

Minutes of the IEEE-PES-AMPS Committee Main Meeting

IEEE-PES-General Meeting 2018

Wednesday, August 8th, 2018 9:00 – 12:00
Double Tree by Hilton Portland – Mt St. Helens
Portland, Oregon

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 | PESGM2018 |
|------------|--------------------|-------------------------------|-----------|
| Aleksa | Babk | Southern Company | X |
| Spyros | Chataivasileiodis | DTU Tech Univ Denmark | X |
| Ying | Chen | Tshmahua Univ | X |
| Yousu | Chen | PNNL | X |
| Kwok | Cheung | Alstom Grid | X |
| Hung-Ming | Chou | Dominion Energy | X |
| Chris | Dent | University of Edinburgh | X |
| | Fiorino | IEEE/PES | X |
| Yangfeng | Gong | AEP | X |
| Stephen | Gord | NREL | X |
| Manimaran | Govindarasu | Iowa State University | X |
| Thomas | Gwin | NRECA | X |
| Catherine | Hurley | AEP | X |
| Sarika | Khusalani-Solokani | WVU | X |
| Qifeng | Li | Univ of Central Florida | X |
| Edwin | Liu | ITRI, Taiwan | X |
| Luis | Marti | LMC | X |
| Barry | Mather | NREL | X |
| Steve | Miller | Commonwealth Associates, Inc. | X |
| Sukumar | Mishra | IIT Delhi | X |
| Joydeep | Mitra | Michigan State University | X |
| Hiro | Mori | Meyji Univ | X |
| Phuong | Nguyen | Eindhoven Univ of Technology | X |
| Dagmar | Niebur | Drexel University | X |
| Milorad | Papic | Idaho Power | X |
| Zhouyang | Ren | Chongquig | X |
| Alex | Schneider | | X |

| | | | |
|---------|-----------|--------------------------------|---|
| Kevin | Schneider | Pacific Northwest National Lab | X |
| Jignesh | Solanki | West Virginia University | X |
| Qin | Wang | EPRI | X |
| Martin | Wolter | OVGU | X |
| Ming | Wu | Arizona State Univ | X |
| Le | Xie | Texas A&M University | X |
| Malia | Zaman | IEEE-SA | X |
| Sina | Zarrabian | SUNY | X |
| Mike | Zhou | State Grid EPRI China | X |

36 persons being present for parts or the entire meeting. Introductions were made.

2) Adopt Agenda

The agenda was adopted.

3) Approval of 2017 Meeting Minutes

The 2017 meeting minutes were approved unanimously.

4) IEEE Staff Presentation on GDPR Requirements

As an international organization IEEE must abide by European law. The GDPR recently passed in the EU requires that protections of privacy, limited usage of e-mail and the right of individuals to be removed from lists. IEEE will be rolling out “12Signup” to help address this matter.

5) AMPS Quorum

There was a long discussion of a quorum and, by extension, membership. The O&P (<http://sites.ieee.org/amps/files/2016/08/AMPS-Organization-Procedures-7-19-2016.pdf>) defines a Quorum as follows:

Fifty percent (50%) of the voting membership of the Committee shall constitute a quorum. Actions which require a majority (greater than 50%) taken at a scheduled meeting lacking a quorum may be subsequently validated through approval of the meeting minutes or through approval by special letter ballot. Such approvals shall require an affirmative majority vote. A quorum shall be identified before the initiation of AMPS Committee business at a meeting, but if a quorum is not present, actions may be taken subject to confirmation by letter or electronic ballot. When the voting membership is less than 50 voting members, a quorum shall be defined as a majority of the current total voting membership. When the voting membership is 50 or more voting members, a quorum shall be defined as 10% of the current total voting membership or 26, whichever is greater. Voting members who recuse themselves shall not be counted in the equation to determine whether a quorum exists.

