IEEE-PES-AMPS Committee Main Meeting

General Meeting 2017

Wednesday, July 19th, 2017 9:00 – 12:00
Sheraton Grand Chicago, S – Michigan B
Chicago, Illinois

1) Welcome and member introductions

AMPS Chair Alex Schneider opened the meeting at 9:00 AM. The attendance is shown below

First Name	Last Name	Organization	Email Address	Status GM2017
Murty	Bhavaraju	PJM	m.p.bhavaraju@ieee.org	Member
Kwok	Cheung	GE Grid Solutions	kcheung@ieee.org	AMPS Secretary
Aleks	Dimitrovski	UCF Orlando	adimitrovski@ufl.edu	
Roger	Dugan	EPRI	R.Dugan@ieee.org	Fellows Chair
Yanfeng	Gong	AEP	ygong@aep.com	TAS Chair
Margaret	Goodrich	Proj. Consultants	margaret@j-mgoodrich.com	CAMS CIM TF chair
Manimaran	Govindarasu	Iowa State University	gmani@iastate.edu	CAMS Chair
Edwin	Liu	Quanta Technologies	eliu@quanta-technology.com	Liaison IGC
Chris	Mensah-Bonsu	CAISO	cmensah@caiso.com	Awards Chair
Steve	Miller	Commonwealth Associates, Inc.	s.miller@ieee.org	Member
Sukumar	Mishra	IIT Delhi	sukumariitdelhi@gmail.com	
Karen	Miu	Drexel University	karen@ece.drexel.edu	Liaison IGC
Dagmar	Niebur	Drexel University	Niebur@drexel.edu	PSACE Past C
Alex	Schneider		aschneiderjr@sbcglobal.net	AMPS Chair
Kevin	Schneider	Pacific Northwest National Lab	Kevin.schneider@pnl.gov	AMPS Vice Chair
Greg	Shirek	Milsoft Utility Solutions	greg.shirek@milsoft.com	DSA Past Chair
Sarika	Solanki	West Virginia University	skhushalanisolanki@mail.wvu.edu	DSA Chair
Kevin	Tomsovic	University of Tennessee, Knoxville	tomsovic@tennessee.edu	Member
Zita	Vale	Polytechnic of Porto	zitavale@sapo.pt	ISS Chair
Le	Xie	Texas A&M University	lxie@ece.tamu.edu	Big Data Chair

20 persons being present for part or all of the meeting. Introductions were made.

2) Adopt agenda

The agenda was adopted.

3) Approval of 2016 meeting minutes

The 2016 meeting minutes were approved unanimously.

4) Talk by S. Rahman

There are resources available for activities outside of North America. Additionally, the Resource Center is looking for material.

5) AMPS Membership

There are many people listed who have not met membership requirements; specifically, attending at least 1 out of the last 3 meetings. But there are cases of members with an extensive history of service who support without attending, so perhaps they should not be expunged.

Options for moving forward:

1) Currently have non-voting emeritus membership in the O&P Manual
2) Voting membership vs. non-voting membership. Need to review the consistency with the O&P Manual and make update, if necessary.
3) Send e-mail prior to removing after 5 years
4) The idea for honorary membership

Final Decision: As revised, the O&P will require a much more rigorous enforcement of attendance requirements and IEEE SA membership to retain voting membership in the AMPS Committee on standards matters. Conduct membership review to determine if the current members satisfy the voting membership requirements.

6) Subcommittee Reports

A. Big Data & Analytics for Power Systems Subcommittee

Chair: Le Xie
Vice Chair: Wen Jun and Christopher DeMarco (TCPC)
Secretary: Hung-Ming Chou
Past Chair: N/A
Website: http://sites.ieee.org/pes-bdaps/
List of active WGs, and the Chairs:

- 1: Data access working group, Chair: Hamed Mohsenian-Rad, Co-Chair: Ning Zhou

List of active TFs, and the Chairs:

- 1: Big Data Applications in Power Distribution Systems, Chair: Reza Arghandeh, Vice Chair: Ram Rajagopal, Nanpeng Yu
- 2: Big Data Webinar Series, Chair: Bo Yang, Vice chair: Yang Weng

