

ALMANACK

The Official Philadelphia Section Monthly Newsletter

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2021 ELECTION RESULTS

The IEEE 2021 Elections have concluded and the new board members have been informed of their new roles. Please help us welcome Emilio Salguiero, Chairman 2021, Taso Malatesta, 2021 Vice Chair, Denis Silage 2021 Treasurer, and Chris Dietsch our 2021 new Section Secretary. At the same time, we would like to express my gratitude to Mark Madjar, J.J. Gingerich and Chris Vaile for their contributions to the Section. 2020 has been a challenging year that forced most

UPCOMING EVENTS



JANUARY 12

Section Administrative Committee Meeting

JANUARY 15

A comprehensive technical history of Video Conferencing

JANUARY 19

IEEE SECTION NIGHT WEBINAR: A.C. Versus D.C.

JANUARY 28

IEEE SSIT Distinguished Lecture: mHealth4Afrika

JANUARY 30

Future City Competition: Volunteers Needed

IEEE SECTION NIGHT

A.C. Versus D.C. - The Battle of Emerging Technologies

Join with: Reliability(R) | Location: Online | Program starts at 7 PM.



ABOUT THE SPEAKER

Bob retired in 2017 after an electrical engineering and consulting career for industrial and commercial facilities. He is a graduate of Drexel University with BS and MS in Electrical Power Engineering and a licensed professional engineer in Pennsylvania. Bob served IEEE local and national societies including the Philadelphia Power & Energy - Industry Applications Joint Chapter, National Electrical Code panels, and IEEE standards committees.

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

IEEE SECTION NIGHT

A.C. Versus D.C. - The Battle of Emerging Technologies

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The 2019 movie “The Current War” is based on events surrounding the introduction of competing Alternating Current and Direct Current power systems in the late 1800s. Let’s dig into the history and technical aspects of these two systems and see what drove the competition of these emerging technologies. This presentation will cover a brief history of electricity discoveries, focusing on times of Thomas Edison, Nikola Tesla, and George Westinghouse and their inventive contributions to society. We will review the fundamental limitations of Edison’s D.C. system and why A.C. became the obvious technological winner. We will also look at Niagara Falls, where the largest hydro-electric power plant at the time was built with Westinghouse’s leadership and Tesla’s patents. Once A.C. was established as the de facto standard, long-distance power distribution and induction motor technology developed, accelerating the industrial revolution. Single-phase, two-phase, and three-phase motors will also be discussed and demonstrated. Yes, two-phase. Philadelphia holds a distinction as one of the very few cities still using two-phase distribution. Join us for this look back when the incandescent lamp was considered high tech.



Hello from Future City Philadelphia!

We hope everyone is staying safe and healthy! Even with these unprecedented times, the Future City Competition is going strong! As of today, there are 41 schools registered! This year's Future City Theme is Living on the Moon. The Competition Challenge: Design a future lunar city and provide examples of how your city uses two Moon resources to keep your citizens safe and healthy. This year's competition will be virtual. The competition Date is **January 30, 2021**. Details on how the virtual sessions are going to work are being developed. In the meantime, we need Volunteers! Volunteers for mentoring, judging, and support. Descriptions are as follows:

Mentor: Work with a student team to build their model and prepare for the competition. Teams are meeting virtually this year so you may be asked to work with a team outside your geographic area.

City Essay Judge: Evaluate a 1,500-word essay describing each team's city and response to the engineering challenge. The instructions for accessing and judging the essays will be emailed to you. Essays will be available for judging in mid-December and judging will be completed by mid-January. We anticipate 30-35 essays will be submitted; all judges will evaluate all essays, which could take about 20 minutes per essay. Rubrics will be provided.

Model/Presentation/Q&A Judge: All judging will be done virtually this year using Zoom and judges will input their scores into the Competition Management System (CMS). There will be three deliverables for each team that the judges will need to evaluate. The Model Slideshow (a pdf file) and a seven-minute Video Presentation will be available shortly after January 16; both will need to be judged and scores inputted into the CMS by January 26. The live ten-minute Q&A Session will be the morning of January 30. We anticipate that each judge will evaluate five to six teams and will need to evaluate all three elements for these teams. Rubrics will be provided for each deliverable. Training before the competition will be provided.

Special Awards Evaluator: Select which teams meet the criteria for a Special Award. Evaluators will be able to review team model slideshows and video presentations (available shortly after January 16) before the competition. These will also be available on the day of the competition. Evaluators will need to be available on the morning of January 30 to meet with teams virtually for Q&A. Scores will be recorded online which can be done using a mobile device while the a computer is used for Q&A via Zoom with the students. Training and detailed instructions will be provided.



Competition Support and Zoom Hosts: If you have been a “Competition Support” person in previous years, this is the equivalent role in the virtual world and we still need you regardless of Zoom experience. Zoom is our virtual platform and we need assistance both before and on the day of the competition to keep everything running smoothly. Individuals of all experience levels, including none, are needed. Duties will range from being virtual escorts for teams to helping to set up our virtual convention center. Instead of photographers we need people who can do screen captures. Training will be provided at all levels as needed.

Zoom Experts and Tech Gurus: The 2021 Philadelphia Future City Competition will be held in a virtual convention center and have about 50 simultaneous Zoom meetings throughout the morning. If you are already a Zoom expert or are an experienced tech person and know Zoom really well or want an excuse to learn more about it, we need you to help us pull this off. HTML and CSS skills would also be helpful but not required.

The following schools still need mentors:

- Abram Hebrew Academy - Yardley, PA
- Carver Engineering and Science - Philadelphia, PA
- Congreso De Latinos Unidos - Philadelphia, PA
- Dayspring Christian Academy - Mountville, PA
- Great Valley Middle School - Malvern, PA
- Pottsgrove Middle School - Pottstown, PA
- Springfield Township Middle School - Oreland, PA
- St Anastasia School - Newtown Square, PA
- St Elizabeth Parish - Uwchlan, PA
- St Hilary Poitiers School - Rydal, PA
- St Jane De Frances De Chantal - Easton, PA
- St Peter’s School - Philadelphia, PA

For more information on mentoring, please contact: Mike McAtee at mjmcatee@urbanengineers.com. If you are interested in getting involved, please visit <http://www.futurecityphilly.org/fcvolops.html> to sign up.

Connect With Us

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