AUTOMATED VEHICLES SYMPOSIUM 2018

Driven by: AUVSI & TRB

Symposium | July 9–12, 2018
Hilton San Francisco Union Square | San Francisco

CALL FOR ABSTRACTS

Breakout Session:
From Automated Vehicles to Automated Transportation Systems

The Automated Vehicles Symposium (AVS) 2018 will be held from July 9-12, 2018 San Francisco. Sponsored by the American Society of Civil Engineers (ASCE) Connected and Automated Vehicles (CAV) Impacts Committee, the Organizing Committee of this breakout session invites all stakeholders from industry, governmental agencies, and research institutions to submit abstracts for oral presentations during this four-hour special session.

With the recent attention from policy-makers on fixing crumbling transportation infrastructure, and the associated increases in funding availability, roadway owner/operators are considering the changes that need to be made to the planning, design, operation, and maintenance of all roads and modes to support automated vehicles. The emergence of vehicle automation offers the opportunity for roadway owner/operators to safely manage traffic flow in ways that have never before been possible; for example, commanding the speed for platoons of automated cars to maximize throughout on existing freeway lanes, moving platoons of automated trucks on dedicated lanes near ports and warehouse complexes, or creating rubber-tired "light rail" systems by combining strings of automated buses traveling on existing right-of-way. This requires us not only understanding dynamics of individual automated vehicles but also investigating characteristics of a transportation system containing a large number of automated vehicles. Emergent behaviors and group phenomena rather than a simple collection of individual properties may rise as a major challenge to management of such transportation systems.

To address this challenge, this session will explore some of these ideas and more that are being considered as we transform today's roadway infrastructure into the smart transportation system of the future. It focuses on how to scale up the benefits from individual connected and automated vehicles to a system level, from a corridor network, urban grid streets, up to a regional network. The CAV technologies also facilitate realization of other emerging transportation concepts (e.g., analytics of emerging transportation data, shared mobility). Those CAV-enabled techniques and their impacts brought to the transportation systems will also be discussed in this session. Topics can include, but are not limited to,

1) Transportation system modeling enabled by CAV
2) Data needs, availability, and system-level analytics enabled by CAV
3) Validation and calibration methods for CAV modeling in the system context

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4) Shared mobility services
5) Worldwide experimental results and their system impacts
6) Multi-modal transportation impacted by CAV

This breakout session features keynote speakers, session presentations, panel discussions, and research needs statements.

What to submit: a presentation title; contact and a brief bio of the corresponding author; contact of all co-authors and an abstract that summarizes problem statement, findings and significance, not to exceed 500 words. All in one single word document.

How to submit (or any questions): By **Mar 31, 2018**, email the single word document to one of the following co-chairs of the Organizing Committee, and include 'AVS2018 Systems Session' in the email subject line.

Greg Larson, P.E.
Division of Research
California Department of Transportation (Caltrans)
E-mail: greg.larson@dot.ca.gov
Phone: 916-227-8008

Xiaopeng (Shaw) Li, Ph.D.
Assistant Professor, Susan A. Bracken Faculty Fellow
Department of Civil and Environmental Engineering
University of South Florida
E-mail: xiaopengli@usf.edu
Phone: 813-974-0778