Panels sponsored at 2017 PES GM

- Big Data Access and Big Data Research Integration in Power Systems
  (Panel Chair: Dr. Hamed Mohsenian-Rad)
- Big Data Analytics for Electricity Markets
  (Panel Chair: Dr. Ran Li, Dr. Li Furong)
- Big Data for Integrated Energy Systems
  (Panel Chair: Dr. Goran Strbac, Dr. Bie Zhaohong)
- Big Data in Power Systems: Transmission, Distribution, and Data Analytic Applications
  (Panel Chair: Dr. Mladen Kezunovic, Dr. Nanpeng Yu)

Panels proposed for 2018 PES GM (Details to Follow Soon)

- Smart Meter Analytics: From Consumer Behavior to Planning
- Big Data Analytics Focused on End-Use Customers in Power Distribution Systems
- Best Practices in Public Sharing of Big Data in Power Systems
- Big Data Analytics for Flexible Electricity Networks, Markets and Prosumers
- Big Data Analytics for Emerging Power Sensors and Internet-of-Things

- High Performance Computing and Big Data Analytics for Large Scale Power System Planning Problems

B. Computing and Analytic Methods Subcommittee

Current Officers:

- Chair: Manimaran Govindarasu, Iowa State University
- Vice-Chair: Zhenyu (Henry) Huang, PNNL
- Secretary: Malik Vallam, PNNL
- Past-Chair: Ivana Kockar, University of Strathclyde, UK

Website URL:
http://ewh.ieee.org/cmte/psace/CAMS.html

Working Groups

- **WG1: CAMS WG on the Understanding, Prediction, Prevention and Restoration of Cascading Failures**
  Chair: Milorad Papic, Idaho Power, (208)388-2343 mpapic@idahopower.com
  Vice Chair: Paul Hines, Univ. of Vermont, paul.hines@uvm.edu
  Secretary: Eduardo Cotilla-Sanchez, Oregon State University, ecs@eecs.oregonstate.edu
  WG Websites: http://sites.ieee.org/pes-camscftf/ (public)
  http://cftf.oc.ieee.org/wiki/ (private)
- **WG2: CAMS WG on High Performance Computing for Grid Analysis**
  Chair: Henry Huang, PNNL & Zeb Tate, University of Toronto
  Secretary: Jimmy Peng, National University of Singapore (jpeng@nus.edu.sg).
  Webmaster: Shrirang Abhyankar, Argonne National Laboratory (abhyshr@mcs.anl.gov).
  WG Website: http://sites.ieee.org/pes-hpcgrid/.
- **WG3: CAMS TF on Cyber Security in Power Systems**
  Chair: Manimaran Govindarasu, Iowa State University, gmani@iastate.edu
  Vice-Chair: Adam Hahn, Washington State University, ahahn@wsu.edu
  Secretary: Chee-Wooi Ten, Michigan Technology University, ten@mtu.edu
- **WG4: CAMS TF on Power System Modeling and Integration Using CIM Standards**
  Chair(s): Enamul Haq, California ISO & Margaret Goodrich, SISCO

Task Force:

- **TF3: New Tools for the operation of future Power System with very high penetration of renewable resources**
  Chair: Dr. Enamul Haq , California ISO, ehaq@caiso.com
  Vice-chair: Margaret E. Goodrich, PNNL, margaretgoodrich@earthlink.net
  Secretary: Dr. Ivana Kockar, University of Strathclyde, ivana.kockar@eee.strath.ac.uk

Activities at IEEE PES GM 2017 (Chicago)

Poster, Panel, Paper, Tutorial Events:

Title	Type	Primary Committee	Room	Session Chair 1	Session Chair 2
Power Grid Cascading - Industry Perspectives	Panel Session	(AMPS) Computer Analytical Methods	G-300 Tiered Classroom	Milorad Papic	Marianna Vaiman
Lessons Learned from Cyber Attack Incidents and How to Mitigate them?	Panel Session	(AMPS) Computer Analytical Methods	S-Arkansas	Manimaran Govindarasu	Adam Hahn
Computing in Optimization – Tales from Methodology Developers, Tool Makers and Users	Panel Session	(AMPS) Computer Analytical Methods	G-222 Multifunction Room	Feng Pan	Jeremy Lin
Tools for Managing Electricity Markets and Reliability for Grid with Very High Renewable Resources	Panel Session	(AMPS) Computer Analytical Methods	G-222 Multifunction Room	Ivana Kockar	Enamul Haq
On the Importance of Benchmarks to Drive Innovation in Grid Modeling	Panel Session	(AMPS) Computer Analytical Methods	G-306 Tiered Classroom	John Grosh	Zhenyu Huang
Future Trends in Computer Hardware for Power Grid HPC Applications	Panel Session	(AMPS) Computer Analytical Methods	G-244 Multifunction Room	Shrirang Abhyankar	John Grosh

