Driverless Cars & Trucks: Highlighting the 2018 AVS Program

www.automatedvehiclessymposium.org

Jane Lappin
Co-chair, Automated Vehicles Symposium
May 3, 2018
“Transportation is Cool Again!”

Former U.S. Transportation Secretary Anthony Foxx

Automated Vehicle Symposium; July 19, 2016
➢ Now in its 7th Year, AVS is the Largest Dedicated Automated Vehicles Meeting in the World
➢ ~1500 attendees
➢ TRB Co-sponsors with the Association for Unmanned Vehicle Systems International (AUVSI) & produced by ~200 volunteers
➢ International participation: speakers, organizers, and attendees
➢ Broad Array of Topics in Plenary, Poster, and 30 Breakout Sessions
➢ Discussion Topics Include:

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<th>Human Factors</th>
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Proceedings from Recent AVS

www.trb.org/Publications/PubsTransportationResearchCirculars.aspx
~1500 Attendees

- 43 states; 28 countries
- Public & private sectors
- Research institutions

Ancillary Events

- USDOT ‘Listening Session
- SAE
- NCHRP 20-102 Panel Meeting
Some Key Takeaways

- **Something everywhere, vs. everything somewhere**
- **Private sector is moving ahead, with or without public agencies**
- **Society not likely to accept even a small number of deaths caused by CAVs**
- **Cyber-security is a major concern**
Risks for Public Agencies

Facilitating innovation vs. protecting public safety

How safe is safe enough?

Impacts on liability, insurance
Uniform laws & regulations for vehicles and operators

How affected by different levels of automation?

Operator training, licensing, and certification

Specialties (e.g., truck platoon drivers)
Impacts on Road Operations

Uniformity and conditions of traffic control devices

Posted speed limits vs. actual speeds

Trained ops workforce
Economic & Social Issues

Loss of public revenue streams

Higher costs of operation of system

Societal Equity

Impacts on land use & trip patterns

(traffic infractions, parking)

Underserved populations

Transportation challenged

Corresponding impacts on congestion and pollution
OEMs investing billions in R&D

Conventional US public agency approaches to research may need to be re-examined

Timeframes do not match transformational technologies

Historically looking backward for guidance vs. looking forward with scenario planning

Inform policy makers based on data, rather than sensationalism or extremes

Mechanism needed for coordinating & sharing research
What you will find at AVS2018

This Year –

Starts **Monday Afternoon, July 9th**
14 Breakout Sessions, Including:

- Reading the Road Ahead: Insights on Machine Vision
- Top Research Priorities
- AV Technologies and Adverse Weather
- AV for People with Disabilities
- AV crash occurs: What happens next?
- AV & Mobility Planning
- CV & Intersection Control
- Shared Vision for National AV Readiness
- AV Low-Speed Shuttles
- Cybersecurity
- Automated Systems
- AVs & Vulnerable Road Users
- Global Testbed Collaboration

Followed by a Reception & Peer-reviewed Posters
What you will find at AVS2018

Tuesday A.M. July 10th

Plenary and Panel Presentations, Including:

- Technology Advancements: Industry Perspective
- Development of Unsupervised Self-Driving Using Deep Learning Neural Networks
- Technology Challenges
- Consumer Acceptance
- Transformational Technologies
- Safety Assurance
- Low-Speed Operations
- Sensors
What you will find at AVS2018

Tuesday P.M. July 10th

13 Breakout Sessions, Including:

- Driver Training
- AV Speed Dating
- Trucking Automation
- From Construction to Modeling
- Enterprise Solutions Series
- Safety Assurance of AV
- Energy & Environmental Impacts
- Automating Transit & Shared Mobility
- Blockchain in the Automated Vehicle Ecosystem
- ITS Architecture and Standards
- Enabling Technologies
- Digital Infrastructure
- User Needs

Followed by a Reception & Peer-reviewed Posters
What you will find at AVS2018

Wednesday A.M. July 11th

Plenary and Panel Presentations, Including:

- Technology Advancements: Freight
- Ethics
- Work Force Impacts
- Cities
- Regulation, Policy & AVs
- International Programs
What you will find at AVS2018

Wednesday P.M. July 11th

15 Breakout Sessions, Including:

- Human Factors
- Trucking Automation
- Ethical & Social Implications
- Shark Tank II
- What we Know – Impacts of AV
- Safety Assurance of AV
- Energy & Environmental Impacts
- Enabling Technologies
- Integrating AVs on City Streets
- Accelerating CAV
- AI & Machine Learning
- OEM/DOT Dialog on AVs
- Policy Implications of AVs
- How to Allow AVs on Public Roads

Followed by a Reception & Peer-reviewed Posters
What you will find at AVS2018

Thursday A.M. July 12th

Plenary Panel Discussions, Including:

- Investor Perspectives on Automated Vehicles
- International AV Programs
- Public Agency Initiatives - EC
- Public Agency Initiatives - UK
- Public Agency Initiatives - Japan
- Public Agency Initiatives - NHTSA
- Public Agency Initiatives - FHWA
- Public Agency Initiatives - FMCSA

Thursday P.M. – USDOT Listening Session
Questions?

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Thank You

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