



Almanack



[IEEE Philadelphia Section Website](#)

Membership in the Following Counties

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

New Jersey: Burlington, Camden and Gloucester

October 2018

(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
	* WIE Meeting	*ADCOM				*Future City
14	15	16	17	18	19	20
		*IEEE Section Night				
21	22	23	24	25	26	27
			* CSS Temple University * CSS Villanova University			
28	29	30	31	Nov 1st		
		* ITC 2018	* ITC 2018	* ITC 2018		



INSIDE THE ALMANACK

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

MESSAGE FROM THE CHAIR

Message from the Chair.....5

AWARDS AND VOLUNTEER CORNER

IEEE Philadelphia Section Award..... 9

ECP – Engineer of the Year.....9

Delaware Valley Science Fair.....10

Future City Engineering Fair.....11

CURRENT EVENTS

IEEE CSS - Temple University.....12

IEEE CSS - Villanova University.....14

IEEE SPS - University of Pennsylvania..... 16

WIE News and Meetings.....18

Senior Member Workshop..... 19

IEEE PHILADELPHIA SECTION

Planning Calendar.....20

Section Notes.....21

Sponsorship Program..... 22

UPCOMING EVENTS

ITC 2018.....23

2018 IEEE WIE FORUM EAST24

SPMB 18.....25

2019 American Control Conference..... 26

iPraxis27

ALMANACK

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Section Office: sec.philadelphia@ieee.org

IEEE SECTION NIGHT

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

ADMINISTRATIVE COMMITTEE

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

IEEE SECTION NIGHT

Philadelphia Section Meeting

Sponsored by:

Engineering in Medicine and Biology (EMB) and Reliability (R) Societies Chapters

When:

Tuesday, October 16, 2018

Dinner at 6:00 PM,

1st Speaker at 7:00 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 (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. You can pay during registration or by check at the meeting.



First Talk

Low frequency (20 kHz), patch-like ultrasound applicator for chronic wound treatment

Professor Peter A. Lewin

Abstract: Chronic wounds, such as venous and diabetic ulcers, cost the U.S healthcare system close to \$25 billion annually. Hence, a reduction of healing time directly translates into savings of treatment related expenses.

This talk describes the implementation of patch-like, un-tethered and clinically viable therapeutic ultrasound applicator and stresses the need for interdisciplinary, electro-mechanical approach crucial to achieve this goal. The device uses well-defined non-cavitation and non-thermal levels of ultrasound energy; its peak acoustic output pressure amplitude was intentionally limited to 55 kPa, corresponding to a spatial peak temporal peak intensity of 100 mW/cm².

A small (n=8) pilot study targeting diabetic ulcers treatment was performed and indicated that with its light weight (<20g), and circular (40 mm dia) disk shape architecture this applicator is suitable to be embedded in wound dressing. The average time to wound closure was 4.7 weeks for subjects treated with the active device, compared to 12 weeks for subjects treated with a sham applicator,

suggesting that patients with diabetic ulcers may benefit from the proposed treatment.

[Work supported by the NINR grant 5R01NR015995. The contents of this presentation are solely the responsibility of the author and do not necessarily represent the official views of the NIH].

Biography: Peter A. Lewin, M.Sc., Ph.D. is



R.B. Beard Distinguished University Professor of Electrical and Computer Engineering in the College of Engineering at Drexel University, Philadelphia. He is also Director of the Ultrasound Research and Education

Center in The School of Bioengineering, Bioscience and Health Systems at Drexel University. Dr. Lewin obtained his M.S. degree in Electrical Engineering in 1969 and the Ph.D. in Physical Acoustics in 1979 in Copenhagen, Denmark. Before receiving his Ph.D. degree, he was employed by Bruel and Kjaer, Denmark, where he was involved in the development of underwater piezoelectric transducers and associated electronics.