Renewable Resources and Demand Response Integration Using the CIM Standard	Panel Session	(AMPS) Computer Analytical Methods	G-203 Executive Meeting Room	Margaret Goodrich	
AMPS Computer Analytical Methods Poster Session	Poster Session	(AMPS) Computer Analytical Methods	S-Riverwalk AB	Zhenyu Huang	

Committee and Combo Session Events:

Title	Type	Primary Committee	Room	Session Chair 1	Session Chair 2
CAMS Computer and Analytical Methods Subcommittee	Committee Meeting	(AMPS) Computer Analytical Methods	S-Old Town	Manimaran Govindarasu	
CAMS WG on the Understanding, Prediction, Prevention and Restoration of Cascading Failures	Committee Meeting	(AMPS) Computer Analytical Methods	G-306 Tiered Classroom	Milorad Papic	
CAMS TF on Power System Modeling in CIM	Committee Meeting	(AMPS) Computer Analytical Methods	S-Lakeview	Enamul Haq	
CAMS TF on Open Source Software	Committee Meeting	(AMPS) Computer Analytical Methods	G-600 Executive Meeting Room	Federico Milano	

CAMS TF on High Performance Computing for Grid Analysis and Operation	Committee Meeting	(AMPS) Computer Analytical Methods	S-Ohio	Zhenyu Huang	
CAMS TF on Cyber Security in Power Systems	Committee Meeting	(AMPS) Computer Analytical Methods	S-Columbus B	Manimaran Govindarasu	

Additional Information from WG1: Cascading Failures Working Group

List of active CFWG's Subgroups and Chairs:

- Restoration from cascading failures (Wei Sun)
- Modeling of dynamics and protection (Alex Flueck)
- Benchmarking of methodologies (Pierre Henneaux)
- PMU Subgroup (Marianna Vaiman)
- Industry Focus Group (Marianna Vaiman/Milorad Papic)

Activities at 2017 PES GM:

- **CFWG Annual Meeting**
  Monday, July 17, 11 AM - 1 PM
  Room: G-306 Tiered Classroom
- Tutorial and Training: **Industry Best Practices, Needs and Challenges in Cascading Analysis**
  Moderators: Marianna Vaiman, and Milorad Papic
  Wednesday, July 19th , 8:00 AM – 12:00 PM
  Room: Michigan A
- Panel: **Power Grid Cascading – Industry Perspectives**
  Moderators: Milorad Papic, and Marianna Vaiman
  Wednesday, July 19th , 1:00 PM – 3:00 PM
  Room: G-300 Tiered Classroom

Panels proposed for 2018 PES GM:

Proposals for the Panels at GM 2018 have not been finalized

Significant Activities:

- **WG's on Benchmarking Methodologies and Tools has been actively working since the GM 2016. As result some good work has been completed.**
- **Joint Panel CFWG and NASPI at IEEE ISGT 2017 - Industry Best Practices in Using Synchrophasor Technology was very well received.** The session had 6 speakers.
- Successful organization of Tutorial and Training: **Industry Best Practices, Needs and Challenges in Cascading Analysis**
- Plan to have a Panel organized by WG at 2018 PMAPS Conference to be held in Boise, Idaho from June 24-28, 2018

C. Distribution System Analysis Subcommittee

A formal meeting of the DSASC was held at the 2017 PES General Meeting. 27 participants were in attendance:

First Name	Last Name	Affiliation
Jason	Fuller	PNNL
Greg	Shirek	Milsoft
Kevin	Schneider	PNNL
Roger	Dugan	EPRI
Barry	Mather	NREL
Jason	Bank	EDD
Bikash	Pal	ICL
Karen	Miu	Drexel
David	Lubkeman	NCSU
Chi	Tang	McMaster Univ.
Nick	Coleman	Drexel
Josh	Hambrick	ORNL
Francis	Therrien	CYME
Nanpeng	Yu	UC-Riverside
Chenghong	Gu	Univ. of Bath
Taku	Noda	CRIEPI
Xiaohe	Yan	Univ. of Bath
Soidhas	Chouhan	Leidos
Hasala	Dharmawardena	Clemson
Alexander	Schneider Jr.	independent
Le	Xu	SCE
Qiuhua	Huang	PNNL

Lakshan	Piyasinghe	Aclara
Thomas	Wells	Navigant
Sukumar	Brahma	NMSU
Pablo	Arboleya	Univ. of Oviedo
Sarika	Khushalani-Solanki	WVU

Action Items

1. Sarika to collect proposals for next year's PES GM sessions until committee meeting on 7/19/17
2. DSASC leadership to discuss how best to handle the large numbers of papers in need of revision and TCPC duties
3. DSASC will discuss the desired process for nominating awards

Contact Information

Subcommittee Chair: Sarika Khushalani-Solanki (Sarika.Khushalani-Solanki@mail.wvu.edu)
Subcommittee Vice-Chair: Jason Fuller (jason.fuller@pnnl.gov)
Subcommittee Secretary: Barry Mather (barry.mather@nrel.gov)
Past Subcommittee Chair: Greg Shirek (greg.shirek@milsoft.com)
Subcommittee Website: http://ewh.ieee.org/soc/pes/dsacom/

Test Feeder Working Group Meeting Minutes

1. Opened meeting at 9:00
    a. Introductions with all attendees
    b. XX current members were in attendance
    c. An announcement that NAPS is being hosted at WVU was made and the organizing committee is looking for industry to host events and/or present tutorials

2. 2016 meeting minutes were approved

3. Chair Report
    a. Panel report
        i. 3 panels are scheduled – 2 on Tuesday – Advanced in Accelerated Distribution System Time-Series Analysis (10-12) and Distribution System State Estimation: Algorithms, Metering and Data Exchange (1-3), and 1 on Thursday – Advancing Distribution System Modeling Tools for PV Integration (8-10)
        ii. Poster Session on Monday night included 55 posters
        iii. WG meetings for Test Feeders and State Estimation will following this meeting sequentially
        iv. A meeting regarding awards will also take place at the meeting

4. Vice-chair report
        i. General meeting TCPC: 118 papers submitted, largest of all SC in AMPS, 350 reviewers, need many more reviewers to reduce reviewing burden, goal was 2-3 reviews per paper, 53% approval rate was obtained
        ii. Jason Fuller suggested that the DSASC should review the scope of the SC in order to better frame the focus and the papers submitted and needing review – should some topics be excluded? Kevin suggested not excluding topics but to rather setup a layer of experts under the TCPC (microgrids, smart grids, etc.) to

manage the large number of papers. The suggestion was made that the secretary of the SC be brought in to help the vice-chair with paper reviews. AMPS also manages T&D Expo – leading to a non-trivial amount of work to review papers for both meetings. A signup sheet was circulated looking for those interesting in serving in a review committee task force to handle TCPC duties for PES-GM and T&D. Volunteers included:

First Name	Last Name	Affiliation
Pablo	Arboleya	Univ. of Oviedo
Bikash	Pal	ICL
Karen	Miu	Drexel
Josh	Hambrick	ORNL
Nanpeng	Yu	UC-Riverside
Chenghong	Gu	Univ. of Bath
Soidhas	Chouhan	Leidos
Kevin	Schneider	PNNL

5. Jason Fuller – Test Feeder Working Group Update
    a. While this is a very active group this year has been a bit slow
    b. Low voltage secondary network test system and European low voltage network test case were published this year
    c. Kevin led the development of a WG paper
    d. Jason is revamping website
    e. Also, Jason is trying to put test circuit in Github so that alternate versions of the test feeders can be collected/archived
6. Bikash – WG on state estimation
    a. Setup two years ago – focuses on the distribution system level aspects of state estimation.
    b. Hosting a panel this year focusing on new algorithms and applications of certain applications (better loss accuracy etc.)

