



IEEE CSS TC on Smart Grid

*Minutes of 2018 June In-Person Meeting
American Control Conference (Milwaukee, USA)
Thursday, June 28th, 2018*

Attendees

- Jianming (Jamie) Lian jianming.lian@pnnl.gov
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- Javad Mohammadpouri javadm@uga.edu
- Toru Namerikawa, namerikawa@ukeio.edu.jp
- Marwan Simaan simaan@ucf.edu
- Richard Hull Richard.hull@utas.utc.com
- Tao Yang, tao.yang@unt.edu
- Jakob Stoustrup jakob@es.aau.dk
- Anuradha Annaswamy, anu@mit.edu
- Zhihua Qu, Univ. of Central Florida, qu@ucf.edu

Agenda

1. Welcome and introductions
2. TC operation
3. TC activities
4. Next steps and general discussions

TC Operation

- TC subcommittees
- TC Publications: Column, Whitepaper, etc.
- TC Website

TC Subcommittees

TC organizes its activities through operational and technical subcommittees:

Operational subcommittees:

- Membership (lead: Changhong Zhao)
- Conference Activities (lead: Joshua Taylor)
- International Collaborations (lead: Jakob Stoustrup)

Technical subcommittees:

- Integration of Renewable Energy (lead: Amro Farid)
- Energy Storage and Electrified Transportation Subcommittee (lead: Scott Moura, co-lead: Javad Mohammadpour)
- Microgrids (lead: Nicanor Quijano)
- Smart Buildings (lead: John James)

A subcommittee on utility/industry was recommended during the last meeting.

TC Publication: TC Vision Document

Smart Grid Control: An Overview and Research Opportunities

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

Springer Verlag, 2018.

Main topics:

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

TC Publications

1. IEEE CSM column
 - Biannual
 - Latest issue: submitted Jan. 2018

2. TC Position Paper

The Role of Control Systems Research in Smart Grids

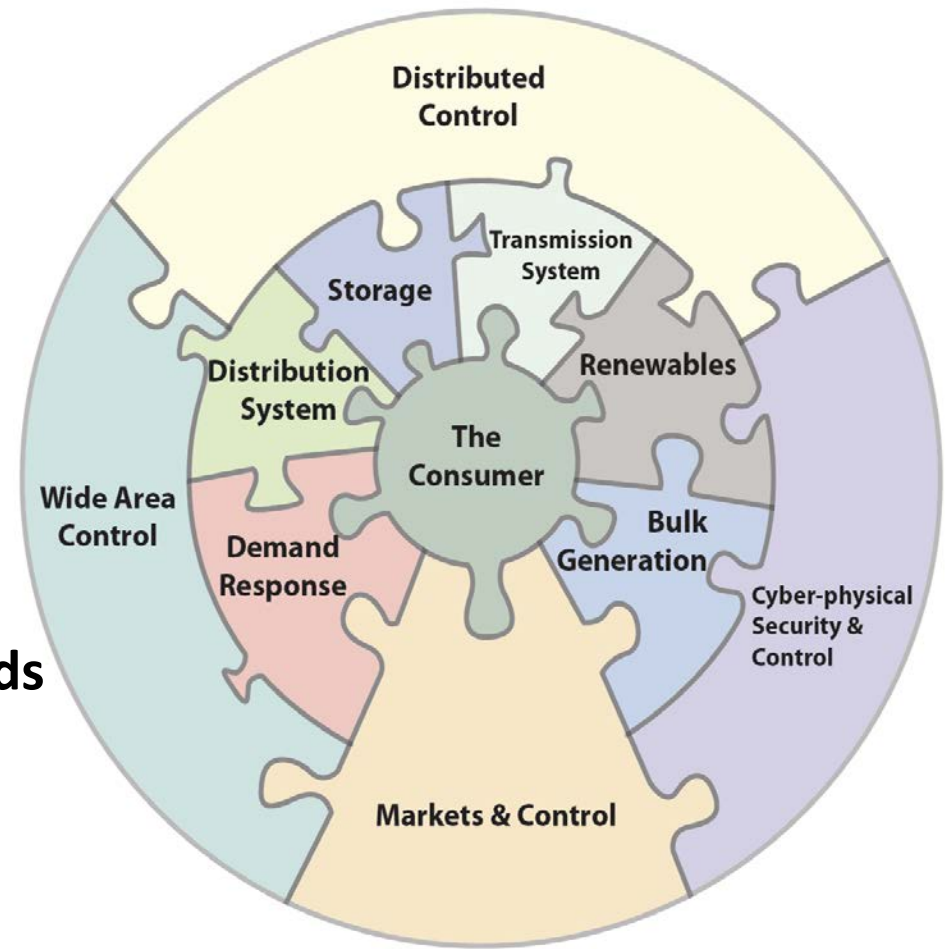
Anuradha Annaswamy and Zhihua Qu

A Whitepaper to IEEE Smart Grid

3. TC Reports

- CSS BOG report (April, October)

4. Action item: a technical/review article in IEEE CSM was discussed.



TC Website

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

1. Member directory
2. Group email (tcs@ieeecss.org; new privacy policy)
3. TC documents
4. TC Meeting schedules
5. Announcements by members
 - Upcoming conferences
 - Invited sessions
 - Job opportunities (added recently)

TC Activities

- Invited sessions
- IEEE Smart Grid
- In-person Meetings

TC Activities: 2018 Invited Sessions

- ACC 2018
 - Advanced Flow Control of Wind Farms (by Lucy Pao)
 - Energy/Fuel Efficient Powertrains (by Qadeer Ahmed)
 - Control of Wind Energy Systems (by Christopher Vermillion)
 - Estimation and Control of Batteries (by Scott Moura)
- CCTA 2018
 - Control of DERs (by Joshua/Zhihua)
- CDC 2018
 - Learning in Power Systems (by Joshua/Zhihua)

Future topics are solicited for ACC 2019 and other conferences.