From 1978 to 1983 he was associated with the Danish Institute of Biomedical Engineering (now Force Institutes) and The University of Denmark, Copenhagen-Lyngby, where his research activities primarily focused on propagation of ultrasound



waves in inhomogeneous media and development of PVDF transducers. In 1983 he joined the faculty of Drexel University. Dr. Lewin was awarded several patents in the field of ultrasound and has authored or co-authored over 240 scientific publications, most of them on topics in ultrasound and is co-editor of *Ultrasonic Exposimetry* (CRC Press, 1993), a landmark book in the field. His current interests are primarily in the field of biomedical ultrasonics including the design and testing of piezoelectric transducers and sensors, power ultrasonics, ultrasonic exposimetry, tissue characterization using nonlinear acoustics, biological effects of ultrasound, applications of shock waves in medicine and image reconstruction and processing. He advised numerous Ph.D. students; in this context it may be worthwhile to add that his most recent research results describing the outcome of clinical studies in the field of ultrasonically assisted chronic wound healing are featured on the NIH website:

(<http://www.nibib.nih.gov/news-events/newsroom/ultrasound-patch-heals-venous-ulcers-human-trial>).

Dr. Lewin is elected Life Fellow of the Institute of Electrical and Electronics Engineers (IEEE). He is also a Fellow of the American Institute of Ultrasound in Medicine

(AIUM), Acoustical Society of America (ASA), American Institute for Medical and Biological Engineering (AIMBE) and Elected Fellow of International Academy for Medical and Biomedical Engineering (IAMBE). He has also served as a Chair (1997-1999) of the AIUM's Technical Standards Committee and the AIUM's Board of Governors (2002-2004).

In addition, Dr. Lewin serves as a consultant to the U.S. Food and Drug Administration, Center for Devices and Radiological Health and was appointed to the US Technical Advisory Group of ANSI to the International Electrotechnical Commission (IEC). He also serves as Associate Editor of the peer-reviewed journal "Ultrasonics" and serves as elected Editor-in-Chief of the IEEE Transactions on Ultrasound, Ferroelectrics and Frequency Control. Most recently, he was elected as a resource member of the prestigious Franklin Institute Science and Awards Committee, Philadelphia and in April of 2018 received the Institute of Electrical and Electronics Engineers (IEEE) Philadelphia Section Benjamin Franklin Key Award. The award recognizes outstanding technical innovations, which contributed to intellectual, industrial and economic development and demonstrated human benefits.



Second Talk

Electrical Supply Systems – Operation and Reliability

Joseph F. Maida, PE, P.Eng. LEED AP
President, Maida Engineering, Inc.
1315 Walnut Street, Suite 716
Philadelphia, PA 19107



Abstract: The course will describe:

- How electrical power systems operate under normal and abnormal conditions.
- The reliability of electrical power system from a utility and end user's prospective.
- The equipment that controls the operation of and protects electrical power system.
- What happens to electrical power systems when electrical faults occur, or normal power is lost.
- How changes in technology will affect future designs of electrical power systems both at home and in the workplace"

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

Education: BSEE, Drexel University – 1971
MSEE, Drexel University – 1976

PE Licenses: PA, NJ, DE, NY, GA, FL, TX, MA, ID, IA, NC, WV, AR, MD, TN, MO, KS, ALBERTA

LEED Accredited Professional – June 2009 to Present

Appointments: Pennsylvania Uniform Construction Code Review and Advisory Council 2009 to 2011

Employment: **Maida Engineering, Inc.** 1978 to Present

Joseph Maida provides engineering and design services for large and small projects in a number of disciplines. Since starting Maida Engineering, Inc. in 1978, Joseph has provided engineering and design and project management services for commercial, industrial, governmental design projects and many design/build projects for industrial power and control systems. Joseph has also performed numerous power system studies and arc flash analyses.



Large or small, simple or complex, Joseph 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 and schedules.



Joseph manages a company that provides harmonious working environments and utilizes the technical and managerial talents of its employees and subconsultants, thus enabling them to provide the highest quality of engineering and design to its clientele.

Joseph has dedicated his career to learning and developing his engineering and management talents enabling him to fill various roles on different types of projects. Joseph prepared the functional specifications describing both existing systems, when applicable, and new systems, and the specifications and related drawings for the removal of existing systems, when applicable, and for the installation of new state of the art systems for the St. Louis Arch Tram Motor and Drive Replacement Project, for NFPA 86 Gas Furnaces and Forehearth Upgrade Projects, for various Theme Park Attractions and for Wind Tunnels. Examples of some the projects he has worked on follow.