7. Discussion of new panels
    a. Jason – Test feeder working group
    b. Bikash – some panel on state estimation WG
    c. Suggestion to have a panel on using existing system data to determine secondary network topology (identification) – potential panelists include Kevin, Jason Bank, Pablo,
    d. Nanpeng - T&D integrated analysis – focus on distribution.
    e. Taku - Potential session on practices for natural disaster planning/operations – in terms of tools used to access infrastructure risk
    f. The solicitation is open for a week or so – members can think about other possible panels
    g. Tutorials seem to be difficult to get approved – tutorials are approved at the committee level

8. Award nomination procedure – still missing out on awards for papers, service, memberships, etc. in our area. The process to recommend or give awards is up to the subcommittee itself. SC leadership will discuss the awards nomination process we want to implement.

9. Closed meeting at 12:59

D. Transient Analysis and Simulation Subcommittee

Chair: Dr. Yanfeng Gong, American Electric Power, 8500 Smith's Mill Rd, New Albany, OH 43054, ygong@aep.com
Vice-Chair: Dr. Luis Marti, L. Marti Consulting, Luis@LMarticonsulting.com
Secretary: Dr. Rey Ramos, Southern Company Services, 600 North 18th Street, Birmingham, AL 35203, rramos@southernco.com
Past-Chair: Juan Martinez-Velasco, Universitat Politècnica de Catalunya ,Dept. d'Enginyeria Elèctrica 08028 Barcelona, Spain, Martinez@ee.upc.edu

Website: http://sites.ieee.org/sa-tass/

List of active WGs, and Chairs:

- WG on Field Measured Overvoltages and Their Analysis, Chair: Dr. Rey Ramos
- WG on Modeling and Analysis of Distributed Resources , Chair: Dr. Amirnaser Yazdani & Dionysios Aliprantis
- WG on Modeling and Analysis of System Transients Using Digital Programs, Chair: Dr. Albert Keri
- WG on Ferroresonance, Chair: Dr. Bruce Mork

List of active TFs, and Chairs:

- "EMT-type Modeling of Wind Turbine Generators and parks", Chair: Dr. Jean Mahseredjian
- "Portable Data & Modeling for Electromagnetic Transient Analysis Programs", Chair: Dr. Jean Mahseredjian & Craig Muller
- "Frequency Domain Methods for Transient Studies", Chair: Pablo Gomez
- "Interfacing Techniques for Simulation Tools", Chair: Xiaoyu Wang
- "Real-Time Simulation of Power & Energy Systems", Chair: Omar Faruque
- "Dynamic System Equivalents", Chair: Ali Mehrizi-Sani
- "Dynamic Average Modeling Techniques", Chair: Juri Jatskevich
- "Advances in Transformer Modeling for GIC", chair: Afshin Rezaei-Zare
- "GIC Modeling and Analysis", chair: Luis Marti
- "Dynamic Phasor Modeling Technique", Shaahin Filizadeh

Panels sponsored at 2017 PES GM:

- "**Advances in the Computation of Power System Transients",**
- "**State-of-the-art of GMD Modeling and Monitoring",**
- **"Challenges and Solutions of Interfacing Techniques for EMT/TSA Hybrid Simulation"**
- **"Modeling, Simulation, and Control of Distributed Energy Resources"**
- **"Power System Transient Overvoltages, Field Measurement and Their Analysis"**

Panels proposed for 2018 PES GM:

- " ***Aggregation Methods of Distribution Connected Resources for Bulk System Studies"***, Chair: Eknath Vittal & Andrew Keane
- "***State-of-the-art of GMD Modeling and NERC Standard TPL-007"***, Chair: Luis Marti
- "***Real-Time Simulation and Testing of Multi-Domain Systems using Detailed Modeling and Experimental Validation***", Chair Omar Faruque & Georg Lauss
- "***Computer Aided Techniques in Simulation of GMD - Challenges and Future Research***", Chair: Jean Mahseredjian
- "***Dynamic long-distance coupling of smart grid research infrastructure, models, and laboratories for distributed real-time assessment of cyber-physical energy systems***", Chair: Xiaoyu wang

Significant Activities:

- **Panel session on Modeling, Simulation, and Control of DR** was organized on Thursday 1–3 pm. The session had 5 speakers, and had attendance of ~50. The room was packed, even though this was the last day of the conference; there was standing room only.
- Panel session on **State-of-the-art of GMD Modeling and Monitoring** was well attended and the room was packed. In response to the feedback received after the PESGM 2017 panel session, I am proposing a follow-up on the state-of-the-art GMD modelling. Emphasis is placed on topics not covered in PESGM 2017, new research and the modelling challenges in the context of NERC GMD standard TPL-007.
- Two new task forces: "Use of Real-Code in EMT Models for Power System Analysis" and "Modeling Subsynchronous Osicllations(SSO) in Wind Energy Interconnected Systems" are proposed in the "Modeling and Analysis of System Transients Using Digital Programs" working group to timely address industry needs.

