

## **Power and Energy Education Committee (PEEC)**

### **2018 Annual Report and 2019 Proposed Activities**

PEEC had three face to face meetings including PEEC AdCOM meeting at PES GM, PEEC main meeting at PES GM and PEEC meeting at NAPS 2018. Also, an online meeting, PEEC AdCOM teleconference meeting was held in February 2018 to discuss the yearly activities.

During PEEC AdCOM teleconference, Edvina Uzunovic PES VP for education discussed the need to include graduate students in the educational activities. She further discussed this and elaborated the need during PEEC Main and AdCOM meeting at PES GM 2018. Sid Suryanarayanan, PEEC chair, presented the planned panel activities for 2018 conferences. Then, each subcommittee chairs presented their planned activities for the year 2018.

For the student activities program, St. Leger is the chair. Jignesh Solanki is the past chair. Cecchi is the vice chair and Anthony Deese is the secretary. St. Leger discussed the funding and support for student program. GM 2018, T&D 2018 and NAPS 2018 was discussed. There were 42 posters for T&D and 76 student rooms allocated. Grainger support and matching conditions were discussed.

For career promotion sub-committee, Valentina Cecchi is the chair and she presented the report. Sarika Kushlani-Solanki is the past chair. Sara Eftekharnjad is the secretary and Masood Parvania is the secretary-elect. The scope of the sub-committee is extended to K-12 activities and junior faculty. This subcommittee is currently in the process of taking over the administrative control of the PES Careers website on a trial basis. Their experience, based on this trial, may lead to a more permanent purview of the website management and appropriate changes to the O&P manual.

For education subcommittee, Syed Islam is the past chair and Sairaj Dhople is the current chair. Dhople, Chen is the Vice Chair and Li is the secretary. The education subcommittee planned to conduct an international survey on university resources.

For research Subcommittee: Joydeep Mitra is the past chair, Lingling Fan is the current chair, Le Xie is the vice chair and Sara Eftekharnjad is the secretary. Dr. Fan discussed the plans for research subcommittee for 2018. Research subcommittee plans to organize panels and presentations.

For awards Subcommittee, Wei Jen Lee is the past chair, Srivastava is the current chair, Hansen is the vice chair and Mandal is the secretary. Srivastava discussed the plan for awards subcommittee for 2018 which includes selection and presentations of awards and recognition of the past subcommittee and PEEC chair and recognizing PES fellows.

PEEC officers discussed that an NSF workshop is planned before PEG SM 2018 which is organized by Srivastava. The PEEC O&P Manual is being updated. This is to reflect the changes in the Life Long Learning Sub-committee and the introduction of new product and development committee. PEEC chair mentioned that the agenda for PEEC main and AdCOM meeting is under development. The past chair Brahma mentioned that the PEEC survey is being reviewed for the paper and Kavasseri discussed that the NAPS deadline for paper submission is planned for the end of March.

During PEEC AdCOM meeting, AdCOM team discussed future activities for PEEC. This includes potentially taking care of PES Careers activities within career promotion and workforce subcommittee, NSF workshop at 2019 PES GM meeting in Atlanta and revising PEEC membership rules. The

requirements for becoming a member and retaining the membership was revisited. Also, plans for NAPS 2018 and PES GM 2019 has been discussed. The PES PEEC survey plans and status and plans of PES officers for 2019 has been evaluated.

At PEEC main meeting at PES GM, PEEC Chair summarized the 2018 panel sessions.

In PESGM 2018, there were five-panel sessions sponsored by PEEC. They are:

1. Professional Society Student Programs and Activities, chair: A. St. Leger
2. Computational Infrastructure for Distributed Control in the Power Grid: Anurag Srivastava
3. Research and Education for Food, Energy, and Water Nexus, chair: Anil Pahwa
4. Power and energy-related R&D on smart cities, chair: Badrul Chowdhury
5. Use of Synthetic Electric Grids for Research and Education, chair: Thomas Overbye.

