

Texts and other class materials will be provided on a USB flash drive and distributed on the day of the workshop.

Participants will retain the hardware and selected texts at the conclusion of the workshop.

REGISTER ON-LINE at:

<https://meetings.vtools.ieee.org/m/196520>





Registration includes notes, and USB SDR Radio. Lunch on your own is available at a number of locations on Temple University campus.

	Payment received on or before April 4, 2019	Payment received after April 4, 2019*
IEEE Member	\$100.00	\$120.00
IEEE Non-Member	\$125.00	\$145.00
Student	\$90.00	\$100.00

Add \$20 for CEU certificate

***Important Note: SDR Radio NOT INCLUDED AFTER MAY 3, 2019. Participants must purchase radio on their own at that point. Radios are available at:**

www.amazon.com/dp/B011HVUEME

Registration Closes on May 17, 2019

Biography: Dr. Dennis Silage received the PhD in Electrical Engineering and Biomedical Engineering from the University of Pennsylvania in 1975. Prior to joining the Faculty at Temple University in 1984, he had a biomedical research career, with research faculty and adjunct faculty appointments at the University of Pennsylvania, School of Medicine, the Medical College of Pennsylvania and the Mount Sinai Medical School. Dr. Silage has been a Professor of Electrical and Computer Engineering at Temple University since 1984, teaches digital data communication, digital signal and image processing and embedded processing systems. His research is in these

areas with high performance, real-time computational architectures using field programmable gate arrays. He has recently supervised four PhD candidates to completion and twenty-two MSE students. Dr. Silage is past chair of the Electrical and Computer Engineering Division of the American Society for Engineering Education (ASEE), recipient of the 2007 ASEE National Outstanding Teaching Award, the 2011 ASEE ECE Division Meritorious Service Award the Lindbach Distinguished Teaching Award in 2012.

He is a Life Senior Member of the Institute of Electrical and Electronics (IEEE).



Women in Engineering Affinity Group of the IEEE Philadelphia Section

New WIE Officers for 2019

Chair: Maria Tabbutt

email: martabutt@gmail.com

Vice Chair: Nannette D'Imperio

email: nxd1@psu.edu

Secretary: Nivedhitha Narasimman

email: npasupa@ncsu.edu

Treasurer: Robert (Bob) Johnston

email: r.johnston@ieee.org

Next Meeting:

Monday, May 13, 2019

25 Yearsley Mill Rd, Media, PA 19063

Penn State Brandywine Campus

Tomezsko Classroom Building, Room 201

<https://brandywine.psu.edu/directions>



Membership: Please join Women In Engineering (WIE). It does not cost Life Members and its \$25 for regular member.



The Philadelphia Section of the IEEE Conducted the Annual Awards Banquet & Gala on Saturday, April 13, 2019



Reception 5:45 P.M. | Dinner
6:45 P.M.

Awards Banquet, Exhibits, Full-
Course Dinner
at the prestigious Union League
of Philadelphia

<https://www.unionleague.org/>

We recognized those who have been honored by the section for their contributions to the industry

Topic

Innovation: Beyond the Buzzword: For a company to have a history, it means it has to constantly reinvent itself, or it ceases to exist. Unisys is an IT company with a rich history of innovation spanning over 140 years, and it has done so by reinventing itself over and over again. While innovation certainly means a lot

of things to a lot of people - Discover how Unisys looks beyond innovation as just a trendy use of overused jargon, and continuously challenges the current status quo on its ongoing journey of technological transformation.



Speakers:

Jim Thompson

Unisys, Vice President and Chief Engineer of Technology

Biography: Jim Thompson is Vice President & Chief Engineer of Technology at Unisys.



In this role, Jim leads a global development organization responsible for the design, development and manufacture of system products that align and support the Unisys'

strategy and marketplace needs. In addition, Jim and his team are responsible for the Innovation practice including campaigns, proofs and the transition from idea to product as well as the Security Vulnerability Response Team that analyzes and responds to security threats to Unisys's products. Jim's main areas of focus is system architecture, enterprise computing platforms, enterprise IoT and enterprise security.

