

# IEEE CSS TC on Smart Grid

2017 May In-Person Meeting Minutes  
(2017 American Control Conference, Seattle, USA)  
Thursday, May 25, 2017

# Attendees

- Draguna Vrabie, PNNL, [draguna.vrabie@pnnl.gov](mailto:draguna.vrabie@pnnl.gov)
- Jakob Stoustrup, Aalborg University, [jakov@es.aau.dk](mailto:jakov@es.aau.dk)
- Qingchang Zhong, IIT, [zhongqc@ieee.org](mailto:zhongqc@ieee.org)
- Johanna Mathieu, U. Michigan, [jlmath@umich.edu](mailto:jlmath@umich.edu)
- Scott Moura, UC Berkeley, [smoura@Berkeley.edu](mailto:smoura@Berkeley.edu)
- Changhong Zhao, NREL, [changhong.zhao@nrel.gov](mailto:changhong.zhao@nrel.gov)
- Long Vu, MIT, [long.vu@mit.edu](mailto:long.vu@mit.edu)
- Karan Kalsi, PNNL, [karanjit.kalsi@pnnl.gov](mailto:karanjit.kalsi@pnnl.gov)
- Zhihua Qu, Univ. of Central Florida, [qu@ucf.edu](mailto:qu@ucf.edu)

# New members

- Pardis Khayyer, Cummins Inc., [pardis.khayyer@gmail.com](mailto:pardis.khayyer@gmail.com)
- Laiz Souto de Carvalho, University of Groningen, [laiz.souto@gmail.com](mailto:laiz.souto@gmail.com)
- Changhong Zhao, NREL, [changhong.zhao@nrel.gov](mailto:changhong.zhao@nrel.gov)
- Draguna Vrabie, PNNL, [draguna.vrabie@pnnl.gov](mailto:draguna.vrabie@pnnl.gov)

# Agenda

1. Welcome and introductions
2. TC website and TC operation
3. Technical activities
4. IEEE Smart Grid and CSS SG Vision Document
5. Next steps and general discussions

# TC Operation

1. Website updated (member directory, group email, TC documents, events, and meeting schedules)

webpage: <http://smart-grids.ieeecss.org/>

group email: [tcs@ieeecss.org](mailto:tcs@ieeecss.org)

2. Operational subcommittees
  - Membership (lead: Changhong Zhao)
  - Conference Activities (lead: Joshua Taylor)
  - International Collaborations (lead: Jakob Stoustrup)
3. Technical subcommittees
4. Annual in-person meetings

# Technical Activities: Part I

Invited sessions organized:

- Control Applications for Renewable Integration, *IEEE CTTA 2017*, led by Joshua Taylor and Zhihua Qu
- Estimation and Control of Electric Load Ensembles, *IEEE CDC 2017*, led by Ian Hiskens and Julio Braslavsky

# Technical Activities: Part II

TC also organizes its technical activities through technical subcommittees:

- Integration of Renewable Energy (lead: Amro Farid who gave a report at TAB)
- Energy Storage and Electrified Transportation Subcommittee (lead: Scott Moura who gave a report, co-lead: Javad Mohammadpour)
- Microgrids (lead: Nicanor Quijano, no response)
- Smart Buildings (lead: John James, no response)

# CSS Key Words

Current and **New**

Control application

Building and facility automation

Smart cities/houses

**Renewable energy**

**Energy storage**

**Electricity market**

**Transportation electrification**

Electrical and Power Systems

Electrical machine control

Energy systems

Power electronics

Power generation

Power systems

Smart grid



# Technical Activities: Part III

## IEEE Initiatives and IEEE programs

- IEEE Big Data
- IEEE Brain
- IEEE Cyber
- IEEE IoT
- IEEE Smart City
- IEEE Smart Grid
- IEEE Symbiotic autonomous systems

# IEEE Smart Grid

IEEE Smart Grid's member societies and their contacts:

- [IEEE Communications Society](#) – Stefano Galli
- [IEEE Computer Society](#) – Dan McCaugherty
- [IEEE Control Systems Society](#) – Anuradha Annaswamy
- [IEEE Dielectrics and Electrical Insulation Society](#) – Vic Catterson
- [IEEE Industrial Electronics Society](#) – John Hung
- [IEEE Industry Applications Society](#) – Peter Wung
- [IEEE Instrumentation & Measurement Society](#) -
- [IEEE Power & Energy Society](#) – Joseph Paladino
- [IEEE Power Electronics Society](#) – Johan Enslin
- [IEEE Reliability Society](#) – Steven Li
- [IEEE Signal Processing Society](#) – Hao Zhu
- [IEEE Standards Association](#) – Bill Ash
- [IEEE Systems, Man, and Cybernetics Society](#) – Loi Lai Lee
- [IEEE Vehicular Technology Society](#) – Swee Goo

# CSS TC-SG Participation in IEEE Smart Grid

Representatives of our TC:

- IEEE Smart Grid Steering Committee and Technical Activities Committee: Anu Annaswamy and Zhihua Qu
- IEEE Smart Grid Publications Committee
- IEEE Smart Grid Policy Technical Support Committee
- IEEE Smart Grid Education Committee: Josh Taylor
- IEEE Smart Grid R&D Committee: Anu Annaswamy
- IEEE Smart Grid Marketing Committee

IEEE contact:

Angelique Rajski Parashis  
*Project Manager*  
IEEE Smart Grid  
445 Hoes Lane, Piscataway, NJ 08854 USA

Tel: +1 732-981-2866 Email: [a.rajski@ieee.org](mailto:a.rajski@ieee.org)

Web: [smartgrid.ieee.org](http://smartgrid.ieee.org)

# IEEE Smart Grid Activities

- Newsletter articles
- Whitepaper
- Webinars
- Tutorial courses
- Videos and interviews
- Standards and policy
- etc.

# IEEE Smart Grid Webinar Schedule

July

Operations

August

Markets and Service Provider

September

Transmission

October

Interaction between  
Distribution/Customer/Transmission

November

Bulk Generation

# Technical Activities: Part IV - Vision Document

## *Smart Grid Control: An Overview and Research Opportunities*

Editors: Jakob Stoustrup, Anuradha Annaswamy, Aranya Chakraborty, and Zhihua Qu

Springer Verlag, 2017.

Main topics:

- Electricity Markets
- Wide Area Control
- Distributed Control
- Cyberphysical Security.

# TC meeting time (decision)

- Semi-annual lunch meeting (at hotel)

*day 2 for IEEE Conference on Decision and Control (CDC)*

- Semi-annual dinner meeting (meeting at hotel and then dinner at a local restaurant)

*day 2 for American Control Conference (ACC)*

# Action items

- Possible speaker for December in-person meeting at 2017 CDC
- Invited sessions for conferences (and special issues for journals)
- Nomination of associate editor(s) for CSS CEB  
Name, email, 1-2 page bio (by November 1<sup>st</sup>, 2017)
- Others?

**Thank you for participating!**