Website: http://sites.ieee.org/sa-tass/

E. Reliability, Risk and Probability Applications Subcommittee

Chair: Dr. Milorad Papic, Idaho Power, 1221 W Idaho Street, Boise, Idaho, mpapic@idahopower.com
Vice-Chair: Dr. Chris Dent, University of Edinburgh, James Clerk Maxwell Building, The King's Buildings, Peter Guthrie Tait Road, Edinburgh EH9 3FD. UK. Chris.Dent@ed.ac.uk
Secretary: Masood Parvania, University of Utah, Electrical and Computer Engineering, 50 S. Central Campus Drive, Room 2110, University of Utah, Salt Lake City, UT 84112, masood.parvania@utah.edu
Past-Chair: Andy Ford, PJM Interconnection | 2750 Monroe Blvd. | Audubon, PA 19403, Andrew.Ford@pjm.com

Website: http://sites.ieee.org/pes-rrpasc/

List of active WGs, and Chairs:

- WG on LOLE Best Practices, John Fazio, Chair
- WG on Probabilistic Application for Common Mode and dependent Events (PACME), Milorad Papic, Chair
- WG on IEEE Std. 762, Alex Schneider, Chair
- WG on IEEE Std. 859, Chris Dent, Chair

List of active TFs, and Chairs:

- TF on Reliability Impacts of Demand Response Integration, TF on RIDRI, Masood Parvania, Chair
- TF on Reliability Consideration in Emerging Cyber-Physical Electrical Energy Systems, Aravinthan, Visvakumar, Chair

Panels sponsored at 2017 PES GM:

- Panel session "Impact of Ramping Scarcity on Reliable Operation of Power Systems", Masood Parvania
- Panel session "Probabilistic Reliability Assessment for Grid with Increasing Uncertainty from Renewable", Dimitry Gorinevsky & Noha Abdel-Karim
- Panel session "Decision support methods for capital planning under uncertainty", Chris Dent & Ben Hobbs
- Panel session "Reliability Modeling and Evaluation of Dependent Cyber-Physical Systems", Milorad Papic & Visvakumar Aravinthan

Panels c-sponsored at 2017 PES GM:

- Panel session "Power Grid Cascading – Industry Perspectives" (Co-Chairs Milorad Papic & Marianna Vaiman)
- Tutorial "Industry Practices, Needs, and Challenges in Cascading Analysis"(Co-Chairs Milorad Papic & Marianna Vaiman)

Panels proposed for 2018 PES GM:

- Panel: Modeling of Emerging Cyber-Physical Power Systems: Challenges and Practices, chaired by Ming Ni
- Panel: Contribution of storage to resource adequacy, chaired by Kevin Carden and Ramteen Sioshansi
- Panel: Metrics for quantifying resource adequacy, chaired by Chris Dent
- Panel: IEEE Test cases, chaired by Roger Dugan

Significant Activities:

- Two members of RRPA SC have received the PES award
  - A. D. Patton, IEEE PES Roy Billinton Power System Reliability Award
  - M. Bhavaraju, IEEE PES Meritorious Service Award
- A member of RRPA SC Dr. Robert Ringlee has presented on 'Future Direction of RRPA'. This talk has initiated a lot of discussion and as a result was created a new Task Force to address some of the issues that are of interest to industry.
- A new Task Force 'Investigation of Reliability Reserves from an Actuarial Viewpoint' chaired by Howard Illian.
- RRPA SC as owner IEEE Std. 762 has approved the work that was accomplished so far. Alex Schneider is a chair of this WG.
- RRPA SC as owner IEEE Std. 859 has approved the work that was accomplished so far. Chris Dent is a chair of this WG.
- RRPA SC was co-organizer of Tutorial "Understanding Cascading Phenomenon: Methodologies and Industry Practice for Analysis of Cascading Failures" at GM 2015
- Secretary of RRPA SC is for election. Presently we are collecting the nominations and more likely vote by email.