Jim's career with Unisys spans more than 30 years in various customer facing and engineering roles. Prior to joining Unisys, Jim held various technical positions in global financial institutions, commercial firms and the US Military, as well as an independent consultant.

Jim holds technology patents in the areas of operating systems, storage, security and banking. Jim is a recipient of the Institute of Electrical and Electronics Engineers (IEEE) Corporate Innovation Award for his work driving Innovation at Unisys.

In his spare time, Jim focuses on Leadership and Technology trends, current interests including automation in our daily lives and innovation processes. Jim volunteers for various community organizations focused on youth, safety and the outdoors.

Jim is based in Malvern, PA



Brittney Burchett, MBA **Unisys, Engineering Director**

Biography: Brittney Burchett is a certified disruptor. Brittney started her career as a software engineer for Unisys which enabled her to discover her passion for challenging any and all traditional boundaries. Realizing early the necessity for bridging the gap between technical brilliance and business knowhow, Brittney co-founded the Technology Innovation Practice; chartered to drive new product development and business opportunities for Unisys.



In her current role as an Engineering Director, Brittney leads innovation strategy throughout Unisys; empowering those with

opportunities, challenges, ideas and technologies to join forces to define and create the future of Unisys.

Brittney graduated from Temple University with a Bachelor's Degree in Electrical Engineering and Bio-Engineering. She holds four patents in the areas of cloud-based active password managers; service partition virtualization system and method having a secure application; and reduced service partition virtualization system and method. Brittney has been recognized as a Philadelphia Business Journal Tech Disruptor and holds a Master of Business Administration from the Pennsylvania State University.



IEEE Philadelphia Section 2019 Annual Awards Recipients



Chairman and other guests



Awards set on a table



Award Recipient



Award Recipient



Women in Engineering (WIE) at the Awards Night



*Olga Koturish
Outstanding IEEE Student Member Award*



*Alexandra Hagger, Rowan University IEEE
Women in Engineering Affinity Group President*



THE PAST CHAIR AWARD

Peter M. Silverberg, P.E.

One hundred and forty-four individuals have served as Chairs of the Philadelphia Section since 1903. The award is given to a volunteer who exhibited industriousness and dedication to the causes of the IEEE and the Philadelphia Section, by serving as Chair of the Section's Executive Committee.



Peter M. Silverberg is the Past Chairman of the Philadelphia Section. Peter edited the Philadelphia Section's eNewsletter – Almanack -- and administered the Section's website for ten years, then becoming Vice Chair and Chair. He was the IEEE representing member on the Board of Directors of the Engineers' Club of Philadelphia from 2008- 2016. Peter is also a member and Chapter Chair of the Professional Communications Society, and the Dielectrics and Insulation Society of the IEEE. He served as Publicity Chair of the 2016 IEEE Radar Conference, held locally. While Chair, the Section earned the 2018 Outstanding Section Membership Recruitment and Retention Performance Award. Peter completed a 2009 project to install a Milestone plaque at the American Philosophical Society honoring Benjamin Franklin as the first true researcher into electrical physics.

He was the Region 2 representative on the MGA Admissions and Advancement Committee 2012-2014.

Peter graduated from MIT in 1960 with a S.B. in Chemical Engineering and in 1961 with a S.M. in Chemical Engineering Practice also from MIT. He became a P.E. (Ohio) in 1977. Joined IEEE as Member 1975; Senior 1983; Life Senior Member 2008. He held seven interesting jobs before formally retiring in 2008. The last two were in editing technical magazines.



MERRILL BUCKLEY JR. STUDENT PROJECT AWARD

This is an award that recognizes an undergraduate student project achievement.

Wearable Electronics

Alexandra Hagger

Affinity Group President, Rowan University
IEEE Women in Engineering

Citation: For her leadership and being active with her team and other WIE members to bring this project to a successful and fun outreach program for middle school students, college students and faculty.

The WIE Wearable Electronics Competition is where students form teams of up to four members and program LED lights that are sewn into clothing items. Each team is given four accessories, LEDs, gemma boards, and wires to use in their making their wearable electronics. These four accessories are then modeled down the red carpet by an engineering professor of the team's choosing.



