INSIDE THIS ISSUE

AdCom Meeting
August 10, 7 to 9 pm, Virtual

Philadelphia Section Night
August 17, 7 to 8 pm, Virtual

IEEE Philadelphia Section Volunteers 2021

IEEE Philadelphia Section Webinar
Dr. Ho-jing Song

Heraeus Engineering III Position Available

OFFICER CONTACT LIST

Emilio M. Salgueiro
Section Chair
emiliosalgueiro@ieee.org

Taso Malatesta
Section Vice Chair
t.malapetsas@gmail.com

Dennis Silage
Section Treasurer
silage@temple.edu

Chris Deitch
Section Secretary/Student activities
chris.deitsch@ieee.org

Fulvio Oliveto
Events Chair

Peter Silverberg
Past Chair/Editor Emeritus
psilverberg3@comcast.net

Office sec.philadelphia@ieee.org
484.270.513

Robert Johnston
Finance Committee Chair

Li Bai
Technical Activities Chair

Kate McDevitt
Membership Development Chair

Fallon Kider
Professional Activities Chair

Alfredo Flores
Publication Relations Chair

Cheer-Sun Yang
Communications Chair
ADCOM MEETING

BRIEF AGENDA
1. Section Chair
2. Past Meeting Minutes.
3. Subcommittees
4. Old Business
5. New Business

When? Where?

August 10, 2021, 7:00 pm - 9:00 pm
Virtual (Zoom Link will be sent out before the meeting via email.)
Abstract

Battery storage is becoming prevalent for many reasons. For example, California set targets of 1.3 gigawatts (GW) of energy storage by 2020, and the New York City Fire Department (FDNY) is developing safety standards for battery storage projects. We will start by briefly reviewing the history of the US Power Grid, and the progression to the current focus on renewable energy, with the addition of battery storage.

For the customer-side energy storage systems, one key factor is the utility cost savings, primarily via Peak-Demand Savings, that would result from the consideration of battery storage.

We will investigate two rate structures (Con Edison and PSE&G), and work through the process of developing the potential cost savings for various battery storage systems, related to Peak-Demand Savings.

Bio: Gabriel Paoletti, P.E. (IEEE Senior Member) formed Paoletti Engineering PLLC, and as Senior Consultant, he applies his forty (40+) plus years of electrical power distribution experience to support the electrical power industry. He is a Registered Professional Engineer in NY, PA, NJ and DE, with a Certificate of Authority (COA) to perform Engineering in NY State. He has authored and presented numerous technical publications for IEEE and other organizations. He received his BSEE in Electrical Engineering at Drexel University in 1976 (Magna Cum Laude), and an MBA from Rutgers in 2009 (Summa Cum Laude). Mr. Paoletti has also been on the forefront of many power system innovations and was awarded the IEEE Engineer of the Year Award for 2009 (Northern New Jersey Chapter) for new product and service innovation which improved the efficient distribution of electrical power. He currently provides services such as Project Engineering, Owners Representative and engineering and feasibility studies, and failure root-cause analysis.
CALL FOR VOLUNTEERS

IEEE Philadelphia Section
IEEE Philadelphia Section - VOLUNTEER FORM

Every day, IEEE Societies make a difference in the world and in the lives of their members. To learn about the latest activities and programs from IEEE's Societies, programs and activities include humanitarian initiatives, initiatives for students and women, educational initiatives, and more visit the IEEE Societies and Communities News page at http://www.ieee.org/societies_communities/societies/society_activities.html.

The Philadelphia Section is looking for interested volunteers to help plan the future of the local IEEE. The local IEEE organization units (Philadelphia Section Executive Committee, section standing and affinity groups, and society chapters) and committees are run by a group of dedicated volunteers. These volunteers are the central most important group that sets the future planning of the local IEEE activity.

Below are a number of different society chapters, affinity group, and committees that are inviting you to experience the rewards, challenges and networking benefits of volunteering for the IEEE Philadelphia Section. Any of these volunteer opportunities allows for varying levels of volunteer participation based on your schedule.

Being one of the oldest and largest sections in IEEE, the Philadelphia Section has a full-time office and staff to support its volunteers in their efforts. This is a tremendous advantage for our local volunteers and greatly reduces their efforts compared to volunteers in sections that do not have the support of a paid staff.

If you are interested in volunteering for any of the standing committees, affinity groups or chapters below, please select the group(s) you have interest in and return this form to the Philadelphia Section office. If you have any questions, please send an email to sec.philadelphia@ieee.org or call the Philadelphia Section office at (484) 270-5136. Once your inquiry is received, a current Philadelphia Section volunteer or staff person will contact you to further discuss you volunteering.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
CALL FOR VOLUNTEERS
(CONTINUED)

IEEE Philadelphia Section

Contact Information:
First & Last Name: ____________________________
Email: ____________________________
Preferred Telephone#: ____________________________
Society, Affinity group or Area of Interest______________________________