The St. Louis Arch Trams Motor and Drive Replacement Project - The Trams, which are very similar to elevators and are currently controlled by a 125 HP Ward Leonard Systems. Because of the difference between the Tram, which operates at different speeds and rotates the passenger capsules the higher owner requirement, standard elevator controllers and machines could not be used. Joseph engineered and designed custom controllers using VFDs and custom machines using AC motors for the Trams.

Aerospace Projects have included 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.

Hospital and Power Projects have included 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 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. Studies have included numerous power system studies including load flow, voltage drop, short circuit, equipment evaluation, TCC Coordination, motor starting, harmonics, and arc flash analyses;

Commercial projects have included 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. Some of these design/build projects have included: a new fiberglass manufacturing plant and warehouse, the engineering, fabrication, installation and PLC programming for a large textile manufacturing line with 56 DC drives and motors; the engineering, fabrication, installation and PLC programming for the electrical and control portions of a new cement terminal; the engineering, fabrication, installation and PLC programming of PLC based, HVAC

control systems for a 100,000 square foot Class 1 Clean Room (total project, concept to startup was completed in 5 months).

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.

Societies: NSPE member, PSPE – Philadelphia Chapter member, Practicing Engineering Institute, IEEE Member and NFPA member.



MESSAGE FROM THE CHAIR

Peter Silverberg, IEEE, LSM, P.E.

We have some funds available to benefit students. These are from estate bequests in the care of the IEEE Foundation. I am using my page for wider circulation. It is kind of a use it or lose it situation. These are short descriptions.



Contact the administrators if you want to draw on the funds.

IEEE Michael Goutmann Memorial Fund (F#1105)

Administrator: Dr. R. Barnett Adler:

adler@ece.villanova.edu

This fund was established 11/8/2008. The Goutmann Student Travel Grant program provides travel stipends of amounts up to \$1000 each to Undergraduate or Graduate IEEE Student Members for conferences sponsored or co-sponsored by one of three IEEE Societies: Information Theory, Signal Processing, or Communications. This program is limited to IEEE Student Members actively pursuing degrees in one of the following colleges or universities: Drexel, Penn State Brandywine, University of Pennsylvania, Rowan, Swarthmore, Temple, Villanova, Widener, and Lehigh. A preference will be given to those

applicants who are on the conference program to present a technical paper.

IEEE William R. Mann Memorial Fund (F#1124)

Administrator: Marvin Weilerstein

This fund was established 6/25/2010. Two annual travel stipends of \$500 are available to students of the list above (excluding Lehigh). One grant is for the IEEE International Test Conference and one for a IEEE VLSI workshop. It is not clear that the student has to present a paper or poster.

IEEE DAY

October 2 is when we celebrate IEEE Day. It is near the anniversary of the day that the AIEE held its first technical meeting (Oct. 7-8). This was at the Franklin Institute in 1884. While the name changed with the 1963 merger with the IRE, it is important history. There is a Milestone Plaque inside the Franklin Institute building. Our activity that week is the RISE Conference on October 6.

For those who like a little history, electrical engineering began with Benjamin Franklin and his famous experiments. His grandson, Benjamin Bache, founded the Franklin Institute. The Section acknowledges Ben Franklin every month by using his old-fashioned spelling for the Almanack.



IEEE Philadelphia Section Receives an Award

2018 Membership Recruitment and Retention Performance

Membership Development goals are created for each Section for both recruitment and retention. Each Section has a unique goal

based on different dynamics – whether the Section has had growth or decline, as well as the overall size and location of the Section.



**2018 Outstanding Section Membership
Recruitment and Retention Performance**

Philadelphia Section



Delaware Valley Science Fairs (DVSF)

DVSF Information

Founded in 1949, The Delaware Valley Science Fairs, Inc., is a non-profit organization sponsored by area companies, foundations, universities and individual donors. One of the oldest and largest Fairs in the country, DVSF embraces a 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.

Learn More About Volunteering for DVSF

Call for Nominations-2019 Engineer of the Year

Kickoff event – Thursday, February 14

Young Engineers Social – Tuesday, February 19

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

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

Call for Nominations – 2019 Young Engineer of the Year

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

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



Future City Philadelphia Engineering Fair

*The fair will be October 13, 2018 at SAP America,
3999 West Chester Pike, Newtown Square, PA 19073*

The Future City Philadelphia Engineering Fair is an opportunity for middle school educators, parents, and students to find out more about the Future City program and find information to help teams develop their city.