Alexandra Hagger is a junior studying Mechanical Engineering with a minor in Systems Engineering and a concentration in Honors at Rowan University. She is currently serving her second term as the President of Rowan University's IEEE Women in Engineering Affinity Group. Alexandra strives to follow WIE's mission to advance student confidence by improving their technical skills. The Rowan WIE chapter holds a series of workshops, events, and competitions devoted to improving technical skills. She is proudest of their involvement in WIE Teach (a one-day STEM outreach program for female middle schoolers to learn about a discipline of engineering) and the WIE Wearable Electronics Competition (a competition where students program LED designs and sew them into clothing). Alexandra is also a member of Rowan's IEEE, American Society of Mechanical Engineers (ASME), and Tau Beta Pi, the engineering honor society. Additionally, on campus, she is involved in intramural sports and has served as a BLAST mentor for incoming students in the Honors College. Alexandra has a passion for the environment and enjoys gleanng with Farmers Against Hunger. Her future plans include pursuing a master's degree in Mechanical or Systems Engineering.



CHAPTER OF THE YEAR AWARD

Of the 36 Technical Societies and Councils represented in IEEE, the Philadelphia Section has 16 Chapters covering disciplines of 24 Societies and Councils. The Chapters assist in the broad technical education of the membership. They sponsor technical meetings, seminars, educational courses and inspection trips. In addition, the local chapters support society conferences held in the Section territory. Chapters displaying outstanding activities and efforts during the year are singled out for recognition through the "Chapter of the Year Award."

Signal Processing, Broadcast Technology, Consumer Electronics Societies (SP/BP/CE)

Michael A. Mayor, MSE, P.E. Chapter Chair

Citation: For exceptional leadership in developing effective chapter activities and encouraging their growth.

The IEEE Philadelphia Chapter of SP/BP/CE has made the following presentations to IEEE Section Night audiences: Information Security Cryptography and Cryptanalyses, Systems Engineering Trades in Geolocation: Digital Receiver Design, Systems Engineering Trades in Geolocation: Global Satellite Navigation Systems, and Google's Page Rank and Beyond: The Science



of Search Engine Rankings. Received the Chapter Certification for the Signal Processing Society (SPS). The other two do not require periodic certifications. Also, the Philadelphia Section received \$100 for increased membership in the SPS chapter.

Michael A. Mayor, MSE, PE is currently an Independent Consultant providing Telecommunications Systems Engineering Services in the areas of RF propagation and Geolocation modeling and analysis, Digital Receiver Design, Digital Signal Processing Algorithm Development and the application of Digital Instrumentation to System Test and Validation.

Formerly, he was Vice President / Chief Scientist, Advanced Technology Research, in the Aerospace/Communications Division of ITT Defense Electronics. He led the development of the first peer-to-peer wireless network called MeshNet which was eventually sold as a commercial venture. He authored six patents in Spread Spectrum Communications and Digital Instrumentation. He received the ITT Defense & Electronics Engineered for Life Award, for his technical contributions in Communications, Geolocation and Microelectronics areas.

He is a Licensed Professional Engineer and holds a Master of Science in Engineering (MSE) in Systems Engineering (Communications and Signal Processing), from the School of Engineering and Applied Science, University of Pennsylvania.



PHILADELPHIA SECTION MEMBER AWARD

Every year the Philadelphia Section selects one of its members to thank and honor for the work they have done to benefit the Section. This year there are two recipients.

Michael Mayor, MSE, P.E.

Citation: *For continued and longstanding commitment to the Philadelphia Section.*

Michael Mayor, MSE, P.E. is active in the IEEE Philadelphia Section where he is the Director of Communications and Industry Relations, as well as the Chapter Chair of the Signal Processing, Broadcast Technology and Consumer Electronics Societies.



Michael is a Licensed Professional Engineer (P.E.) and holds a Master of Science in Engineering (MSE) in Systems Engineering (Communications and Signal Processing), from the School of Engineering and Applied Science, University of Pennsylvania. He is a member of the National Society of Professional Engineers (NSPE) and a Senior Member of the Institute of Electrical and Electronic Engineers (IEEE).