F. Intelligent Systems Subcommittee

Chair: Zita Vale, ISEP/IPP - Instituto Superior de Engenharia do Instituto Politécnico do Porto / Polytechnic of Porto
Rua Dr. António Bernardino de Almeida, 431; 4249-015 Porto - Portugal
Email: zav@isep.ipp.pt
Vice Chair: Sukumar Mishra, IIT Delhi Hauz Khas, New Delhi 110 016, India
Email: sukumar@ee.iitd.ac.in
Secretary: Hiroyuki Mori, Meiji University
Room 1203, 4-21-1 Nakano, Nakano-ku, Tokyo 164-8525, Japan
E-mail: hmori@meiji.ac.jp
Past Chair: Alexandre da Silva, General Electric, Fairfield · GE Global Research Center,
3135 Easton Turnpike, Fairfield, Connecticut 06828, USA
E-mail: dasilva@ge.com

Website: http://sites.ieee.org/pes-iss/

List of active WGs, and the Chairs:

- 1: Intelligent Control Systems: Ganesh Kumar Venayagamoorthy, included in http://sites.ieee.org/pes-iss/
- 2: Intelligent Data Mining and Analysis: Zita Vale, http://sites.ieee.org/psace-idma/
- 3: Modern Heuristic Optimization: Kwang Lee, http://sites.ieee.org/psace-mho/
- 4: Multi-Agent Systems: Koen Kok, http://sites.ieee.org/pes-mas/

List of active TFs, and the Chairs:

- 1: Micro-Grid Control System: Jignesh Solanki, reports to the Intelligent Control Systems WG
- 2: Modern Heuristic Test Beds: José Rueda, reports to the Modern Heuristic Optimization WG
- 3: Open Data Sets: Zita Vale, reports directly to ISS, http://sites.ieee.org/pes-iss/data-sets/

Panels sponsored at 2017 PES GM

- 1: Intelligent Systems for Voltage Control in Smart Grid. Kumar Venayagamoorthy
- 2: Intelligent Control Systems for Micro-grids, G. Kumar Venayagamoorthy and Zita Vale
- 3: Resilient Control Systems for Cyber Physical Power and Energy Systems, G. Kumar Venayagamoorthy and M. Ben-Idris
- 4: Smart Grid Monitoring and Control, Zita Vale
- 5: Trusted Monitoring and Intelligent Consumption Data Management for Smart Buildings, Zita Vale and C. Chandler
- 6: Modern Heuristic Optimization Techniques for Renewable Energy Sources Integration with Energy Storage Devices: Operation and Uncertainty, S. Grillo and K. Lee
- 7: Evaluating the Performance of Modern Heuristic Optimizers on Smart Grid Operation Problems, José Rueda
- 8: Panel on Multi-agent Field Deployment Platforms, S. Widergren

Panels proposed for 2018 PES GM

- Intelligent buildings in a smart grid context: IoT and transactive energy applications, Zita Vale, Shawn Chandler, and Kumar Venayagamoorthy
- The role of datahubs and data analysis in the transition towards local energy markets, Zita Vale, Tiago Pinto, Jan Segerstam
- Transactive Approaches to Integration of Flexible Demand and Distributed Generation: Highlights from the TPWRS Special Section, Koen Kok and Steve Widergren
- Competition on Modern Heuristic Optimization for Operational Planning under Uncertainty, Jose Rueda and Istvan Erlich
- Intelligent Control of Electric Vehicles and the Grid, Kumar Venayagamoorthy, and Sukumar Mishra
- Deep learning for energy system integration, Qun Zhou
- Distributed Optimization Algorithms for Integration of Power Transmission and Distributed Networks Management, Amin Kargarian
- Enabling methodologies for Knowledge discovery from massive smart grids data-sets, Alfredo Vaccaro and Zita Vale
- Application of multi-objective heuristic optimization to power systems, Istvan Erlich and Hiroyuki Mori
- Big Data Analytics in Microgrid Operations and Control, Jignesh Solanki and Kumar Venayagamoorthy
- Intelligent Control of a Distribution System with High Penetration of Rooftop PVs, C Nakazawa and Kumar Venayagamoorthy
- Benchmark Microgrid for Intelligent Control System Studies, Jignesh Solanki, Maria Ilic, and Kumar Venayagamoorthy