Future City Philadelphia Competition

Teachers, mentors, parents and interested students are invited to join us on October 13, 2018 for the Philadelphia Future City Engineering Fair hosted by SAP America Inc.

Future City Philadelphia Engineering Fair

About 200 volunteers from the Greater Philadelphia Area are needed to run the competition. Activities include working directly with the student teams, virtual judging of some competition elements prior to the competition day, judging at the competition, general tasks at the competition, and serving on the Steering Committee to help plan the competition.

*Download **THIS FLYER** for more information.*

**IEEE PHILADELPHIA CHAPTER OF CONTROL SYSTEMS SOCIETY PRESENTS****THEORETICAL AND EXPERIMENTAL OUTCOMES OF
CLOSED-LOOP NEUROMUSCULAR CONTROL METHODS TO
YIELD HUMAN LIMB MOTION****BY
DR. WARREN DIXON****DISTINGUISHED LECTURER, IEEE CONTROL SYSTEM SOCIETY,
CHARLES TAYLOR FACULTY FELLOW AT UNIVERSITY OF FLORIDA****When: Oct 24, 2018: Noon-1 PM;****Where: Dean's Seminar Room (Rm 301), 3rd Floor, Engineering Building, Temple
University, 1947 N. 12th St., Philadelphia, PA 19122.****In collaboration with Temple's Electrical and Computer Engineering Department.**

Abstract: Neuromuscular Electrical Stimulation (NMES) is prescribed by clinicians to aid in the recovery of strength, size, and function of human skeletal muscles to obtain physiological and functional benefits for impaired individuals. The two primary applications of NMES include: 1) rehabilitation of skeletal muscle size and function via plastic changes in the neuromuscular system, and 2) activation of muscle to elicit movements that result in functional performance (i.e., standing, stepping, reaching, etc.) termed functional electrical stimulation (FES). In both

applications, stimulation protocols of appropriate duration and intensity are critical for preferential results. Automated NMES methods hold the potential to maximize the treatment by self-adjusting to the particular individual (facilitating potential in-home use and enabling positive therapeutic outcomes from less experienced clinicians). Yet, the development of automated NMES devices is complicated by the uncertain nonlinear musculo-skeletal response to stimulation, including difficult to model disturbances such as fatigue. Unfortunately, NMES dosage (i.e.,



number of contractions, intensity of contractions) is limited by the onset of fatigue and poor muscle response during fatigue. This talk describes recent advances and experimental outcomes of control methods that

Biography: Prof. Warren Dixon received his Ph.D. in 2000 from the Department of Electrical and Computer Engineering from Clemson University. After completing his doctoral studies, he was selected as an Eugene P. Wigner Fellow at Oak Ridge National Laboratory (ORNL). In 2004, Dr. Dixon joined the University of Florida in the Mechanical and Aerospace Engineering Department, where he currently is the Charles Taylor Faculty Fellow and holds a University of Florida Research Foundation Professorship. Dr. Dixon's main research interest has been the development and application of Lyapunov-based control techniques for uncertain nonlinear systems. He has published 3 books, an edited collection, 9 chapters, and over 250 refereed journal and conference papers. His work has been recognized by the 2011 American Society of Mechanical Engineers (ASME) Dynamics Systems and Control Division Outstanding Young Investigator

seek to compensate for the uncertain nonlinear muscle response to electrical stimulation due to physiological variations, fatigue, and delays.

Award, 2009 American Automatic Control Council (AACC) O. Hugo Schuck Best Paper Award in the Application category, 2006 IEEE Robotics and Automation Society (RAS) Early Academic Career Award, an NSF CAREER Award (2006-2011), 2004 DOE Outstanding Mentor Award, and the 2001 ORNL Early Career Award for Engineering Achievement.

He previously served as a member of the U.S. Air Force Science Advisory Board and as the Director of Operations for the Executive Committee of the IEEE CSS Board of Governors. He is currently or formerly an associate editor for ASME Journal of Journal of Dynamic Systems, Measurement and Control, Automatica, IEEE Transactions on Systems Man and Cybernetics: Part B Cybernetics, and the International Journal of Robust and Nonlinear Control.