Michael is currently an Independent Consultant providing Telecommunications Systems Engineering Services in the areas of RF propagation and Geolocation modeling and analysis, Digital Receiver Design, Digital Signal Processing

Algorithm Development and the application of Digital Instrumentation to System Test and Validation. Formerly, he was Vice President/Chief Scientist, Advanced Technology Research, in the Aerospace/Communications Division of ITT Defense Electronics. He led the development of the first peer-to-peer wireless network called Mesh Net which was eventually sold as a commercial venture. He authored six patents in Spread Spectrum Communications and Digital Instrumentation. He received the ITT Defense & Electronics Engineered for Life Award, for his technical contributions in Communications, Geolocation and Microelectronics areas.

Marvin Weilerstein

Citation: *For continued and longstanding commitment to the Philadelphia Section.*

Marvin has been active in the Philadelphia Section since 1985. He was co-founder of the Section's Consultants Network, He has served in almost all our Section Offices: Secretary, Treasurer, Vice-Chair, and Section Chair. Marvin also was Chair of the Technical Activities



Committee. He is currently chair of our Technical Conferences Committee. As such he coordinates with IEEE conferences held in Philadelphia or sponsored by our Section. Most notably, he represents our Section as a member of the International Test Conference's Steering



Committee. ITC is fully sponsored by our Section and has been beneficial to both for many years.

Marvin Weilerstein received a BSEE from The City College of New York and an MS from the University of Pennsylvania. He began his engineering work at Univac in design and development of large main-frame computers. In 1968 he received a fellowship at the Weizmann

Institute and helped design electronics for their Golem B computer. Marvin joined Kulicke & Soffa in 1979, leading an engineering group in the development of Semiconductor Assembly equipment. In 1985 he began consulting in electronics design, which led to a position at Intest Corporation in 2000, designing Semiconductor Test equipment.

BENJAMIN FRANKLIN KEY AWARD

*This award recognizes an electrical engineer for outstanding technical innovation and technological contributions that have had significant practical applications. It emphasizes technical innovation, such as style (design and application), significant improvements to a system or patents of clear technical and technological achievements, which demonstrates intellectual, industrial, economical or human benefits. **This year there are two recipients.***

Wilbur Lew

Technical Director for the development of Quantum Magnetometers at Lockheed Martin RMS

Citation: *His leadership and innovation have been instrumental in the progressive maturation of ONV technology, starting with basic research to increase the sensitivity of the diamond's material properties while also developing the sensor applications in parallel.*

Mr. Lew has more than 35 years as an electrical engineer in technical and leadership roles for design and integration of Electromagnetic sensors at Lockheed Martin RMS. As the Technical Director for the develop-



ment of Quantum Magnetometers at Lockheed Martin, Wilbur led a team of engineers, physicists and mathematicians in the development of a Diamond Nitrogen Vacancy (DNV) Magnetometer. DNV enables room temperature, high sensitivity, and high dynamic range magnetic measurements in three-dimensional space using photonic and RF excitation techniques. Focusing on cost, size weight and power, Wilbur's team transitioned quantum DNV Magnetometry from basic principles observed at universities laboratories into prototype hardware that demonstrated applications for magnetic communications, tracking, and anomaly



detection. Wilbur's team is currently testing a portable Advance Demonstration Model (ADM) of a DNV Magnetometer to test vector based magnetic navigation on air, sea and land-

Steve Poserina

Senior Software Engineer at Channel Logistics

Citation: Recognized for designing and leading the development of CATE Geospatial Analytics that federates Radar, Optical and AIS Satellites for locating non-compliant dark objects and asymmetric threats.

based vehicles. Lockheed Martin currently has 52 pending U.S. application and 30 U.S. Patents associated with DNV Magnetometry on the work performed by Wilbur and his team

Stephen Poserina received his B.S. in computer



science in 2007 from the University of Pittsburgh. He has over 10 years' experience creating GEOINT aware software to help risk analysts make informed decisions in the maritime domain. His

current project involves integrating SAR and optical satellite data to expand situational awareness in an environment when non-compliance is common.