6) Subcommittee Reports

A. Big Data & Analytics for Power Systems Subcommittee

Chair: Le Xie, Texas A&M, le.xie@tamu.edu

Vice Chair & TCPC: Yannan Sun, Oncor Electric Delivery, yannan.sun@oncor.com

Secretary: Hung-Ming Chou, Dominion Energy, hung-ming.chou@dominionenergy.com

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.
<https://bigdata.seas.gwu.edu/>

List of active TFs, and the Chairs:

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

Panels sponsored at 2018 PES GM

- Smart Meter Analytics: From Consumer Behavior to Planning, Ram Rajagopal
- Big Data Analytics Focused on End-Use Customers in Power Distribution Systems, Nanpeng Yu, Haiwang Zhong
- Best Practices in Public Sharing of Big Data in Power Systems, Ning Zhou, Hamed Mohsenian-Rad
- Big Data Analytics for Flexible Electricity Networks, Markets and Prosumers, Ran Li, Tao Hong
- Big Data Analytics for Emerging Power Sensors and Internet-of-Things, Hamed Mohsenian-Rad, Emma Stewart
- High Performance Computing and Big Data Analytics for Large Scale Power System Planning Problems, Dimitri Papageorgiou, Yingzhong Gu
- Super session: Data Science and Data Quality as Applied to Power System, Le Xie, Nanpeng Yu

Panels proposed for 2019 PES GM

- Big data analytics for power systems' economy, reliability and security, Wei Hu, Nanpeng Yu
- Frontiers of big data analytics in the operations and maintenance for power distribution systems, Zhouyang Ren, Yunhe Hou
- Data analytic tools for dynamic security assessment of bulk power system, Rafael Segundo, Petr Korba, Emilio Barocio
- Predictive analytics for grid applications, Jie Zhang, Yingchen Zhang
- Data-driven approach to power system analysis, Zhifang Yang, Deepjyota Deka

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: (Plan to work on this with Web Chair for AMPS)

List of active WGs, and the Chairs

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 WG 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 WG on Power System Modeling and Integration Using CIM Standards**

Chair(s): Enamul Haq, California ISO & Margaret Goodrich, SISCO

Task Force:

- **TF1: New Tools for the operation of future Power System with very high penetration of renewable resources**

Chair: Dr. Ivana Kockar, University of Strathclyde, ivana.kockar@eee.strath.ac.uk

Vice-chair: Margaret E. Goodrich, PNNL, margaretgoodrich@earthlink.net

Secretary: Dr. Enamul Haq, California ISO, ehaq@caiso.com

Activities at IEEE PES GM 2018 (Portland, ID)

Panel Sessions: (IEEE PES GM 2018)

New Computer Architectures – Survival Guide for Programming for Performance and Portability

Session Type: Panel Session
Time: Tuesday, August 7, 2018 10:00 AM-12:00 PM
Room: OC-A105
Committee: (AMPS) Computer Analytical Methods
Chair 1: John Grosh; Lawrence Livermore National Laboratory

Challenges of Cascading Failure Analysis: Modeling, Data and Interdependence

Session Type: Panel Session
Time: Wednesday, August 8, 2018 1:00 PM-5:00 PM
Room: OC-D131
Committee: (AMPS) Computer Analytical Methods
Chair 1: Paul Hines; University of Vermont
Chair 2: Ian Dobson; Iowa State University

Centralized Network Model Management Integration Using the CIM Standards

Session Type: Panel Session
Time: Thursday, August 9, 2018 8:00 AM-10:00 AM
Room: OC-D139
Committee: (AMPS) Computer Analytical Methods
Chair 1: Margaret Goodrich; Project Consultants, LLC

State-of-the-art in HPC tools in the Real-time and HIL simulation of Macro and Micro Grid technologies

Session Type: Panel Session
Time: Thursday, August 9, 2018 8:00 AM-10:00 AM
Room: OC-D137
Committee: (AMPS) Computer Analytical Methods
Chair 1: Innocent Kamwa; Hydro-Quebec
Chair 2: Mallikarjuna Vallem; TBD

