

The National Academies of
SCIENCES • ENGINEERING • MEDICINE



TRANSPORTATION RESEARCH BOARD

Connected and Automated Vehicles
9th University Transportation Centers Spotlight Conference
November 4-5, 2015
National Academy of Sciences ~ Washington, DC

As of October 2, 2015 and subject to change

WEDNESDAY, NOVEMBER 4	
7:30 a.m. – 8:30 a.m.	Continental Breakfast
7:30 a.m. – 5:00 p.m.	Registration
8:30 a.m. – 10:15 a.m.	<p>Opening Session: Overview of CV/AV Issues and Progress Moderator: Melissa Tooley, Texas A&M Transportation Institute</p> <p>Keith Marzullo, Director of the Federal Networking and Information Technology Research and Development (NITRD) National Coordination Office (NCO)</p> <p>Presentation: USDOT Initiative on Smart Cities Kevin Dopart, Program Manager, Vehicle Safety & Automation, ITS Joint Program Office, U.S. DOT</p> <p>Presentation: USDOT Connected and Automated Vehicle Research Update Ron Medford, Google Jane Macfarlane, HERE</p>
10:45 a.m. – Noon	<p>Plenary Session 1: Institutional and Policy Moderator: Steve Shladover, California Partners for Advanced Transportation Technology</p> <p>AAMVA Project on Harmonization of State Regulations for Automated Driving, Bernard Soriano, California DMV</p> <p>Ethical Considerations in Design of Automated Driving Systems, Chris Gerdes, Stanford</p> <p>Sustainability Implications of Automated Driving, Reuben Sarkar, Department of Energy</p> <p>Insurance Issues for Automated Driving Systems, Edward Collins, Allstate</p>
Noon – 1:30 p.m.	Lunch
1:30 p.m. – 3:00 p.m.	<p>Plenary Session 2: Infrastructure Design & Operations Moderator: Pat Szary, Rutgers University</p> <p>Carla Bailo, Ohio State University</p> <p>AV/CV Infrastructure and Transportation Agency Readiness, Steve Lockwood, Steve Lockwood, LLC</p>

	<p>Infrastructure Considerations for Connected-Automation, Jim Barbaresso, HNTB</p> <p>Michigan Mobility Transformation Center & MDOT Deployments in SE Michigan, John Maddox, University of Michigan Mobility Transformation Center</p>
3:30 p.m. – 5:00 p.m.	<p>Plenary Session 3: Planning Moderator: Charlie Howard, Puget Sound Regional Council</p>
	<p>AV/CV Deployments: Implications for State and Local Transportation Agencies, Johanna Zmud, TTI</p> <p>AV/CV Deployment in Michigan: Considerations for Transportation Planners, Matt Smith, Michigan DOT</p> <p>Understanding the Potential Impacts of Connected and Automated Vehicles on Activity-Travel Behavior: Implications for Transport Modeling, Ram Pendyala and Patricia Mokhtarian, Georgia Institute of Technology, Chandra Bhat, The Center for Transportation Research at The University of Texas, Austin</p> <p>Results of the AVS 2015 Planning Breakout Session, Jane Lappin, Office of the Assistant Secretary for Research and Technology</p> <p>Audience Discussion</p>

5:00 p.m. – 7:00p.m.	Reception and Poster Presentations
Infrastructure Design and Operations	
<p>Vehicular Ad-hoc Network (VANET) Simulations of Passing Maneuvers on Two-Lane Rural Highways, Michael Motro, Alice Chu, Rahi Kalantari, Junil Choi, Jie Xu, Joydeep Ghosh, Robert Heath, and Chandra Bhat, University of Texas, Austin, Abdul Pinjari, University of South Florida</p>	
<p>Monitoring Pavement Conditions Using a Connected Vehicle-enabled Application, Huanghui Zeng, Battelle Memorial Institute, Brian Smith and Hyungjun Park, University of Virginia</p>	
<p>Signal Control Optimization and Simulation for Automated Vehicles at Isolated Intersections, Zhuofei Li and Lily Elefteriadou, University of Florida</p>	
<p>Quantifying the Benefits and Costs of Virtual Dynamic Message Signs Relative to Traditional Dynamic Message Signs Using a Case Study of the I-66 Connected Vehicle Testbed, David Recht, Hyungjun Park, and Brian Smith, University of Virginia, Alona Green, Morgan State</p>	
Institutional and Policy	
<p>Opportunities for Automated and Connected Vehicles to Improve Mobility and Access for People Unable to Drive, Frank Douma, Adeel Lari and Leili Fatehi, University of Minnesota</p>	
<p>User Adoption for Connected and Automated Vehicles – What Can We Learn From Previous Experiences, Mohammad Lavasani and Xia Jin, Florida International University</p>	