CORPORATE TECHNOLOGY INNOVATION AWARD

This award recognizes a company or corporation for its outstanding contribution to electro-technology. The award emphasizes developments, projects, products and other accomplishments that have been innovative and successful.

AGI Commercial Space Operations Center (ComSpOC)



Analytical Graphics, Inc. (AGI) provides commercial software for designing, developing,

and operating missions within the aerospace and national security communities. Our technology and support provide complete insight into the four-dimensional world by using extremely accurate **AGI** analytical models backed by compelling visual simulations, so that users can make the best decisions about assets that *move* in space and time. AGI products are available as ready-to-use applications or development tools and have been adapted to implement unique and open enterprise solutions to help our customers solve some of their hardest problems. Based outside Philadelphia with offices around the world, AGI has been



helping people solve their most difficult engineering and mission challenges since 1989 with exceptional accuracy and legendary customer support.

Accepting the award for ComSpOC is Bob Hall.

Bob is currently the Director of Operations for ComSpOC, having spent years working in

satellite operations and in space situational awareness (SSA).

Citation: For pioneering commercial innovation in space situational awareness, ensuring that spacecraft operators and government organizations can meet critical mission needs and assure flight safety in the space domain.



DELAWARE VALLEY YOUNG ELECTRICAL ENGINEER OF THE YEAR

This award is for an engineer under 35 years of age. It emphasizes creative, important and widely recognized work. An additional part of the judging is the individual's contribution to professional and civic affairs. This year there are two recipients.

Joseph Spada

Senior Hardware Engineer at Lockheed Martin RMS

Citation: For his technical prowess, coupled with his ability to thrive in a collaborative environment and his drive to teach others.

Joseph Spada is a Senior hardware design engineer with over thirteen years of varied

experience and success spanning design concept and architecture, design execution, integration and test. and transition to production. Designed over ten high performance RF and mixed signal printed circuit boards including receivers, excitors, and synthesizers up to x-Band. Expertise in low phase noise, low spurious, high stability designs. Led an inter-disciplinary team through design, qualification, and transition to production on a high-performance analog synthesizer. Integration and test experience ranging from module assemblies up through 1,000+ element digital phased array radar.





SUNNY WONG, PH.D.

Director, Enterprise Development at Analytical Graphics



Dr. Sunny Wong is the Director of Enterprise Development at Analytical Graphics, Inc. (AGI) and leads development of the company's enterprise software products. Prior to joining AGI, he was the lead software architect for clinical content at Siemens Health Services. Sunny received his M.S. and Ph.D. in computer science from Drexel University, where he explored the relationship between structural and historical dependencies in software to develop new methods of software design analysis. His work earned him the Best Student

Poster Award at the 2008 ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE). He is a former adjunct faculty member at Drexel University and continues to teach software design and engineering courses within AGI. Sunny's current research interests include software architecture and design modeling, tools support for improving developer productivity, applications of artificial-intelligence techniques to software design analysis, and technology transfer from research to practice. He is a member of the ACM and IEEE.

RECOGNITION OF IEEE FELLOW

Yimin Daniel Zhang, Ph.D.

Associate Professor, Department of Electrical and Computer Engineering, College of Engineering, Temple University

Dr. Yimin D. Zhang is an Associate Professor with the Department of Electrical and Computer Engineering, College of Engineering, Temple University. He was a Research Faculty with the Center for Advanced Communications, Villanova University, in 1998-2015. His research



interests lie in statistical signal and array processing for radar, wireless communications, and satellite navigation. He has published more than 350 papers and book chapters. He is an Associate Editor for IEEE Transactions on Signal Processing and for Signal Processing. He served as an Associate Editor for IEEE Signal Processing Letters and for Journal of the Franklin Institute. He is a member of the Sensor Array and Multichannel (SAM) Technical Committee and the Signal Processing Theory and Methods (SPTM) Technical Committee of the IEEE Signal Processing Society. He was a Technical Co-Chair of the 2014 IEEE Benjamin Franklin Symposium on Microwave and



Antenna Sub-Systems and the 2018 IEEE Sensor Array and Multichannel Signal Processing Workshop. He received the 2016 IET Radar, Sonar & Navigation Premium Award and the 2017 IEEE Aerospace and Electronic Systems

Society Harry Rowe Mimno Award and coauthored a paper that received the 2018 IEEE Signal Processing Society Young Author Best Paper Award.