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

Session Type: Panel Session
Time: Thursday, August 9, 2018 1:00 PM-3:00 PM
Room: OC-E145
Committee: (AMPS) Computer Analytical Methods
Chair 1: Dimitri Papageorgiou; ExxonMobil Research & Engineering
Chair 2: Yingzhong Gu; GE

Committee Events: (IEEE PES GM 2018)

| Date | Time | Title | Room |
|---------------------------|-------------------|---|-----------------|
| Monday, August 6, 2018 | 11:00 AM-12:00 PM | CAMS TF on Power System Modeling in CIM | DP-Washington |
| Monday, August 6, 2018 | 11:00 AM-1:00 PM | CAMS WG on the Understanding, Prediction, Prevention and Restoration of Cascading Failures | OC-B114 |
| Monday, August 6, 2018 | 1:00 PM-2:00 PM | CAMS TF on Cyber Security in Power Systems | DP-Washington |
| Monday, August 6, 2018 | 3:00 PM-4:00 PM | CAMS Computer and Analytical Methods Subcommittee | DP-Washington |
| Wednesday, August 8, 2018 | 8:00 AM-9:00 AM | New Tools for the Operation of Future Power Systems with Very High Penetration of Renewable Resources | OC-A107 |
| Wednesday, August 8, 2018 | 11:00 AM-12:00 PM | CAMS TF on High Performance Computing for Grid Analysis and Operation | DP-Mt. Bachelor |

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)

Panels proposed for 2018 PES GM:

- A total of seven panel proposals were submitted to PES GM 2019.
- Four proposals are selected to go forward, totaling 10 hours.

Significant Activities:

- WG on Cybersecurity for the Power Systems had a 4-hour panel session under the sponsorship of Technical Committee on Communications and Cybersecurity. The session was overwhelmingly successful.

- WG on Benchmarking Methodologies and Tools has been actively working since the GM 2016. As result some good work has been complete. ---- end of the report ----

C. Distribution System Analysis Subcommittee

Chair: Sarika Khushalani Solanki, West Virginia University, skhushalanisolanki@mail.wvu.edu

Vice Chair: Jason Fuller, PNNL, Jason.fuller@pnnl.gov

Secretary: Barry Mather, NREL, barry.mather@nrel.gov

Past Chair: Greg Shirek, Milsoft, greg.shirek@milsoft.com

Website: <http://sites.ieee.org/pes-dsacom/>

List of active WGs, and the Chairs:

- 1: Distribution Test Feeder Working Group, Jason Fuller, <http://sites.ieee.org/pes-testfeeders/>
- 2: Working Group on Distribution State Estimations: Practical challenges, limitation of current tools and way forward, Bikash Pal, None Listed
- 3: Working Group on Spatial-temporal data for Distribution Systems Analysis, Nanpeng Yu and Sridhar Chouhan (Proposed)

List of active TFs, and the Chairs:

- 1: None

Panels sponsored at 2018 PES GM

- Advancements in Power System Analysis Test Cases, Roger Dugan
- Topology and Parameter Identification in Electric Power Distribution Systems, N. Yu and M. Lave

Panels proposed for 2019 PES GM

- Distribution System Hierarchical Load Modeling: Needs, Trends and Methodologies, Dongbo Zhao
- Transient Modeling and Analysis of Distribution Systems, Dongbo Zhao
- Optimization methods for unbalanced power distribution systems, Anamika Dubey, Mads R. Almassalkhi, Sumit Paudyal
- Quasi Static Time Series (QSTS) Analysis Applications to Smart Distribution Systems, Sridhar Chouhan and Barry Mather

Any other activities to highlight

Distributed Energy Resource (DER) Interconnection Studies Considering IEEE 1547-2018 Standard, Sridhar Chouhan – Tutorial accepted for GM2019

Rotation of positions this year with new secretary elected as Arturo Bretas- University of Florida and secretary elect as Sridhar Chouhan - Leidos

D. Transient Analysis and Simulation Subcommittee

Chair: Yanfeng Gong, Vice Chair: Luis Marti

Subcommittee Activities Overview

There were total 54 technical papers submitted to 2018 PES general meeting for TASS for reviewing. After peer review process, 27 papers were selected to be accepted.