Registration is free: [Registration Link](#)



IEEE PHILADELPHIA CHAPTER OF CONTROL SYSTEMS SOCIETY PRESENTS

**THEORETICAL AND EXPERIMENTAL OUTCOMES OF
CLOSED-LOOP NEUROMUSCULAR CONTROL METHODS TO
YIELD HUMAN LIMB MOTION**

BY

DR. WARREN DIXON**DISTINGUISHED LECTURER, IEEE CONTROL SYSTEM SOCIETY,
CHARLES TAYLOR FACULTY FELLOW AT UNIVERSITY OF FLORIDA****When: Oct 24, 2018: 7-8 PM;****Where: Tolentine Hall, Rm. 215, 800 Lancaster Ave., Villanova University.****In collaboration with Villanova Center for Analytics of Dynamic Systems (VCADS)**

Abstract: Neuromuscular Electrical Stimulation (NMES) is prescribed by clinicians to aid in the recovery of strength, size, and function of human skeletal muscles to obtain physiological and functional benefits for impaired individuals. The two primary applications of NMES include: 1) rehabilitation of skeletal muscle size and function via plastic changes in the neuromuscular system, and 2) activation of muscle to elicit movements that result in functional performance (i.e., standing, stepping, reaching, etc.) termed functional electrical stimulation (FES). In both applications, stimulation protocols of appropriate duration and intensity are critical for preferential results.

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Mechanical Engineers (ASME) Dynamics Systems and Control Division Outstanding Young Investigator Award, 2009 American Automatic Control Council (AACC) O. Hugo Schuck Best Paper Award in the Application category, 2006 IEEE Robotics and Automation Society (RAS) Early Academic Career Award, an NSF CAREER Award (2006-2011), 2004 DOE Outstanding Mentor Award, and the 2001 ORNL Early Career Award for Engineering Achievement.

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Registration is free: [Registration Link](#)



Statistical Inference through Sparse Sensing

Dr. Geert Leus

IEEE Signal Processing Society - Distinguished Lecturer
Delft University of Technology, The Netherlands

When: Monday, November 5, 2018 - 3:00 pm to 4:30 pm, Refreshments in the adjacent Mezzanine from 4:00 pm to 5:30 pm

Where: University of Pennsylvania, Wu & Chen Auditorium in Levine Hall.

Attendance is free; however, we ask that you register:

[Register Here](#)

Contact: Alejandro Ribeiro aribeiro@seas.upenn.edu

Abstract: Ubiquitous sensors generate prohibitively large data sets. Large volumes of such data are nowadays generated by a variety of applications such as imaging platforms and mobile devices, surveillance cameras, social networks, power networks, to list a few. In this era of data deluge, it is of paramount importance to gather only the data that is informative for a specific task in order to limit the required sensing cost, as well as the related costs of storing, processing, or communicating the data. The main goal of this talk is therefore to present topics that transform classical sensing methods, often based on Nyquist-rate sampling, to more structured low-cost sparse sensing mechanisms designed for specific inference tasks, such as estimation, filtering, and detection. More specifically, we

present fundamental tools to achieve the lowest sensing cost with a guaranteed performance for the task at hand. Applications can be found in the areas of radar, multi-antenna communications, remote sensing, and medical imaging.

Biography: Geert Leus received the M.Sc.



and Ph.D. degree in Electrical Engineering from the KU Leuven, Belgium, in June 1996 and May 2000, respectively. Geert Leus is now an "Antoni van Leeuwenhoek" Full Professor

at the Faculty of Electrical Engineering, Mathematics and Computer Science of the



Delft University of Technology, The Netherlands. His research interests are in the broad area of signal processing, with a specific focus on wireless communications, array processing, sensor networks, and graph signal processing. Geert Leus received a 2002 IEEE Signal Processing Society Young Author Best Paper Award and a 2005 IEEE Signal Processing Society Best Paper Award.

He is a Fellow of the IEEE and a Fellow of EURASIP. Geert Leus was a Member-at-Large of the Board of Governors of the IEEE Signal Processing Society, the Chair of the IEEE Signal Processing for Communications and Networking

Technical Committee, a Member of the IEEE Sensor Array and Multichannel Technical Committee, and the Editor in Chief of the EURASIP Journal on Advances in Signal Processing. He was also on the Editorial Boards of the IEEE Transactions on Signal Processing, the IEEE Transactions on Wireless Communications, the IEEE Signal Processing Letters, and the EURASIP Journal on Advances in Signal Processing. Currently, he is the Vice-Chair of the EURASIP Special Area Team on Signal Processing for Multisensor Systems, an Associate Editor of Foundations and Trends in Signal Processing, and the Editor in Chief of EURASIP Signal Processing.