CONGRESSIONAL VISIT DAY (CVD) Took Place on April Tuesday, April 2 and Wednesday, April 3 in Washington DC from 12:00 PM to 7:00 PM

IEEE-USA will be holding our CVD Orientation training on Capitol Hill. Join us to learn how to meet with members of Congress, how to navigate Capitol Hill, and what the current state of play for our issues are. By the time we are done, you'll be fully prepared to discuss policy with anyone in Washington!



A reception will follow at the Senate Russell Building, Room 325.

See more information on CVD at:

<https://ieeusa.org/advocacy/cvd/>

April 3, 2019: 9:00AM - 5:00PM

IEEE-USA will schedule appointment(s) for you to meet both your Senators and your Representative, or their staff, on Capitol Hill in your legislator's personal offices.

You and your team will have a chance to ask your legislators for help protecting basic research and for IEEE-USA's other legislative priorities.

Meetings will be scheduled at the convenience of your legislators. Most meetings are completed between 9:00 am and 5:00 pm, but schedules vary.

Let IEEE-USA if you have an early flight home, so we can push for early meetings.

Staff Contacts

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Following are some photos of the Event





iPraxis

THE POWER OF VOLUNTEERING!

Through in-class mentoring, project-based learning, science fairs, and after-school programs, our iPraxis volunteers (Scienceteers) 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



Electrical Engineer

Overview:

TLC Engineering Solutions is a dynamic and growing National Engineering firm seeking an experienced and motivated Electrical Engineer for our Philadelphia, Healthcare Operations.

Responsibilities:

- Electrical design experience (lighting, power and low voltage systems) for **Healthcare facilities**
- Prepare load calculations, select equipment, layout electrical systems using Revit
- Coordinate with architect, owner-client and other disciplines
- Familiarity with recent NEC

Qualifications:

- 5+ years of experience in Electrical Design (Lighting, power distribution, low voltage, lightning protection, etc.)
- Background from similar Engineering design firm, Consulting or Architectural engineering firm
- BSEE or BSAE
- EIT or PE preferred
- **Projects consist of healthcare buildings design**
- Revit Experience

If you or someone you know is interested in this opening please send all resumes to
Angie Camacho at Angie.Camacho@tlc-eng.com

****Check out TLC Engineering Solutions website for more information****

<https://tlc-engineers.com/>

TLC is an Equal Opportunity, Affirmative Action employer, dedicated to Workforce Diversity EOE-M/F/Vets/Disabled. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, veteran status, disability, age and other classifications covered under federal, state or local laws. TLC participates in E-Verify.



PHILADELPHIA SECTION NOTES

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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](#)

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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
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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/>)

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Anouck Girard
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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/>

Merrill W. Buckley, Jr., IEEE Student-Branch Leadership Scholarships IEEE Philadelphia Section

IEEE Philadelphia Section Office
111 Presidential Blvd, Suite 231
Bala Cynwyd, PA 19004
Tel: 484-270-5136
E-Mail: sec.philadelphia@ieee.org

Description

The Merrill W. Buckley, Jr, IEEE Student-Branch Leadership Scholarship Program of the Philadelphia Section recognizes IEEE Student Members who have made, and are planning to continue to make, 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

Up to 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.

Up to two highly qualified applicants from the same Student Branch may be selected to receive Leadership Scholarships in the same year. Only under special circumstances, as determined by the Scholarship Selection Panel, shall a past recipient of an IEEE Student-Branch Leadership Scholarship be selected to receive a second such scholarship in a subsequent 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) Certified 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 **June 3, 2019**.

(Updated May 15, 2019)

IEEE Student-Branch Leadership Scholarship Application – 2019-20
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 an outline of your goals for the 2019-20 academic year relative to your IEEE Student Branch and to its 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 **June 3, 2019**.

- 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 **June 3, 2019**.

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
111 Presidential Blvd., Suite 231
Bala Cynwyd, PA 19004

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

(Updated 3/20/2019)