TC Activities: IEEE Smart Grid

Representatives of our TC:

- IEEE Smart Grid Steering Committee and Technical Activities Committee: [Zihua Qu](#) and [Anu Annaswamy](#)
- IEEE Smart Grid Education Committee: [Josh Taylor](#)
- IEEE Smart Grid R&D Committee: [Anu Annaswamy](#)

Activities:

- Newsletter
- Webinars and Tutorials
- Interviews
- Whitepaper

TC Activities: In-Person Meetings

- Semi-annual lunch meeting (at hotel)

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


December 18, 2018

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

day 2 for *American Control Conference (ACC)* ---

June 28, 2018

Upcoming Conference

 **2nd IFAC Conference on
Cyber-Physical & Human Systems**
INTERNATIONAL FEDERATION
OF AUTOMATIC CONTROL
December 14-15, 2018, Miami, USA www.cphs2018.org

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Anuradha Annaswamy, MIT, USA
Dawn Tilbury, UMichigan, USA

Program Chair
Sandra Hirche, TU München, Germany

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Vice Chair, Invited Sessions
Tariq Samad, UMinnesota, USA, Vice Chair, Industry
Berenice Mettler, ICSI, Berkeley, USA, Editor
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France
Shinichi Nakasuka, University of Tokyo, Japan
Eric Rogers, University of Southampton, UK
Anthony Rossiter, University of Sheffield, UK
Thomas Schauer, TU Berlin, Germany
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Ljubo Vlacic, Griffith University, Australia
Birgit Vogel-Heuser, TU München, Germany
Jessie Yang, University of Michigan, USA
Yildirim Yildiz, Bilkent University, Turkey
Jianhua Zhang, East China University of
Science and Technology, China

CALL FOR PAPERS

Steady advances in controls, communications, and computing are enabling new forms of cyber-physical systems (CPS), and are simultaneously redefining the role and position of humans in broad areas of applications and blurring the traditional boundaries between humans and technology. Therefore, for the most part, human interactions in these technical systems are becoming more complex and raising a range of new technical challenges and broader questions, touching social and even cultural domains. This newfound relationship between humans and technology must be studied from an engineering perspective, a human-factors perspective, and from the perspective of social sciences. This conference series on Cyber-Physical & Human Systems (CPHS) is intended to examine these multidisciplinary dimensions.

The second IFAC conference on CPHS builds on the success of CPHS 2016 and the H-CPS-I meeting in 2014. CPHS 2018 aims to bring together researchers and practitioners from academia and industry to share scientific and technological advances as well as gain a deeper understanding of the interactions between cyber-physical systems and humans. Of particular interest are human-centered technologies in a wide-range of applications including transportation, energy, robotics, manufacturing, and health-care. Examples of topics include human-machine symbiosis, humans as supervisors/operators of complex engineering systems, humans as agents in multi-agent systems, and humans as elements in controlled systems. In addition to the technical and theoretical contributions, CPHS 2018 also invites papers studying the ethical questions, public policies, regulatory issues, and new risks associated with interactions between humans and cyber-physical systems. Towards this end, we invite submissions in the following categories:

- Full conference papers (6-8 pages) addressing relevant CPHS topics, which will be peer-reviewed, and presented at the conference (if accepted). Review, Tutorial and Vision papers are also welcome.
- Extended abstracts (a minimum of 500 words) addressing topics of interest, subject to the same review process as full papers, and invited to present at the conference (if accepted).
- Invited sessions, consisting of six full papers and/or short abstracts, to fill a two-hour block.
- Tutorials and/or workshops, a half-day or full-day event either before or after the conference (please contact the organizers for guidance and details)

The conference program will only include papers of the highest standard as selected by the IPC, in accordance with the IFAC guidelines www.ifac-control.org/publications/Publications-requirements-1.4.pdf. All papers and abstracts will be accepted with the understanding that the authors will present them at the CPHS Conference. At least one author of every accepted paper will be required to register for the conference before uploading the final version. Accepted papers and abstracts will be presented either in oral or poster format. Accepted papers will be included in the conference "preprints" (USB drive) and published online, whereas accepted abstracts will only be included as preprints and not published on-line. All papers, abstracts, and invited session proposals must be submitted through the conference submission website, www.cphs2018.org, and conform to the policy found therein.

Important Dates:

Submission Deadline: April 15, 2018
Acceptance/Rejection Notice: September 1, 2018
Final Submission Deadline: October 1, 2018

2nd IFAC Conference on Cyber-Physical&Human-Systems December 14-15, 2018, Miami, USA www.cphs2018.org



General Chairs: Anu Annaswamy and Dawn Tilbury
Program Chair: Sandra Hirche

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General Discussion and Action items

- Publication: CSM article is discussed.
- Invited session: Topics are solicited. The alternative of first soliciting papers and then organizing session(s) is also discussed.
- Nomination of associate editor(s) for CSS CEB
- December meeting talk: Blockchain/Scott Moura
- Other:
 - Possible tutorial session at ACC 2019

Thank you for participating!