

IEEE PES INTELLIGENT SYSTEMS SUBCOMMITTEE MEETING

Minutes

IEEE PES GM 2015, Denver, CO, USA

Date and Time: Tuesday, 28th July 2015, 11am to 1pm

Venue: Sheraton Denver Downtown Hotel

Denver, CO, USA, Room: Beverly

Chair: Zita Vale, Polytechnic of Porto, Portugal

Vice-Chair: Sukumar Mishra, Indian Institute of Technology, Delhi, India

Technical Secretary: "To be appointed"

AGENDA

1. Welcome and introduction of attendees
2. Approval of the Minutes of the 2015 ISS Washington meeting
3. Announcements: Panels, Paper Sessions and Paper Forums
4. Working Group and Task Force Activities
 - 4.1 Working Group on Multi-Agent Systems: TBA
 - 4.1.1 Task Force on Agent-Based Modeling: Ivana Kockar, Koen Kok, and Zita Vale
 - 4.2 Working Group on Intelligent Control Systems: Ganesh Kumar Venayagamoorthy
 - 4.2.1 Task Force Micro-Grid Control System: Jignesh Solanki
 - 4.3 Working Group on Intelligent Data Mining and Analysis: Zita Vale
 - 4.4 Working Group on Modern Heuristic Optimization: Kwang Lee
 - 4.5 Review of WG and Task Force activities
5. ISS website
6. Linking ISS activities to application areas and industrial interests
7. Panels and Paper sessions for GM 2016 and other meetings
8. Tutorials
9. Other Business
10. Next Meeting and adjournment.

1. Welcome and introduction of attendees

The meeting started at 11am. The chair welcomed everyone to the Intelligent Systems Subcommittee (ISS) meeting and passed around an attendance list, which was signed by 17 people attending the meeting. Several sub-committee members informed that they could not participate due to a ISS panel session which has been scheduled in parallel with the subcommittee meeting.

2. The minutes of the ISS meeting at IEEE PES GM 2014 in Washington were approved.

3. Announcements

The Chair announced the list of panels supported by the ISS during the 2015 IEEE PES GM. This information is summarized in table 1.

Table 1: Panel Sessions sponsored by the IS Subcommittee in IEEE PES GM 2015, Denver

Session Type	Session Title	Time & Venue
Panel	From smart metering and PMU data to intelligent power and energy management	Monday, 27 July, 3:00 PM–5:00 PM
Panel	Stochastic Optimization for SmartGrid Operation	Tuesday, 28 July, 8:00 AM–12:00 PM
Panel	Coordinated control of AC and DC microgrids	Tuesday, 28 July, 1:00 PM–3:00 PM
Panel	Benchmarking challenges and test systems for intelligent control and management	Thursday, 30 July, 8:00 AM–10:00 AM

4. Working Group (WG) and Task Force (TF) Activities

4.1 Working Group on Multi-Agent Systems – Chair position: TBA

The WG meeting has been attended by 26 people.

Nikos Hatziargyriou will ensure the chair of the WG till another chair is appointed. Koen Kok suggested to have a group to lead the WG.

A tutorial titled “Intelligent Systems Support for Transactive Energy Systems: The Fundamentals” has been delivered yesterday, Sunday, 26th July, by Koen Kok, Leigh and Steve Widergren. About 21 people assisted and gave a very positive feedback.

The WG has organized two panels on transactive energy, one addressing more academic aspects and the other more on the industrial side, that took place during IEEE ISGT Europe 2014. The panel proposed by the WG for the 2015 PES GM is not in the program because the request of detailed information about panelists and chairs seems to have been lost.

The WG webpage is out of date and will be updated shortly.

The WG scope is being discussed according to the most recent activities in the area.

The working group proposes a panel for IEEE PES GM 2016 with tentative title “Challenges and opportunities in implementing multi-agent systems”. Ryan May (rmay@intwineconnect.com), Steven McArthur, Nikos Hatziargyriou will lead the organization and prepare an abstract to propose the session.

The WG is planning another tutorial more oriented towards details of the agent modeling. Some of existing material can be used for webinars. The WG is thinking on organizing monthly webinars; IEEE has a webinar program going on; The group will check the conditions to include webinars in that program (Steve McArthur will get that information).

4.2 Working Group on Intelligent Control Systems- Chair Ganesh Kumar Venayagamoorthy, Clemson University, USA

The WG meeting has been attended by 30 people.

The WG is proposing three panel sessions for IEEE PES GM 2016 with the following tentative titles:

- Voltage control in MV systems involving DG
- Control systems for frequency response and regulation with high penetration of variable generation
- Impact of communication systems on advanced control systems

The WG chair announced the upcoming Symposium on Computational Intelligence Applications in Smart Grids (CIASG) to be held in the scope of IEEE SSCI Symposium Series, which will take place in Cape Town, South Africa in December 2015. Power Systems Conference 2016 will take place in Clemson USA in March 2016; the submission period is still open.

