The Importance of Consistent Perceptual Information on Service Vehicles for Safe Driving

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Previous research suggests that the colors of flashing lights and of vehicles and their markings provide important perceptual information to drivers about the type and nature of roadway situations involving front line service workers. Building upon that research, participants completed an online survey with video clips containing pairs of scale-model vehicles having different combinations of paint and marking colors, flashing light colors, and flashing modes. In a forced choice paradigm, participants judged which vehicle in the pair was more likely to be responding to an emergency situation such as a fire. The results of the study indicate that the color of flashing lights was the most important predictor of whether a service vehicle was seen as responding to an emergency (red) or not (yellow). Response consistency was substantially greater if the vehicle color was the same as that of the flashing lights. Slightly greater response consistency was found when the flashing mode (e.g., brighter and faster flashing lights) reinforced the color (red) of the emergency vehicle and its flashing lights. While field validation of these findings is necessary, the results suggest that consistency in observer judgments about roadway situations involving front line service workers is maximized when the perceptual information on a service vehicle is consistent.

TRBAM-24-02533

Poster Session 3039

Pedestrians, Bicyclists, and Driver Interactions

Tuesday, January 09, 8:00 AM- 9:45 AM ET Convention Center 2024, Hall A *Poster*

Sanaz Motamedi, University of Florida

Sponsored by:

Standing Committee on Human Factors of Infrastructure Design and Operations (ACH40)

No description available

No agenda available

Evaluating Drivers' Braking Behavior at Mid-Block Pedestrian Crosswalks Using Video Data and a Mixed Logit Model

Md Jamil Ahsan, University of Central Florida Mohamed Abdel-Aty, University of Central Florida Nafis Anwari, University of Central Florida Natalia Barbour, University of Central Florida

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TRBAM-24-00109

Sessions and Events



Spotlight Sessions



TRB has spotlighted a number of sessions that are being presented by our sponsors or cover timely issues and topics.

Poster Sessions

Convention Center, Lower Level, Hall A

Poster Sessions provide an opportunity to interact with authors in a more personal setting than the conventional lecture. The papers presented in these sessions meet the same review criteria as lectern session presentations. For a complete list of poster sessions, see the "Sessions, Events, and Meetings" section in the printed program. The full description for each poster session—including the titles and locations of individual posters—is available via the mobile app. A floor plan of the posters also on the mobile app.

Continuing Education Credits



Certification Maintenance **Professional Development Hours** (PDHs) may be claimed for attending the TRB Annual Meeting. Each hour of participation earns one PDH. Attendees must maintain their own record of attendance and can do so using the form in the printed program. At the request of a licensing or certifying agency, TRB will confirm an individual's meeting registration; however, TRB is not able to confirm attendance at specific sessions. Please note that, at this time, neither TRB nor the Annual Meeting is certified with the state licensing boards of Florida and New York.

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Evaluating Drivers' Braking Behavior at Mid-Block Pedestrian Crosswalks Using Video Data and a Mixed Logit Model (TRBAM-24-00109) - B780

Md Jamil Ahsan/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Nafis Anwari/University of Central Florida, Natalia Barbour/University of Central Florida

Evaluating Driving Safety Using Real-World Autonomous Vehicle Data in Seoul Autonomous Mobility Testbed (TRBAM-24-00157) - B781

Hoseon Kim/Hanyang University, Young Jo/Hanyang University, Minkyung KIM/Hanyang University, Cheol Oh/Hanyang University, Seolyoung Lee/Hanyang University

The Importance of Consistent Perceptual Information on Service Vehicles for Safe Driving (TRBAM-24-02533) - B782

John Bullough/Icahn School of Medicine at Mount Sinai, Mark Rea/Icahn School of Medicine at Mount Sinai Investigating Driver Avoidance Behavior Under Pedestrian–Vehicle Conflicts in the Visual Blind Area: A Driving Simulator Study (TRBAM-24-03448) - B783

Changshuai Wang/Southeast University, Yongcheng Shao/Southeast University, Tong Zhu/Southeast University Pedestrian and Bicycle Conspicuity in the Second Strategic Highway Research Program Naturalistic Driving Study (TRBAM-24-03533) - B784

Patricia Tice/ProFound Insights, Inc, Sudipta Dey Tirtha/ProFound Insights, Inc

Corner-Case Scenarios of Vulnerable Road Users for the Development of Automated Vehicles: A Data-Driven Framework (TRBAM-24-04666) - B786

Huizhong Guo/University of Michigan, Transportation Research Institute, Zifei Wang/University of Michigan, Transportation Research Institute, Brian Lin/University of Michigan, Transportation Research Institute, Fred Feng/University of Michigan, Transportation Research Institute, Feng Zhou/University of Michigan, Transportation Research Institute, Rini Sherony/University of Michigan, Transportation Research Institute, Shan Bao/University of Michigan, Transportation Research Institute

An Evaluation of Driver Comprehension of the Pedestrian Hybrid Beacon (TRBAM-24-04984) - B787

Angelina Caggiano/University of Massachusetts, Amherst, Jaji Pamarthi/University of Massachusetts, Amherst, Tracy Zafian/University of Massachusetts, Amherst, Michelle Deng/University of Massachusetts, Amherst, Kirsten Johnson/University of Massachusetts, Amherst, Francis Tainter/University of Massachusetts, Amherst, Michael Knodler/University of Massachusetts, Amherst

Understanding Heavy Braking in Vehicles While Approaching Pedestrian Crosswalks: A Survival Analysis Perspective (TRBAM-24-05129) - B788

Kaliprasana Muduli/Indian Institute of Technology, Roorkee, Anshul Maurya/Indian Institute of Technology, Roorkee, Indrajit Ghosh/Indian Institute of Technology, Roorkee

Smart Leading Pedestrian Intervals (LPIs): A Deep Reinforcement Learning Control Strategy for Determining Optimal LPIs (TRBAM-24-05991) - B789

Yingfan Gu/University of Cincinnati, Zhixia Li/University of Cincinnati

Investigating and Modeling Motorized and Non-Motorized Interaction Behavior in Shared Spaces of Intersections (TRBAM-24-06090) - B785

Zhangcun Yan/Tongji University, Lishengsha Yue/Tongji University, Nicolas Saunier/Tongji University, Jian Sun/Tongji University





Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Traffic Control Devices 2024

Angela Kargel, Oregon Department of Transportation, presiding Sponsored By Standing Committee on Traffic Control Devices

This session is a collection of traffic control device related research covering traffic signals and digitized infrastructure.

Field Assessment of Variable Left Turn Mode by Time of Day for Intersections Being Upgraded with Flashing Yellow Arrow Signal Heads and Offset Left Turn Lanes (TRBAM-24-00515) - B726

Pranesh Biswas/University of South Alabama, Min-Wook Kang/University of South Alabama, Md. Rezwan Hossain/University of South Alabama, Moynur Rahman/University of South Alabama