Any other activities to highlight

- The initiative on Open Data Sets is evolving with a number of data sets already publicly available. The public data sets are permanently available in http://sites.ieee.org/pes-iss/data-sets. These data are intended to be used by researchers and other professionals working in power and energy related areas and requiring data for design, development, test, and validation purposes. The data sites have characteristics that make them suitable for machine learning applications, mostly regarding real measured data with frequent time samples. The initiative is being disseminated; it is announced in the subcommittee website where a Call for Open Data Sets is published.
- Organization of the Panel & Competition "Evaluating the Performance of Modern Heuristic Optimizers on Smart Grid Operation Problems" for the 2017 IEEE PES GM.
- Preparation of two publications to describe the newly developed Test Beds for Smart Grid Operation Problems and the best Ranked Algorithms. The codes of the test beds and best performing algorithms are publicly available in the Modern Heuristic Optimization WG website.
- Special Issue/Section proposal to Trans. on Power Systems. In total 83 abstracts have been submitted of which 61 were found in-scope of the special issue. After review of all abstracts by the Guest Editorial Board, 32 abstracts have been accepted for full-paper submission. So, 38% of all abstracts and 52% of the in-scope ones have passed to the next phase. The final paper submission deadline is 1st of September.
- The Book on Modern Heuristic Optimization Applications to Power Systems, which is edited by Kwang Y. Lee and Zita Vale, is in its final editing phase and will be submitted to IEEE/Wiley soon. The book will include a chapter describing the First Test Bed on Optimal Power Flow Problems used in the scope of the first competition organized by the Modern Heuristic Optimization WG.
- A book on Intelligent Data Mining and Analysis in Power and Energy Systems: Advances in models and applications as drivers for smarter efficient power systems is being organized. A Call for Sections and Chapter has been published; October 1st is the deadline for chapters and sections proposals submission.

7) Officer Reports

Chair:

- O&P Manual is updated
- Update the member roster
- Annual reports are requested by the February deadline
- The annual report for last year was not submitted
- SCs need to send accomplishments to the marketing individual twice a year
- Looking to increase the international participation at the committee level
- Portland is the next GM. T&D 18 is Denver. JTCM 2018 is in Jacksonville, Florida.

Vice-Chair:

- Give out service awards for past chairs
- Go over the Award nomination process

8) TCPC Report on the GM2017 papers

For the 2017 IEEE PES General Meeting Steve Miller was the TCPC. 296 conference papers were submitted to the PSACE area, 145 accepted 151 rejected; 49% acceptance. The breakdown by subcommittee is shown below.

	Total	Accept
MISC	2	1
CAMS	73	37
DSA	109	55
ISS	46	22
RRPA	57	28
TASS	3	1
BDA	6	1
Total	296	145

The new TCPC for the next GM is yet determined.

9) Liaison Report

None of the liaisons were present.

10) AMPS Standards Coordination

Need to coordinate with Tom McDermott

IEEE Std 762 (A. Schneider)

- Standard 762, IEEE Standard Definitions for Use in Reporting Electric Generating Unit Reliability, Availability and Productivity, is undergoing a very extensive revision to consistently measure the performance of Variable Energy Units, also referred to as “renewables”. Conference calls are being held approximately biweekly and between six and ten of the 25 members typically attend, while others submit comments. When the working group, the subcommittee and the AMPS committee leadership have approved the draft it will be submitted for IEEE-SA style review and balloting. This standard expires at the end of 2019 and the PAR for revision expires at the end of 2020.

IEEE Std 859 (C . Dent)

- Standard 859, Standard Terms for Reporting and Analyzing Outage Occurrences and Outage States of Electrical Transmission Facilities, is in the balloting process. A meeting of the Working Group will be held at the IEEE PES General Meeting to discuss resolution of comments received in the first round. This standard expires at the end of 2018 but the PAR for revision expires at the end of 2019.

IEEE Std 1729

- The DSA subcommittee is responsible for Standard 1729, IEEE Recommended Practice for Electric Power Distribution System Analysis, which does not expire until 2024.

Kwok Cheung
Secretary

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