TASS organized 5 panel sessions as listed in the follow table. All the panel sessions were well attended.

| Title | Attendance | Length | Speakers | Session Chair |
|--|------------|--------|----------|--------------------|
| Real-Time Simulation and Testing of Multi-Domain Systems using Detailed Modeling and Experimental Validation | 40 | 2 | 5 | Omar Faruque |
| Dynamic long-distance coupling of smart grid research infrastructure, models, and laboratories for distributed real-time assessment of cyber-physical energy systems | 60 | 4 | 8 | Xiaoyu Wang |
| Computer Aided Techniques in Simulation of GMD - Challenges and Future Research | 50 | 3 | 10 | Afshin Rezaei-Zare |
| State-of-the-art of GMD Modeling and NERC Standard TPL-007 | 40 | 2 | 4 | Luis Marti |
| Dynamic Phasor Modeling and Simulation of Power Systems | 50 | 3 | 6 | Shaahin Filizadeh |

Subcommittee website: <http://sites.ieee.org/sa-tass/>

Under the current structure, TASS has the following working groups and Task Forces:

Working Group on Modeling and Analysis of System Transients using Digital Programs, Chair: *Xiaoyu Wang*, Email: *xiaoyuw@doe.carleton.ca*

- Task Force on Frequency Domain Methods for Transient Studies, Chair: *Pablo Gomez*, Email: *pablo.gomez@wmich.edu*
- Task Force on Real-Time Simulation of Power & Energy Systems, Chair: *Omar Faruque*, Email: *faruque@caps.fsu.edu*

- Task Force on Interfacing Techniques for Simulation Tools, Chair: *Xiaoyu Wang*, Email: xiaoyuw@doe.carleton.ca
- Task Force on Dynamic Average Modeling Techniques, Chair: *Juri Jatskevich*, Email: jurij@ece.ubc.ca
- Task Force on Portable Data & Modeling for Electromagnetic Transient Analysis Programs, Chair: *Jean Mahseredjian*, Email: jean.mahseredjian@polymtl.ca
- Task Force on EMT Modeling of Wind Turbine Generators and Parks, Chair: *Jean Mahseredjian*, Email: jean.mahseredjian@polymtl.ca
- Task Force on Dynamic Phasor Modeling Technique, Chair: *Shaahin Filizadeh*, Email: Shaahin.Filizadeh@umanitoba.ca
- Task Force on Use of Real-Code in EMT Models for Power System Analysis, Chair: *Garth Irwin*, Email: gdi@electronix.com
- Task Force on Modeling Subsynchronous Oscillations in Wind Energy Interconnected Systems, Chair: *Yunzhi Cheng*, Email: Yunzhi.Cheng@ercot.com

Working Group on Ferroresonance, Chair: *Bruce Mork*, Email: bamork@mtu.edu

Working Group on Geomagnetic disturbance (GMD) and Geomagnetic ally Induced Current(GIC),
Chair: *Luis Marti*, Email: luis@lmarticonsulting.com

- Task Force on Transformer Modeling for GIC Studies, Chair: *Afshin Rezaei-Zare*, Email: afshin.rezaeizare@gmail.com

Working Group on Field Measured Overvoltages and Their Analysis, Chair: *Ilhan Kocar*,
Email: ilhan.kocar@polymtl.ca

Working Group “Modeling and Analysis of System Transients using Digital Programs” report

Task Force 1: Interfacing Techniques for Simulation Tools (Chair: Xiaoyu Wang)

- 1 TF paper was prepared, 1 4-hour panel session was organized on this GM.

Task Force 2: Real-Time Simulation of Power & Energy Systems (Chair: Omar Faruque)

- 2 TF papers were submitted, 1 TF paper was prepared. 1 panel was organized on this GM.