4.2.1 Task-Force on Micro-Grid Control System – Chair: Jignesh Solanki

The TF activities have been reported by Sukumar Mishra. The TF meeting has been attended by 32 people.

4.3 Working Group on Intelligent data Mining and Analysis- Chair: Zita Vale, Polytechnic of Porto, Portugal

The working group meeting has been attended by 33 people. The most important points of the meeting are the planned panels, and the work on the public data sets for R&D activities which are made available in the working group website (<http://sites.ieee.org/psace-idma/data-sets/>).

4.4 Working Group on Modern Heuristic Optimization: Chair :Kwang Lee,Baylor University

The WG chair announced the new WG webpage.

The WG is organizing a competition on the use of MHO for Optimal Power Flow. The information about the competition is available in the WG website.

Regarding the book that is being prepared by the WG, the chair is requesting final contributions to finalize the work.

4.5 Review of Working Group and Task Force activities

IEEE PES is undertaking a re-organization of WG and TF, so as to avoid overlapping. ISS scope is well defined so the subcommittee is likely to remain with the same organization. The ISS request to formalize two new TFs, which are already operating and producing results:

- TF on Modern Heuristic Optimization Test Beds, in the scope of MHO WG
- TF on Open Data Sets

has not yet succeeded, maybe due to the current re-organization process. The importance of the request will be emphasized in the Wednesday PSACE meeting.

After the re-organization process, the ISS will propose a new WG or TF on Internet of Things (IOTS) to be co-chaired by Ratnesh Sharma and by Ganesh Kumar Venayagamoorthy.

5. Other Technical Activities - ISS Website

Working groups and task forces are requested to create and/or update their own websites. The members of ISS encouraged to send the relevant information to be published in the ISS website to forward the updates to Zita Vale, Polytechnic of Porto, Portugal (email.zitavale@gmail.com).

6. Linking ISS activities to application areas and industrial interests

The need for increasing the participation from industry was emphasized and ISS members were encouraged to effective actions to increase the industry participation in the subcommittee. It was reiterated that effort to be made to organize panels with special invitees from industries.

7. Panel and paper sessions for IEEE PES GM 2016 and other meetings

ISS supports four panel sessions taking place in the scope of the IEEE PES GM 2015, as listed in table 1. The details of the panel sessions proposed for the IEEE PES GM 2016 are given in table 2.

Table 2: Panel Sessions proposed by the ISS for the IEEE PES GM 2015, Denver, Colorado, USA

WG/TF	Chair/Organizer		Session Title
	Name	Email	
WG ICS	Ganesh Kumar Venayagamoorthy	gvenaya@clemsun.edu	Impact of communication systems on advanced control systems
WG ICS	Ganesh Kumar Venayagamoorthy	gvenaya@clemsun.edu	Voltage control in MV systems involving DG
WG ICS	Ganesh Kumar Venayagamoorthy	gvenaya@clemsun.edu	Control systems for frequency response and regulation with high penetration of variable generation
WG IDMA	Zita Vale	email.zitavale@gmail.com zav@isep.ipp.pt	Using smart metering and PMU data to enable intelligent smart grid operation
WG MAS	Ryan May Steve Widergren Nikos Hatziaargyriou	rmay@intwineconnect.com Steve.Widergren@pnml.gov nh@power.ece.ntua.gr	Challenges and opportunities in implementing multi agent system
WG MHO	Istvan Erlich Jose Rueda	istvan.erlich@uni-due.de j.l.ruedatorres@tudelft.nl	Modern Heuristic Optimization Techniques for Renewable Energy Sources Integration with Energy Storage Devices: Optimization under Uncertainty
WG MHO	Istvan Erlich Jose Rueda	istvan.erlich@uni-due.de j.l.ruedatorres@tudelft.nl	Competition on Solution of Smart Grid Operation's Stochastic Optimization Problems based on Modern Heuristic Optimization Algorithms

One or two additional panel proposals will be discussed with the Big Data Analytics TF. Besides these panel sessions, several other topics are being considered for panel sessions to be organized in the scope of other meetings (IEEE ISGT, IEEE PES T&D, IEEE ISGT Europe, ISAP).

8. Tutorials

The MAS WG is proposing a new edition of the tutorial “Intelligent Systems Support for Transactive Energy Systems: The Fundamentals” for the IEEE PES GM 2016.

The MAS WG is planning another tutorial more oriented towards details of the agent modeling. Some of existing material can be used for webinars. The WG is thinking on organizing monthly webinars; IEEE has a webinar program going on; The group will check the conditions to include webinars in that program (Steve McArthur will get that information).

The WG on intelligent control is preparing a tutorial proposal for the GM 2017.

9. Other Business

ISS officers rotated last January. Alexandre da Silva is now past Chair and will be in charge of organizing the subcommittee award activities. The new ISS technical secretary will be announced shortly.

Eduardo Asada is the new secretary of the MHO WG.

10. Next meeting

The next meeting of ISS will take place in Boston, Massachusetts, in the scope of IEEE PES GM 2016.

The meeting was adjourned at 01:00pm