Modal Applications
Bicyclists and Connected and Autonomous Vehicles , Ken McLeod, The League of American Bicyclists
Human Factors Evaluation of an In-Vehicle Active Traffic and Demand Management (ATDM) System , Kayla Sykes, Alexandria Noble, Zachary Doerzaph, Thomas Dingus, Pamela Murray-Tuite, and Luke Neurauter, Virginia Polytechnic Institute & State University
A Research Agenda for the Application of Autonomous Collision Avoidance Technology and Autonomous Emergency Braking to Transit Buses , Jerome Lutin, New Jersey Transit, Alain Kornhauser, Princeton University, Jerry Spears, Washington State Transit Insurance Pool, Louis Sanders, American Public Transportation Association
Dynamic and Real-Time Traffic Signal Coordination Tuning Model for Signalized Arterials within Connected Vehicle Environment , Zhitong Huang, Turner-Fairbank Highway Research Center and Mississippi State University, Li Zhang, Mississippi State University, Deborah Curtis and Govindarajan Vadakpat, Federal Highway Administration and David Hale, Leidos Inc.
Congestion Shockwave Damping through Cooperative Adaptive Cruise Control (CACC) with Variable System Response Time , Yizhou Wang and Peter J. Jin, Rutgers, The State University of New Jersey, Haiyan Gu, University of Southeast, China
Dynamic Merge Assistance Based on V2I (Vehicle-to-Infrastructure) Communication in Connected Vehicle Environment , Xiaowen Jiang and Peter J. Jin, Rutgers, The State University of New Jersey, Xia Wan, University of Wisconsin-Madison, Madison
Pilot Study: Effects of the Incorporation of Wireless Communication-Enabled and Autonomous Vehicles on Traffic Congestion and Safety , Claire Silverstein and Samer Hamdar, George Washington University
Predictive Control of a Vehicle Convoy Considering Lane Change Behavior of the Preceding Vehicle , Peng Liu, Arda Kurt, Keith Redmill, Umit Ozguner, Ohio State University
Other Connected and Automated Vehicle related topics
Improved Warning and Control Assistance Information Embedded in Basic Safety Messages Transmitted between Connected Vehicles , Asad Khattak, University of Tennessee
Identifying Safety-Critical Events using the Basic Safety Message , Robert Kluger and Brian Smith, University of Virginia
Developing a Spatial-Temporal Dimension Extension-based Autonomous Intersection Control Strategy for Connected Autonomous Vehicles , Qiong Wu, Cheng Wang, Cong Chen, Guohui Zhang, and Rafiqul Tarefder, University of New Mexico, Zong Tian, University of Nevada
Optimal Intersection Control of Automated and Cooperative Vehicles , Youssef Bichiou, Hesham Rakha, Mohammed Almannaa, and Ahmed Roman, Virginia Tech Transportation Institute
U.S. DOT FHWA Intelligent Transportation Systems (ITS) Professional Capacity Building (PCB) Program: An Overview of ITS PCB Program Resources and Academic Links , Mac Lister, U.S. DOT

A Scalable Force Terrain Model for Microscopic Simulation of Connected and Autonomous Transport , Bumjoon Bae, Hyeonsup Lim, Yang Zhang and Lee Han, University of Tennessee
Energy and Greenhouse Gas Emissions Impacts of Autonomous Vehicles , Regina Clewlow, Stanford University
Minimum Time to Situation Awareness during Transfer of Control in Autonomous Driving , Siby Samuel and Donald Fisher, University of Massachusetts, Amherst
Personal Intersection Speed Advisory System , Slobodan Gutesa, Joyoung Lee, Dejan Besenski and Branislav Dimitrijevic, New Jersey Institute of Technology
Texas Technology Task Force: A Platform for Identifying, Evaluating, and Leveraging Emerging Technologies , Andrea Gold, Kristie Chin, and C. Michael Walton, Ph.D., P.E., The Center for Transportation Research at the University of Texas at Austin
Planning
The Impact of Activities while Traveling on Commute Mode Choice in an Autonomous Vehicle Future: Simulations Based on a Revealed-Preference Model , Aliaksandr Malokin, Patricia Mokhtarian and Giovanni Circella, Georgia Institute of Technology
The Implications of Automated and Connected Vehicle Technologies on Travel Behavior and Modeling , Mohammad Lavasani and Xia Jin, Florida International University
Consumers' Perception, Intended Adoption, and Travel Behavior Impacts of Automated Vehicle Technology: Findings from a Multi-University Population Survey in Florida , Nikhil Menon, Abdul Pinjari and Yu Zhang, University of South Florida, Siva Srinivasan, University of Florida, Xia Jin, Florida International University, Naveen Eluru, University of Central Florida
Creating Livable Communities through Connecting Vehicles to Pedestrians and Cyclists , John MacArthur, Portland State University

THURSDAY, NOVEMBER 5	
7:30 a.m. – 8:30 a.m.	Continental Breakfast
7:30 a.m. – 5:00 p.m.	Registration
8:30 a.m. – 10:00 a.m.	<p>Plenary Session 4: Modal Application Moderator: Robert Bertini, California Polytechnic State University, San Luis Obispo</p> <p>Connected Transit, Steve Smith, Carnegie Mellon</p> <p>Connected Work Zone for Improved Freight Mobility and Safety, Christopher Poe and Robert Brydia, Texas A&M Transportation Institute</p> <p>Stan Young, National Renewable Energy Laboratory/University of Maryland</p>

10:30 a.m. – Noon	Concurrent Breakout Discussion Groups	
	Group 1 – Institutional and Policy	Steve Shladover
	Group 2 – Infrastructure Design & Operations	Pat Szary
	Group 3 – Planning	Charlie Howard
	Group 4 – Modal Applications	Robert Bertini
Noon – 1:30 p.m.	Lunch	
1:30 p.m. – 3:00 p.m.	Breakout Session Reports	
3:00 p.m. – 4:00 p.m.	Closing Session and Adjourn	

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