LOCATION AND PARKING

Levine Hall.

University of Pennsylvania

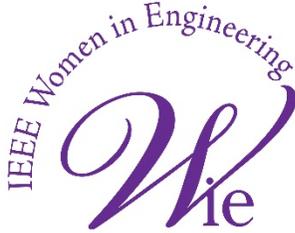
Address: 3330 Walnut St, Philadelphia, PA 19104

Phone: (215) 898-7246

University of Pennsylvania Parking

Chestnut 34

- **N.E. corner 34th & Chestnut Streets (enter off 34th, North of Chestnut)**
- **Hourly Parking:**
- **Monday – Sunday: 6:00 a.m. - 11:00 p.m.**
- **Flat Rates: Credit Card only at all times**
- **\$19 6:00 a.m. - 10:00 a.m.**
- **\$14 10:00 a.m. - 4:00 p.m.**
- **\$11 4:00 p.m. - 11:00 p.m.**



IEEE WIE Report - Philadelphia Section

IEEE ADCOM Meeting - Submitted by Kate McDevitt, IEEE WIE Philadelphia Chair

Goals for 2018– Maintain active IEEE WIE chapter, increase members and volunteers, Increase STEM outreach.

- Meeting Monday, September 10, 2018, Double Decker Upstairs, 415 E. Baltimore Pike, Media, PA
- Election Ballot for 2019: Maria Tabbut – nominated for IEEE WIE Chair, Nannette D’Imperio – nominated for IEEE WIE Vice Chair. Nominating Chair – Kate McDevitt
- Budget
- IEEE WIE Member list – we are working on correcting and updating our list. Board has fallen off the list. Attention Board Members – please join WIE \$25
- IEEE WIE Speaker Series at Penn State Brandywine will be planned for Spring 2019
- IEEE WIE and WIE Branch will be planning a STEM outreach for coding: Spring and Summer
- Social programs – Team building and getting to know you – This year we will be going to the Brandywine River Museum on Sunday, September 16, 2018 at 1 pm (Please note change in time from 12 pm to 1pm) Lunch following at the Terrain.
- IEEE WIE and Young Professionals have planned Terror behind the Wall, Thursday, October 11, 6pm meet up at Urban Tavern. Edwin John to prepare flyer and add to vTools. EdwinJohn@ieee.com
- Grace Hopper - We are working towards completing the location. Contacted Veronica, CAO of MCSC
- Membership – how to encourage new members – we discussed this and agree there has to be a personal connection and commitment. That is best served by having monthly meetings.
- No meeting will be held December.

Meetings schedule for remainder of the year is as follows:

- **Monday, October 8, 2018, 6pm to 7pm – Upper Deck**
- **Monday, November 12, 2018, 6pm to 7pm – Upper Deck**



Senior Member Workshop

The Senior Member Workshop was held August 21 @ 6:00 pm - 8:30 pm at the Sheraton University City

Results will be published in the near future

The Philadelphia Section wants to increase the number of Senior Members in our section. We are setting up a workshop for the purpose of signing up new Senior Members. We gain, and you gain by advancing. What does it mean to be a Senior Member of the IEEE? The Senior Member grade is a way for IEEE members to receive recognition for

their professional experience and significant performance in Electrical and Electronics Engineering and related fields, including: Computer Science and Information Technology, Physical Sciences, Biological and Medical Sciences, Mathematics, Technical Communications, Education, Management, Law, and Policy.