The details and the slides from panels can be found here <https://sites.google.com/view/peec-rs/home>

The website is current on the activities of the committee and subcommittee.

Then the awards and recognition of PEEC members have been announced. 2018 IEEE PES Prabha S. Kundur Power System Dynamics and Control Award is for Prof. Vijay Vittal. Prof. Karen Butler has been elected as IEEE fellow and Prof. Chanan Singh has been elected as a member of the National Academy of Engineering. During PEEC main and subcommittee meeting DOE and NSF representatives were present. Kory Hedman presented GO competition and the related FOA opportunity sponsored by DOE ARPA-E. Anil Pahwa discussed NSF funding opportunities. 2017 meeting minutes were approved, followed up with NAPS status report, and panel idea discussion. Further PEEC editors for Transactions and conferences presented their report. Then Vice President for Education Edvina Uzunovic presented her report. Following that PES PEEC secretary updated the officer's list. Following that each subcommittee presented their reports.

- a. Awards: Srivastava presented the awards and recognition for outgoing PEEC officers.
- b. Career Promotion and Workforce Development: Cecchi presented career promotion and workforce development activities. the main updates are as follows: Shift of focus of the SC from K-12 to undergrad, grad, and young professionals/young faculty, Draft document on "how to navigate PES" has been initiated, Panel has been proposed for GM2019 on Paths to Academic Career Success in Power and Energy and discussion continues involvement of the SC with PES Careers
- c. Research: Fan presented the acuties of the research subcommittee. Research Subcommittee: Research subcommittee 2018 officer list has been presented. Activities for the research subcommittee for the past year include NAPS meeting organizing championed by Rajesh Kavasseri, organizing IEEE PESGM 2018 panel proposals in Sep 2017, inviting Federal Agencies before the PESGM 2018 meeting, and conducting Research Subcommittee meeting in PESGM 2018.
- d. Student Meeting Activities: St. Leger
- e. University Education Activities: Dhople was absent. In his absence, Syed Islam presented the 2018 activities for university education committee. In 2018, the University Education subcommittee

completed the Australia New Zealand trial on University resources. The trial now needs to go broader. The trial data now need to be consolidated on the PES Education survey portal alongside the North American data. The plan is then to target other parts of the World moving forward. The subcommittee nominated Professor Syed Islam as the International PES resources survey coordinator. Also, during the meeting, PEEC roles in technical council and future conference dates were discussed.

During NAPS 2018, the site selection for NAPS 2021 was discussed and Texas A&M University has been selected to host NAPS 2021. Subcommittee reports were also presented and discussed. Regarding membership rules, a proposal will be presented at PES GM 2019. Plans for 2019 panels at GM and PEEC website update were discussed. The details are as discussed below.

1. Integrating Resiliency into Operational Practice (2 Hours)
  - Clayton Barrows, NREL and Anurag Srivastava, WSU
2. Research Challenges for Protection of Power Systems with Massive Amounts of Renewable Energy (2 Hours)
  - Saeed Lotfifard, WSU and Brian Johnson, UI
3. Research and Educational Experiences of NSF CAREER Awardees in Power Systems (4 Hours)
  - Anil Pahwa and Radhakisan Baheti, NSF
4. Enhancing Cyber-Physical Resilience of Smart Grid: Design, Operation, and Control (2 Hours)
  - Wei Sun, University of Central Florida
5. New Generation Laboratories to Enable Smart Grid Education (2 Hours)
  - Syed Islam, Federation University, Australia and S M Muyeen, Curtin University, Australia
6. Paths to Success in Academic Careers in Power & Energy (2 Hours)
  - Ramtin Hadidi, Clemson U., and Valentina Cecchi, UNC Charlotte
7. New Advances in Interdisciplinary Research: Bridging Operations Research and PES (2 Hours)
  - Andy Sun and Pascal Van Hentenryck, Georgia Tech

Total: 16 hours

Respectfully submitted by:

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