Task Force 3: Real-Time Simulation of Power & Energy Systems (Chair: Jean Mahseredjian)

- 1 TF paper submitted (rejected). The TF chair proposed to change the TF name to EMT-type Modeling of Converter-based renewable energy resources. Also, the chair mentioned that there is overlap between this TF and the new TF Modeling Subsynchronous Oscillations in Wind Energy Interconnected Systems.

Task Force 4: Use of Real-Code in EMT Models for Power System Analysis (Chair: Garth Irwin)

- This is a new TF and the first TF meeting on this GM is very successful.
- **Minutes and Discussion:**
- - approx 50 people attended (with a few other members who could not attend). A signup sheet was distributed, asking for email and contact information to join the task force.
- - discussion on other efforts that may be coordinated (G Irwin will contact IEC 61400-27-1 developers for example).
- - discussion on whether the scope should be expanded to include real-code models for transient stability programs (general consensus was "not at this time").
- - ultimate deliverable of the task force is a white paper as the initial target (although many attendees suggest this eventually become a standard - TBD).
- - paper should include requirements for documentation, capabilities and limitations of the recommended approaches.
- - recommendations should also consider parameters/settings for the models (so they are aligned with settings from the field).
- - use of Linux/DBus was suggested as a possible messaging platform (as opposed to DLLs and Windows simulation tools) – TBD.
- - consideration should be given to version control and methods of synchronize models to updates in field controls.
- - validation should be part of the scope.
- - test cases should be proposed (for challenging conditions where real-code models are warranted, such as low SCR conditions etc.).

Task Force 5: Dynamic System Equivalents (Chair: Ali Mehrizi-Sani)

- The chair proposed to close the TF due to lack of interest.

Task Force 6: Dynamic Average Modeling Techniques (Chair: Juri Jatskevich)

- 2 TF papers are under preparation.

Task Force 7: Dynamic Phasor Modeling Technique (Chair: Shaahin Filizadeh)

- This TF replaced the previous TF Modeling of Induction Machines on the 2018 GM. 1 panel was organized on this GM.

Task Force 8: Portable Data & Modeling for Electromagnetic Transient Analysis Programs (Chair: Jean Mahseredjian)

- 1 TF paper was prepared. The TF chair proposed to suspend the TF and then close the TF on the next year GM before the TF paper is published.

Task Force 9: Modeling Subsynchronous Oscillations in Wind Energy Interconnected Systems (Chairs: Yunzhi Cheng, Lingling Fan)

- This is a new TF on this GM meeting.

Task Force 10: Transformer Modeling for GIC Studies (Chair: Afshin Rezaei-Zare)

- This is a new TF on this GM meeting.

Task Force 11: GIC Modeling and Analysis (Chair: Luis Marti)

- 1 panel session was organized. TF 10 and TF 11 are suggested to be combined due to overlap.

Working Group on Ferroresonance, Chair: Bruce Mork, Email: bamork@mtu.edu

No meeting was held

Working Group on Geomagnetic disturbance (GMD) and Geomagnetic ally Induced Current (GIC)

Panel session “GMD Modelling, Tools, and Future Research in the Context of NERC GMD Standard” report

4 hours 11 presenters. One did not obtain a visa and did not make a presentation for someone else to present.

Room was full - standing room only at times.

Unsolicited feedback was very positive. From audience perspective, the quality of the presentations varied from very good to blatant marketing to self-promotion. Quality should more consistent in the future.

TF “GIC modelling”

12 attendees.

One topic was dropped (How to reverse engineer thermal response measure using a weak source). . Last year’s volunteers did not show up and did not communicate any progress since last meeting.

NRCAN has hired a resource to work on the coastal effects topic.

New topic: Magnetometer installation guide (shared experiences and lessons learned). Have support from AEP, NRCAN, probably Hydro One, EPRI, CPI).

