

IEEE CSS Technical Committee on  
Automotive Control  
Meeting  
2016 ACC

July 7, 2016  
Boston, MA

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# Outline

- Summary of previous activities
  - Invited session
  - CSM
- TC website
- Upcoming activities
  - CSS Conference
  - IoT
  - Workshop

## **CSS TC AC and ASME ATS – Invited Sessions @ACC16**

1. Energy Storage and Hybrid Electric Vehicle Controls
2. Advanced Ground Vehicle Estimation and Control Algorithms
3. Analysis and Control of Autonomous Vehicles Systems
4. IC Engine and Aftertreatment Systems Control
5. Advanced Turbocharged Air Path Modeling and Controls

Shahbakhti, Mahdi (Michigan Tech. Univ) Xiao, Baitao (Ford Motor Company, Wang, Yue-Yun (General Motors Company) Borhan, Hoseinali (Ali) Cummins Inc; Organizer: Hall, Carrie (Illinois Inst. of Tech); Ahmed, Qadeer (The Ohio State Univ); Naghshtabrizi, Payam (Eaton Corp. Innovation Center); Pan, Selina (Stanford Univ), Scacchioli, Annalisa (Stevens Inst. of Tech); Simona Onori (Clemson)

- 51 papers submitted

# Invited Sessions

## **Invited Sessions @CDC16**

1. Advanced Vehicle Controls Technology
2. Modeling and Control of Automotive Propulsion Systems

Ali Borhan (Cummins), Yue-Yun Wang (GM)

# TC activity

- Column on TC activities was on the August issue 2015 of **Technical Committee on Automatic Controls [Technical Activities]** Publication Year: 2015, Page(s):18 – 64  
Control System Magazine

“Current research needs being faced by the TC on AC”

# TC activity

CSS website re-organized

- Update the TC webpage: <http://automotive-controls.ieeecss.org/>

NAVIGATION	HOME
HOME	<b>Message from the TC Chair</b>
TC MEMBERS	The scope of interests of the IEEE CSS Technical Committee (TC) on Automotive Control (AC) covers modeling, simulation, identification, estimation, control, optimization, and diagnostics of present and future automotive systems. Jessy Grizzle and Luigi Glielmo established the TC in 1999, and past chairs include Rajesh Rajamani (2003-2005), Ilya Kolmanovsky (2006-2008), Francesco Borrelli (2009-2011), and Stefano Di Cairano (2012-2014). There are currently more than 150 members of the technical committee.
DOCUMENTS	With significant participation from both academia and industry, the committee coordinates activities towards improving the understanding of challenges, problems, and effective methods of controlling automotive systems. The TC has been very active in jointly organizing invited sessions at the American Control Conference with the ASME Automotive Transportation System TC, and invited sessions with the IFAC TC on Automotive Control at the European Control Conference.
EVENTS	

## DOCUMENTS

### TC Meeting Slides

**June 2015** : TC meeting at the 2015 American Control Conference in Chicago, IL.  
2015 next upcoming activities. [See full meeting notes.](#)

**June 2014**: TC meeting at the American Control Conference in Portlan, OR.  
Q1-Q2 2014 Activities, 2014 Plan. [See full meeting notes.](#)

# Upcoming activities: Main 2017 CSS Conference

2017

Conference Name and Organizers	Location	Dates
<b>2017 Conference on Decision and Control</b> <i>General Chair(s):</i> Richard H. Middleton, Dragan Netic, <i>Program Chair(s):</i> Mario Sznaier	Melbourne, Australia	Dec 12 - Dec 15, 2017
<b>2017 Conference on Control Technology and Applications</b> <i>General Chair(s):</i> Stephen Yurkovich <i>Program Chair(s):</i> Mark W. Spong, Mario A. Rotea	Kohala Coast, United States	Aug 27 - Aug 30, 2017
<b>2017 American Control Conference</b> <i>General Chair(s):</i> Jing Sun <i>Program Chair(s):</i> Rajesh Rajamani	Seattle, United States	May 24 - May 26, 2017

# TC activity: Invited Sessions

## 2017 ACC – Seattle, WA (May 26-28)

1. Sessions will be organized with the **ATS-TC ASME**
  - CFP for invited sessions will be sent out on August 10<sup>th</sup>, 2016
  - Extended abstracts due September 10<sup>th</sup> to be considered for invited sessions (submission deadline Sept. 19<sup>th</sup> )

**-Looking for volunteers..**
2. AC TC and **IoT TC** will jointly propose invited session (connected vehicle, V2X,..)



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# TC activity: Invited Sessions

## **2017 1st IEEE Conference on Control Technology and Applications**

Kohala Coast, Hawaii, Aug 27 - Aug 30, 2017

- Invited Session Proposals Due March 1, 2017
- Contributed and Invited Papers Due March 1, 2017
- CFP for invited sessions will be sent out on early January 2017

- **2018 Control and Decision Conference**

Melbourne, Australia Dec. 12-15 2017

- Invited Session Proposals Due March 1, 2017
- Contributed and Invited Papers Due March 1, 2017
- CFP for invited sessions will be sent out on early January 2017

# 2016 Workshop on Open Problems and Challenges in Automotive Control

**2016 Workshop on Open  
Problems and Challenges in  
Automotive Control  
One-day Workshop  
8am-17:30pm  
December 11<sup>th</sup> , 2016**

Stay tuned..more to come