PHILADELPHIA SECTION PLANNING CALENDAR

Current Month: September

Date	Activity
October	
October 8	WIE Meeting
October 9	ADCOM
October 10	Volunteer sign-up mentors for Future City
October 15	Voting closes for section officers
October 15	New members get 15 months by joining in October
October 15	Nominations due for Engineer of the Year (DVEW)
October 16	IEEE Night
October 24	CSS Distinguished Lecturer – Temple University
October 24	CSS Distinguished Lecturer – Villanova University
October 26-27	Electric Expo
Oct. 26 to Nov. 4	ITC Meeting (Phoenix)
October 30	Voting closes for Engineer of the year
November	
November 2	Chairman starts to assemble ADCOM for next year
November xx	WIE Forum in White Plains
November 13	ADCOM
November 20	IEEE Night
December	
December 1	Application due for Region 2 Awards nominations
December 1	Signal Processing in Medicine and Biology Conference at Temple. Dr. Joseph Picone, Chair. Co-Sponsored Philadelphia Section and SPS Chapter.
December 11	ADCOM
December 11	Send sponsorship donation to Del. Valley Eng. Week
December 31	Last Day to pay 2019 dues



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

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

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sec.philadelphia@ieee.org

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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.

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ITC 2018 Registration Open

Program Preview now Available

International Test Conference, the cornerstone of TestWeek™ events, is the world's premier conference dedicated to the electronic test of devices, boards and systems-covering the complete cycle from design verification, test, diagnosis, failure analysis and back to process and design improvement. At ITC, test and design professionals can confront the challenges the industry faces and learn how these challenges are being addressed by the combined efforts of academia, design tool and equipment suppliers, designers, and test engineers.

ITC 2018 will be held October 30 - November 1, 2018, in Phoenix Arizona at the Phoenix Convention Center.

The preliminary 2018 ITC Program is available at:

<https://easychair.org/smart-program/ITC2018/>

See the accepted papers and abstracts. More content, including invited sessions, panels, and keynote speakers will be posted when available.

Once you look at the program, register for ITC at our [registration page](#)

Then, reserve your hotel room at the [hotel reservation page](#).

Looking forward to seeing you in Phoenix for the 49th **International Test Conference**.

Visit us on our Web Page, <http://www.itctestweek.org>



2018 IEEE WIE FORUM USA EAST

Call for Papers & Participation



November 29 – December 1, 2018 White Plains, NY

Presentation & Paper Topics

- Innovation: Emerging/Future/Disruptive Technical & Entrepreneurial
- Development: Communication skills in written and spoken word, effective dialog
- Empowerment: Women as leaders in education, industry, and government
- Work-Life balance: family systems traditions and changes
- Mentoring women leaders
- Leadership development
- Exploring the attrition gap

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Submission Deadline

Presentation only: Title and topic abstract suitable for program (up to 150 words), and an extended abstract for evaluation (up to 2 pages)

Presentations with paper submission: Title and topic abstract suitable for program (up to 150 words), and publication-ready paper (up to 8 pages)

Deadline for all submissions: 25 July 2018

Submit abstracts: <http://sites.ieee.org/wie-forum-usa-east-2018/cfp-abstract-submission/>

For questions, email: R1R2WIEForum@gmail.com



Eighth Annual

IEEE Signal Processing in Medicine and Biology Symposium (SPMB18)

Saturday, December 1, 2018

Temple University, Philadelphia, Pennsylvania

IEEE SPMB18 is a regional symposium intended to provide a highly interactive forum where bioengineering and signal processing researchers can collaborate on emerging trends in signal processing. We expect approximately 125 researchers to attend. We specifically encourage graduate students to attend and present their thesis or dissertation research. This is an excellent opportunity to network with leading professionals in your field and to form new collaborations.

Signal processing plays a vital role in applications ranging from medical electronics to data mining of electronic medical records. The enormous amounts of data that can be acquired from devices are enabling a new generation of technology based on big data. This symposium is intended to bring together a wide range of professionals interested in applications of signal processing medicine and biology. The symposium is sponsored by IEEE-USA, IEEE Region 2, IEEE Region 2 Philadelphia Section, Temple University, the Neural Engineering Data Consortium and NYU Polytechnic School of Engineering.

The symposium will consist of two plenary talks, two oral sessions and two poster sessions. Exhibits and demonstrations are encouraged as well. Interested parties should contact the conference organizers at help@ieeespmb.org for further details. Please consult our [conference archive](#) for additional information about the history of this conference.

Symposium Topics:

Traditional signal processing topics include:

- Signal analysis (e.g., EEG, ECG, EMG)
- Medical imaging (e.g., MRI, fMRI)
- Machine learning, data mining and classification
- Big data resources and applications
- Signal processing methods in bioinformatics
- Linear, nonlinear, and adaptive filtering and prediction
- Time-frequency and non-stationary signal analysis

Applications of particular interest this year include:

- Electronic medical records
- Wearable healthcare devices
- Data mining and analytics in healthcare
- Security and reliability in wireless medical technologies
- Biomedical nanosensors and wireless technologies
- Biomedical instrumentation and electrical stimulation

If you have questions about the relevance of a planned submission, feel free to contact the technical committee at help@ieeespmb.org for guidance.