E. Reliability, Risk and Probability Applications Subcommittee

Chair: Chris Dent, University of Edinburgh and Alan Turing Institute, chris.dent@ed.ac.uk

Vice Chair: Masood Parvania, The University of Utah, masood.parvania@utah.edu

Secretary: Visvakumar Aravinthan, Wichita State University, visvakumar.aravinthan@wichita.edu

Past Chair: Milorad Papic, Idaho Power, mpapic@idahopower.com

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

List of active WGs, and the Chairs:

- WG on Review of IEEE Standard 762, Alex Schneider, aschneiderjr@sbcglobal.net
- WG on Review of IEEE Standard 859, Chris Dent, chris.dent@ed.ac.uk [Note standards WGs may be officially under AMPS)
- WG on Probability Applications for Common Mode Outages, Milorad Papic, mpapic@idahopower.com, <http://sites.ieee.org/pes-rrpasc/working-groups/wg-on-probability-application-for-common-mode-events-pacme/>
- WG Loss of Load Expectation Best Practices, Phil Fedora, pfedora@npcc.org, <http://sites.ieee.org/pes-rrpasc/working-groups/wg-on-lole-best-practices/>

List of active TFs, and the Chairs:

- TF on Reliability Impacts of Demand Response Integration, Masood Parvania, masood.parvania@utah.edu
- TF on Reliability Consideration in Emerging Cyber-Physical Electrical Energy Systems, Visvakumar Aravinthan, visvakumar.aravinthan@wichita.edu
- TF on Capacity Value of Solar Power, Chris Dent, chris.dent@ed.ac.uk
- TF on Update of the IEEE Reliability Test System, Clayton Barrows and Chris Dent, Clayton.Barrows@nrel.gov and chris.dent@ed.ac.uk
- There is a draft proposal for a TF on “High-efficiency Computation methods and Tools of Composite System Reliability Assessment” chaired by Yu Juan, 148454745@qq.com – this will be passed to AMPS when the RRPA Officers have approved it from their perspective
- There is a tentative proposal for a TF on a topic related to power system resilience – this may be proposed officially at the 2019 PES GM, following development of technical scope and coordination with other relevant activities across PES

Panels sponsored at 2018 PES GM

- “Increased Need for Probabilistic System Operation and Planning in the 21 Century” organized by Noha Abdel-Karim & Julie Jin
- “Metrics for Resource Adequacy Assessment” organized Chris Dent
- “Modelling of Emerging Cyber-Physical Power System: Challenges and Practices” organized by Ming Ni (transferred to another committee at JTC meeting)
- “Resource Adequacy and Reliability Contributions of Energy Storage” organized by Ramteen Sioshansi and Kevin Carden (transferred to another committee at JTC meeting)

Panels proposed for 2019 PES GM

- Not confirmed yet – deadline for proposals has not yet passed

Any other activities to highlight

- Awards and honors: George Anders received the Roy Billinton Power System Reliability Award, Alex Schneider was elevated to Fellow of the IEEE, and Chanan Singh attained membership of the National Academy of Engineering
- With sorrow, the RRPA Subcommittee received news of the passing of John Endrenyi, one of the major figures in its field

F. Intelligent Systems Subcommittee

Chair: Sukumar Mishra, IIT Delhi

Hauz Khas, New Delhi 110 016, India

Email: sukumar@ee.iitd.ac.in

Vice Chair: Hiroyuki Mori, Meiji University

Room 1203, 4-21-1 Nakano, Nakano-ku, Tokyo 164-8525, Japan

E-mail: hmori@meiji.ac.jp

Secretary: Kwang Y. Lee, Baylor University

One Bear Place #97356, Waco, TX 76798-7356

E-mail: Kwang_Y_Lee@baylor.edu

Past Chair: Zita Vale, ISEP/IPP

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Email: zav@isep.ipp.pt

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

List of active WGs, and the Chairs:

- 1: Intelligent Control Systems: Ganesh Kumar Venayagamoorthy, <http://www.ele.uri.edu/ieee-scci2017/>
- 2: Intelligent Data Mining and Analysis: Zita Vale, <http://www.ele.uri.edu/psace-idma/>
- 3: Modern Heuristic Optimization: Kwang Lee, <http://www.ele.uri.edu/pes-/>
- 4: Multi-Agent Systems: Koen Kok, [http:// sites.ieee.org/pes-mas/](http://sites.ieee.org/pes-mas/)

List of active TFs, and the Chairs:

- 1: Micro-Grid Control System: Jignesh Solanki that reports to WG Intelligent Control Systems

- 2: Modern Heuristic Test Beds: José Rueda that reports to WG Modern Heuristic Optimization
- 3: Open Data Set: Zita Vale that reports to WG Intelligent Data Mining and Analysis, <http://sites.ieee.org/pes-iss/data-sets/>

Panels proposed for 2017 PES GM

- 1: Intelligent Systems for Voltage Control in Smart Grid, G. 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 Shawn Chandler
- 6: Modern Heuristic Optimization Techniques for Renewable Energy Sources Integration with Energy Storage Devices: Operation and Uncertainty, S. Grillo and Kwang Lee
- 7: Evaluating the Performance of Modern Heuristic Optimizers on Smart Grid Operation Problems, José Rued Torres
- 8: Multi-agent Field Deployment Platforms, S. Widergren

Panels proposed for 2018 PES GM

- 1: Emerging heuristic optimization algorithms for operational planning of sustainable electrical power systems, José Rueda Torres
- 2: Intelligent buildings in a smart grid context: IoT and transactive energy applications, Zita Vale and Shawan Chandler
- 3: The role of datahubs and data analysis in the transition towards local energy markets, Zita Vale and Ning Liu
- 4: Optimization Algorithms for Power Transmission and Distribution Networks Management, Amin Kargarian
- 5: Deep Learning and Smart Grid Applications, Qun Zhou and Qihua Huang

7) Officer Reports

Chair:

- See Quorum Discussion Above

Vice-Chair:

- None

8) TCPC Report on the GM2018 Papers and Panels

Stephen Miller presented a summary of the statistics for this year's General Meeting. The papers submitted and reviewed were as follows:

| Subcommittee | Accepted | Rejected | Total | Transaction |
|--------------|----------|----------|-------|-------------|
| BDA | 19 | 25 | 44 | 3 |
| CAMS | 25 | 28 | 53 | 13 |
| DSA | 32 | 32 | 64 | 8 |
| ISS | 17 | 27 | 44 | 5 |
| RRPA | 19 | 25 | 44 | 10 |
| TASS | 22 | 27 | 49 | 5 |
| Total | 134 | 164 | 298 | 44 |

The realized acceptance rate is 45%. AMPS quota is 50%. There were 44 Transaction papers.

AMPS has a nominal quota of 14 four-hour panels or 56 total hours of panel time. We were allowed 16 four-hour panels this year. The actual summary of panel sessions is as follows:

| Subcommittee | Panels | Hours |
|------------------------------|---------------|--------------|
| AMPS | 1 | 2 |
| BDA | 5 | 14 |
| CAMS | 5 | 12 |
| DSA | 3 | 4 |
| ISS | 5 | 12 |
| RRPA | 2 | 4 |
| TASS | 4 | 12 |
| Subtotal (Native) | 25 | 60 |
| CAMS (PSCC) | 1 | 3 |
| ISS (SBLC) | 1 | 4 |
| RRPA (ESSB & PSCC) | 2 | 5 |
| Subtotal (Farmed Out) | 4 | 12 |
| Super Session | 1 | 4 |
| Total | 30 | 76 |

We were prepared with very good panels that we offered to committees that did not use their quota and we were ready with a proposal for the super session chair.

Mechanically, committee meetings are accomplished by copying the previous year's meeting forward. We could do a better job by feeding the information back to the subcommittee chairs and making sure the process is executed early.

Jason Fuller will be the TCPC for 2019

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.

Stephen Miller
AMPS Secretary

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