

Call for Papers: TRB 96th Annual Meeting, Jan. 8-12, 2017, Washington, D.C.

Call Title: Critical Research Needs in Surface Transportation Weather

Sponsoring Committee: AH010 Surface Transportation Weather

Call Description:

This Call for Papers is to invite researchers and practitioners to develop papers to be considered for publication and/or presentation at the TRB Annual Meeting in January 2017. The following research areas were identified by the AH010 Committee of being critical areas of research within the field of Surface Transportation Weather.

- Research addressing technologies, applications, and modeling in connected road weather sensing and evaluates its potential impact on traveler information, maintenance, and operations.
 - o Connected vehicle based road weather data collection.
 - o Mobile road weather data modeling
 - o Analytic models on mobile weather data fusion
 - o Mobile road weather data visualization
 - o Crowdsourcing weather data collection through social media and mobile applications
 - o Mobile application based road weather information delivery
 - o Connected vehicle applications on maintenance vehicles
 - o Driver behavioral response to new weather data sources (e.g. impact on travel and driver behavior)
 - o Agency response to and utilization of mobile weather data sources.
 - o Impact on traffic operations and maintenance, e.g. ICM(Integrated Corridor Management), Active Traffic and Demand Management (ATDM), and MDSS (Maintenance Decision Support System)
- While there is limited guidance on the impacts on rain events on speed, a better understanding of the impacts of all types of weather on roadways is needed, particular on congested or nearly congested facilities.
 - o Some weather types are missing (ice, freezing rain) as well as mixed weather (visibility along with surface slickness)
 - o Impacts on traffic on road conditions during weather events (mechanical wear on ice and snow on road surface)
 - o Visibility reductions due to spray (melt, rain, brine)
 - o Sun glare impact on crashes (concerns about accuracy of crash data time reporting)
 - o Review of *Model Minimum Uniform Crash Criteria* (MMUCC) for weather reporting categories
- Harnessing of big weather datasets for improved understanding of roadway operations and maintenance.
- Standards needed in describing different road weather events. What weather parameters are measured, how are these parameters measured, how are the data transmitted.
- Combining road weather information remains a research challenge.
 - o Work being done in the Weather Data Environment. More information from the research community needed to ensure that the Weather Data Environment serves their needs. Issues on data availability/compatibility for different applications.
 - o Data sharing agreements
 - o Data integration between weather and non-weather data sources
 - o Reliability
 - o Data resolution needs

Submission Deadline: August 1st, 2016.

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Authors interested in submitting papers are advised to check the [Paper Author Resource Page](#) for the major changes for 2017 and read [Writing a Paper for TRB](#) and [Submitting a Paper to TRB](#). Authors submitting papers in response to this Call for Papers should submit full papers for peer review to the Transportation Research Board online at www.TRB.org/AnnualMeeting. Paper submission is open from June 1 to August 1. The paper submission website will close when it is no longer August 1 anywhere in the world. When submitting please indicate the sponsoring committee name or the Call for Papers title on the papers submission form. Please contact the Call for Papers organizer if you are submitting a paper or need additional information.