Minutes for 2022 IEEE PESGM Big Data Analytics (BDA) Subcommittee Meeting
July 20, 2022
In Person

1. Introduction

Yannan introduced the subcommittee and reviewed the meeting agenda

2. Reintroduce the subcommittee

- Value proposition: methodology, diverse applications, platform, and education/training
- A trajectory of growth and impacts: 2012 - 2022
    - 2019 - Distribution working group, 2020 - 2021: 3 TFs and 2 WGs, 2022: 2 TFs promoted to WGs
    - 2016 – 2022: 44 panels and 2500+ participants

3. Approval of minutes from the 2021 meeting

Hung-Ming Chou moved, Yang Weng seconded. Members voted in favor of approving the 2021 meeting minutes. Special thanks to past chair Le Xie.

4. Announcements/summary

- Subcommittee website is updated with a new design
    - Home: introduction
    - Website structure
    - Archived activities
    - Data access
    - Feedback page
- Meetings
    - Add past leads from panels to the core team meeting
    - Public meeting: Increase from once a year to twice a year
- Task force changes
    - BDA webinar: TF to WG
    - Application of big data analytics on transmission system dynamic security assessment: TF to WG
    - New TF: Continuation of data access effort
    - New TF: Data analytics for energy storage
- TCPC announcement
    - PESGM 2023: July 16-20, Orlando, FL
    - Tutorial proposals: 9/6/22
    - Panel submission deadline: 8/28/22
    - Paper submission deadline: 11/21/22
- Report from WG/TF
    - Data-driven Modeling, Monitoring and Control in Power Distribution Networks WG (new in 2020, Nanpeng Yu)
      https://intra.ece.ucr.edu/~nyu/IEEE%20PES%20WG.html

- o Big Data Webinar Series TF (Yang Weng)
  https://www.public.asu.edu/~yweng2/Tutorial5/
- o Application of Cloud Computing in Power System TF (new in 2020, Song Zhang)
  https://sites.google.com/view/cloud4powergrid/
- o Application of Big Data Analytics on Transmission System Dynamic Security Assessment TF (new in 2020, Rafael Segundo, Yanli)
- o Application of Cloud Computing in Power System
  Technical Report: Practical Adoption of Cloud Computing in Power Systems- Drivers, Challenges, Guidance, and Real-world Use Cases
- Presentations of New Task forces
  - o **Data sharing in energy systems - Continuation of the Data Access effort**
  - o **Data Analytics for Energy Storage**
    - Mission: Using advanced data analytics to assist energy storage planning and operation, and thereby advance the development and deployment of energy storage
    - Tasks:
      - Identify data needs and availability for energy storage modeling and analytics
      - Review existing data analytics methods and tools
      - Identify practical challenges and opportunities
    - Expected outcomes:
      - Survey report
      - Contribute to Data Access service of BDA Subcommittee

5. TCPC reports on GM2022 papers and panel sessions

- 2022 Papers for PES Gm
  - o Total paper submitted: 42
  - o Thanks to all the reviewers. All the authors have received detailed review comments and suggestions
  - o Willing to be a reviewer for PESGM2023? Please send a note to Hung-Ming.Chou@domininenergy.com
- **AMPS Total: 40, BDA: 10**
  - o Learning to Predict, trade and operate in the electricity market
    Monday 3-5pm (Session chair: Nanpeng Yu, Hao Zhu)
  - o Pushing distribution grid analytics to the edge: opportunities, challenges and best practices
    Tuesday 8-10am (Session chair: Nanpeng Yu)
  - o Big Data and AI Applications for Enhanced Power Grid Security and Reliability
    Tuesday 8-10am (Session chair: Rui Fan)
  - o Event Characterization Using Synchrophasor Big Data
    Tuesday 10-12 am (Session chair: Mladen Kezunovic)
  - o Data-Driven State and Parameter Estimation in Power Distribution Systems
    Tuesday 10-12am (Session chair: Yuzhang Lin, Nanpeng Yu)
  - o Enhancing power system operation through online analytics
    Tuesday 1-3pm (Session chair: Panagiotis Papadopoulos, Stephen McArthur)
  - o Using Data Analytics to Improve Energy Storage Modeling, Dispatch, and Valuation
    Tuesday 3-5pm (Session chair: Di Wu)

- Data collection and future needs to account for the continuous growth of sensing data in control rooms
  Thursday 8-10am (Session chair: Jochen Cremer, Segundo Rafael)
- Testbed and Dataset for Machine Learning Applications in Power Systems
  Thursday 10-12am (Session chair: Nanpeng Yu)
- Data challenges and analytical system requirement for distribution grids with high solar penetration
  Thursday 3-5pm (Session chair: Bo Yang)

6. Future activities

- Add subcommittee meeting attendees to BDA member email list
- Upload final meeting slides and meeting minutes to BDA webpage
- Send a final email to all BDA members capturing the following items:
  - Thank everyone who attended BDA subcommittee meeting
  - Slides and meeting minutes are available on BDA website
  - Deadlines for submitting panel proposals with a proposal template
  - Feedback and suggestions can be submitted on BDA website