Paper/Abstract Submission:

Presenters may choose to submit to one of two peer-reviewed tracks:

- (1) Paper: An original four to six-page paper for oral presentation.
- (2) Poster: A one-page abstract that will be presented as a poster.

All papers and abstracts are indexed in IEEE Xplore (search for "IEEE SPMB").

Papers/abstracts can be submitted via email to submit@ieeespmb.org. Contributions must follow the approved conference formats. See [IEEE SPMB Guidelines](#) for more information.

Important Dates:

Paper Submission	Aug. 1, 2018
Notification	Oct. 1, 2018
Early Registration	Nov. 1, 2018
Final Program	Dec. 1, 2018

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Contact: help@ieeespmb.org





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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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/>



IPRAXIS INC. NEWSLETTER

CHANGING THE FACE OF SCIENCE - ISSUE 2 - SEPTEMBER 21

Hi Scientist!

We hope that you're having a great week! We're checking in to ask folks who are interested in volunteering this year to fill out a short survey. The survey will be used to place volunteers in our partner schools around the city. If you volunteered with us last year, simply reply to this email letting us know that you're interested in coming back. (We already have your information)

Talk to you soon!

IN THIS ISSUE:

1. **Big News: Announcing School Partners for the Fall (Whoop!)**
2. **Volunteer Survey**
3. **Hiring a Part-time Administrative Assistant**
 - **CORRECTION:** The last newsletter asked for resumes to be sent to an incorrect email address. For those interested in the administrative position, please send your resume and a brief cover letter to ipraxisphi@gmail.com

Big News: Announcing This Fall's Partners!

Every year, iPraxis works with certain schools (partner schools) in the Philadelphia area to bring high-quality STEM experiences to their students. We are excited to announce our partners for this fall!

Cook-Wissahickon School

- Program Beginning: October 10, 2018
- Grades: All 6th, 7th, 8th Grade Classes
- Subject Areas: Earth Sciences, Robotics & Technology, Planarians (worms) & Addiction

Hardy Williams Mastery Charter School

- Program Beginning: October 9th & October 11th
- Grades: 7th and 8th
- Subject Areas: *Details are forthcoming! Stay Tuned*

Dr. Tanner G. Duckrey Public School

- *Details are forthcoming! Stay Tuned*

McMichael Morton School

- *Details are forthcoming! Stay Tuned*

Exciting stuff right? The best part is that there is more to come!

If you would like to participate as a volunteer in our science fair program, please see below.



Volunteer Corner:

We're gearing up to begin programs in two schools and we need your help! If you're interested in volunteering in any capacity this year, please click the button below to fill out a short survey. We will be in touch with more details next week.

[Take Me To The Survey!](#)

Administrative Corner

iPraxis is in immediate need of a part-time administrative assistant. The assistant would be responsible for supporting the organization's administrative needs as well as filling in other program areas when needed. This is a great opportunity for a college or high school student in the Philadelphia area who has their own transportation or is comfortable with public transit and would like to be a part of a small but mighty non-profit team.

- Rate: \$10/hour
- Shift times are flexible
- Training provided

Please send your resume and a brief cover letter to ipraxisphl@gmail.com. We look forward to hearing from you!



Northwood student and volunteer from PCOM at Northwood's Health Fair last year.

As a small non-profit, we are always appreciative of your support in any way that you can give it. If you are able, please click the button below to send us a donation. No amount is too small.

[Donate](#)

Thank you so much for your continued partnership and support! We love working with you to bring STEM excitement and experiences to our students! Have a great weekend!

iPraxis

We understand that sometimes our Scienteers move out of the area, change schedules, or generally become unavailable. If you would prefer to no longer receive emails from iPraxis (although we'd hate to see you go), please feel free to unsubscribe from this newsletter using the link in the footer of this email. If you'd like to connect without receiving our emails, please follow our page on [Facebook](#) @jpraxisinc. We wish you all the best and hope to cross paths again in the future!



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