○ Aerospace and Electronic Systems
○ Antennas and Propagation
○ Broadcast Technology
○ Computer
○ Circuits and Systems
○ Consumer Electronics
○ Computational Intelligence
○ Communications
○ Components, Packaging & Manufacturing
○ Control Systems
○ Consultants Network
○ Dielectrics and Electrical Insulation
○ Education
○ Electron Devices
○ Graduates of the Last Decade (GOLD)
○ Technology Management
○ Engineering in Medicine and Biology

○ Industry Applications
○ Industrial Electronics
○ Instrumentation and Measurement
○ Information Theory
○ Intelligent Transportation
○ Lasers and Electro-Optics
○ Life Members Affinity Group
○ Magnetics
○ Membership Development
○ Microwave Theory and Techniques
○ Nuclear and Plasma Sciences
○ Oceanic engineering
○ Professional Communication
○ Power Engineering
○ Power Electronics
○ Product Safety
○ Robotics and Automation

○ Society of Social Implications of Technology
○ Short Course Programs Committee
○ Student Activities
○ Systems, Man, and Cybernetics
○ Signal Processing
○ Solid-State Circuits
○ Ultrasonic's, Ferroelectrics and Frequency Control
○ Technical Activities and Technical Conferences
○ Vehicular Technology
○ Web and Electronics
○ Communications Committee
○ Women in Engineering (Requires IEEE Membership)
**IEEE Philadelphia Section Webinar**

**Speaker: Dr. Ho-jing Song**

**TITLE: Terahertz Communications at 300 GHz: Devices, Packages and Systems**

**Abstract**

Recent progress in semiconductor devices on compound semiconductor or silicon substrates has made it possible to produce more power and receive a signal with less noise at THz frequencies. Various integrated circuits for the THz radio front-end functional blocks, including power and low-noise amplifiers, modulators and demodulators, and oscillators, have been demonstrated in the last decade. In the first experimental demonstration conducted in 2004, bulky instruments originally developed for THz spectroscopy were used to transmit pulsed THz signals carrying a 7-kHz bandwidth audio signal across a short free space. However, recently, there have been several successful demonstrations of multi-Gbps data transmissions at THz frequencies with state-of-the-art devices and components. In this talk, the first prototype of a THz wireless communications system designed under the ‘touch-and-go’ scenario will be presented. I clarify the concept of the KIOSK data downloading system, cover some considerations in this work, and present a brief link-budget plan. We will then overview technologies for implementing THz components operating at 300 GHz and their performance, followed by preliminary investigation of the channel responses and the experimental demonstration results. At the end of the presentation, we will discuss several issues that need to be addressed for the future of the THz communications systems, in terms of system architectures, packaging and potential applications.

Please check the web page at https://mtt.org/profile/ho-jin-song/ for the profile of the speaker

Virtual: https://events.vtools.ieee.org/m/278597

Wednesday, August 18, 2021 @ 3:30pm-5:00pm

Registration open soon
Electrical Engineering III Position Available

Heraeus Electrical Engineer III

Summary
We are seeking an Electrical Engineer to design electronics/electro-mechanical equipment to include, concept development, simulation, design documentation and analysis. This position has the flexibility to be in Gaithersburg, Maryland or Buford, GA but may spend time supporting either location.

RESPONSIBILITIES:
The selected candidate will be responsible for, including but not limited to:

- Design electronics/electro-mechanical equipment to include, concept development, simulation, design documentation and analysis.
- Conceptualize equipment requirements and designs based on customer and sales input.
- Prepare engineering specifications and effectively communicate design and specification to sales, customer, and engineering.
- Utilize CAD and Altium PWB design tools for schematic capture and board layouts.
- Ability to work independently with limited supervision.
- Conduct design reviews with internal and external teams to meet product specification and cost requirements.
- Develop project schedule for design and development.
- May provide supervision of junior engineers, technicians and other support personnel

QUALIFICATIONS:

- BS or MS in Electrical Engineering
- 8- 10 years of product development experience
- Proficiency using CAD and Altium PWB design tools
- Working knowledge or experience with high voltage power supply design topologies such as Switch Mode Solid-State and Ferro-Resonant
- Experience/Knowledge about RF (microwave, 2.4GHz) signal measurement and testing to determine integrity, crosstalk and coupling in a RF cavity
- SAP experience a plus
- Time Management

Experience

- Ability to apply electrical engineering fundamentals to solve complex electrical/electronic design problems
- Experience in sustaining existing products and challenges with component obsolescence or supplier quality issues
- Ability to work with multidisciplinary teams on complex electrical, mechanical, and optical industrial systems
- Ability to collaborate with engineers, scientists and technicians, and interacts with Strategic Procurement
- Able to work and adapt to fast-paced and changing work environment

If you want to do more than make a living, at Heraeus you can make a difference. We can provide you with the opportunity – and Open Space – where your ideas and career can grow and advance. We offer attractive compensation, top-notch benefits, and an ideal environment that supports your professional development. You can find more information at https://jobs.heraeus.com/job/Gaithersburg-Maryland-Electrical-Engineer-III-MD-20878/646331301/

Interested candidates may e-mail a cover letter with resume to Nekita.watts@heraeus.com.