

Technical Program

IEEE Connected and Automated Vehicles Symposium 2018

August 27, 2018, Hilton Chicago, Chicago, USA

IEEE CAVS 2018 oral presentations will take place in room Boulevard A (2nd floor), and the Poster presentations in Normandie Lounge (2nd Floor).

IEEE CAVS 2018 Schedule:

08:30-10:30	Keynotes
10:30-11:00	Coffee break
11:00-12:30	Oral session 1
12:30-13:30	Lunch (lunch is not provided)
13:30-15:30	Oral session 2
15:30-16:00	Coffee break
16:00-17:45	Poster session

Keynotes (8:30-10:30) – location: Boulevard A

Keynote 1: Dr. Xinzhou Wu, Senior Director of Engineering and Head of ADAS/Autonomous Driving R&D, Qualcomm

Title: Enabling Autonomy in Mass Production Vehicles

Keynote 2: Dr. Ruigang Yang, Head of Robotics and Auto-Driving Lab, Baidu Research

Title: Baidu RAL: From Autonomous Driving to Robotics.

Oral Session 1 (11:00-12:30) – location: Boulevard A

Session Chair: Yaser P. Fallah, University of Central Florida

Concurrent Data Dissemination at Intersections in mmWave for Cooperative Perceptions

Akihito Taya, Takayuki Nishio, Masahiro Morikura, Koji Yamamoto, Kyoto University

On the Feasibility of Integrating mmWave and IEEE 802.11p for V2V Communications

Marco Giordani, Andrea Zanella, University of Padova; Takamasa Higuchi, Onur Altintas, TOYOTA InfoTechnology Center; Michele Zorzi, University of Padova

Field Experiments on Sensor Data Transmission for 5G-based Vehicle-Infrastructure Cooperation

Akihiro Ogawa, Shinsuke Kuroda, Katsunori Ushida, Hidenori Yamashita, Takuji Kantou, Sumitomo Electric Industries, LTD.; Riichi Kudo, Kiichi Tateishi, NTT DOCOMO, INC.

An IEEE 802.11p-assisted LTE-V Scheduling for Reliable Multi-Link V2X Communications

Rafael Molina-Masegosa, Javier Gozalvez, Miguel Sepulcre, Universidad Miguel Hernandez de Elche (UMH)

Kalman filter based spatial prediction of wireless connectivity for autonomous robots and connected vehicles

Ramviyas Parasuraman, Purdue University; Petter Ögren, KTH Royal Institute of Technology; Byung-Cheol Min, Purdue University

Oral Session 2 (13:30-15:30) – location: Boulevard A

Session Chair: Miguel Sepulcre, Universidad Miguel Hernandez de Elche

Centralized Model Predictive CACC Control Robust to Burst Communication Errors

Raj Haresh Patel, Jerome Härrri, Christian Bonnet, Eurecom

Decision Making for Connected and Automated Vehicles: A Max-Plus Approach

Mauro Fusco, TNO; Elham Semsar-Kazerooni, ASML; Jeroen C. Zegers, TNO; Jeroen Ploeg, 2getthere, Eindhoven University of Technology

A Driver Behavior Modeling Structure Based on non-Parametric Bayesian Stochastic Hybrid Architecture

Hossein Nourkhiz Mahjoub, Behrad Toghi, Yaser P. Fallah, University of Central Florida

Transitions from Autopilot to Manual Control in Highly Automated Driving: Cognitive Simulations

Woojin Kim, Hyun-Suk Kim, Seung-Jun Lee, Jungsook Kim, Daesub Yoon, Electronics and Telecommunications Research Institute (ETRI)

3D Scan Registration Based Localization for Autonomous Vehicles - A Comparison of NDT and ICP under Realistic Conditions

Su Pang, Daniel Kent, Xi Cai, Daniel Morris, Hayder Radha, Michigan State University

Automated Signal Extraction from Controller Area Networks

Brent C. Nolan, Scott Graham, Barry Mullins, Christine Schubert Kabban, Air Force Institute of Technology

Optimizing a Misinformation and Misbehavior (MIB) Attack Targeting Connected Cars

Bruce DeBruhl, California Polytechnic State University; Patrick Tague, Carnegie Mellon University

Poster Session (16:00-17:45) – location: Normandie Lounge

Session Chair: Javier Gozalvez, Universidad Miguel Hernandez de Elche

Measuring Performance Impact of Battery Swapping on Mobility Behavior

Abhik Banerjee, Vidhya Murali, Vijendran Gopalan Venkoparao, Robert Bosch Engineering and Business Solutions

Real-time air pollution exposure and vehicle emissions estimation using IoT, GNSS measurements and web-based simulation models

L. Thibault, P. Pognant-Gros, G. Sabiron, L. Voise, P. Degeilh, IFP New Energies; K. Thanabalasingam, Infotem

Performance Analysis of Physical-Layer-Based Authentication for Electric Vehicle Dynamic Charging

Terry Guo, Mohamed Mahmoud, Tennessee Tech University

State Estimation for Mitigating Positioning Errors in V2V Networks Employing Dual Beamforming

Nivetha Kanthasamy, Raghvendra V. Cowlagi, Alexander M. Wyglinski, Worcester Polytechnic Institute

Autonomous Vehicle Scheduling At Intersections Based On Production Line Technique

Nasser Aloufi, Amlan Chatterjee, California State University

Toward a Standard-Compliant Implementation for Consensus Algorithms in Vehicular Networks

Elena Cinque, University of L'Aquila; Henk Wymeersch, Christopher Lindberg, Chalmers University of Technology; Marco Pratesi, University of L'Aquila

Identifying DSRC Channel Loss Factors of Urban Intersections using RSS Datasets

S M Osman Gani, Yaser P. Fallah, University of Central Florida; Syed Amaar Ahmad, Savari Inc.

Visual Servoing for Mobile Navigation

Jeffrey Kane Johnson, Maeve Automation

Key management system for private car-sharing scenarios

Ana C. Hernández Gómez, Universitat Rovira i Virgili and Seat; Jordi Castellà-Roca, Alexandre Viejo, Universitat Rovira i Virgili

Measurements and Analysis of DSRC for V2T Safety-Critical Communications

Junsung Choi, Virginia Tech; Vuk Marojevic, Mississippi State University; Carl Dietrich, Virginia Tech

Exploiting the Shape of CAN Data for In-Vehicle Intrusion Detection

Zachariah Tyree, Oak Ridge National Laboratory and Florida Atlantic University; Robert A. Bridges, Frank L. Combs, Michael R. Moore, Oak Ridge National Laboratory