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EDUCATION

- PhD, Civil and Environmental Engineering, Northwestern University, Evanston, IL, 2008
- MS, Systems Engineering, Tsinghua University (China), 2003
- BS, Automation, Tsinghua University (China), 2001

PROFESSIONAL EXPERIENCE

- Associate Professor, Department of Civil, Construction and Environmental Engineering, Iowa State University, Ames, IA, 2018–present
- Assistant Professor, Department of Civil, Construction and Environmental Engineering, Iowa State University, Ames, IA, 2012–2018
- Research Staff Member, Oak Ridge National Laboratory, Oak Ridge, TN, 2010–2012
- Postdoctoral Researcher, Northwestern University Transportation Center, Evanston, IL, 2009–2010

SELECTED RESEARCH PROJECTS

- *Evaluation of Messaging Techniques to Increase Vehicle Spacing at Work Zones* (Smart Work Zone Deployment Initiative). This project developed novel anti-tailgating messages for deployment in work zones, assessed the emotional resonance and comprehensibility of the messages through user surveys, and evaluated the effectiveness of the developed messaging strategies in real-world work zones.
- *Assessment of the Consumer Reasons for Selection of Ethanol Fuel* (Federal Highway Administration, Iowa Department of Agriculture and Land Stewardship, Iowa Department of Transportation). This project evaluated consumer acceptance of different blends of ethanol at fueling stations in Iowa. In-person intercept surveys were conducted regarding biofuel use and fuel preferences at 16 gas stations. The survey results showed that cost was the primary factor in fuel selection for purchasers of E-0, E-10, and E-85 ethanol blends, and compatibility of the fuel with the respondent's vehicle was a major factor for all respondents.
- *Automated Permitting System Report to Legislature* (Iowa Department of Transportation). The goal of this project was to report to the legislature on the implementation options in performing oversize/overweight (OS/OW) permitting for local public authorities (LPAs) using the Iowa Automated Permitting System. Interviews and surveys were conducted to collect information on

other state's practices and gather input from the industry and Iowa LPAs regarding OS/OW permitting.

- *The Role of Electric Vehicles in Promoting Sustainable Urban Mobility* (Oak Ridge National Laboratory). This project investigated the impact of using battery electric vehicles in the ridesharing and ride-hauling fleet based on travel survey data and Global Positioning System (GPS) tracked taxi trajectories. The research team extracted ten variables from the trip data of New York City yellow taxis to represent their spatial-temporal travel patterns in terms of driver-shift, travel demand, and dwell, while examining the implications of these driving patterns on battery electric vehicle (BEV) taxi feasibility.

SELECTED PUBLICATIONS

- Oh, M., J. Shaw, and J. Dong-O'Brien. 2024. Enhancing Work Zone Safety: A Psychological and Behavioral Analysis of Anti-Tailgating Strategies Using Dynamic Message Signs and Fixed Warning Signs. *Transportation Research Part F: Traffic Psychology and Behaviour,* Vol. 106.
- Zhao, Y., and J. Dong-O'Brien. 2023. Freeway Traffic Breakdown Prediction using Artificial Neural Networks. *Algorithms*, Vol. 16, No. 6.
- Hu L., and J. Dong. 2022. An Artificial-Neural-Network-Based Model for Real-Time Dispatching of Electric Autonomous Taxis. *IEEE Transactions on Intelligent Transportation Systems*, Vol. 23, No. 2, pp. 1519–1528.
- Hallmark, B., and J. Dong. 2020. Develop Roadway Safety Models for Winter Weather Conditions using A Feature Selection Algorithm. *Journal of Advanced Transportation*.
- Dong, J., X. Wu, C. Liu, Z. Lin, and L. Hu. 2020. The Impact of Reliable Range Estimation on Battery Electric Vehicle Market Acceptance. *International Journal of Sustainable Transportation*. Vol. 14, No. 11, pp. 833–842.
- Dong, J., C. Liu, and Z. Lin. 2014. Charging Infrastructure Planning for Promoting Battery Electric Vehicles: An Activity-Based Approach Using Multiday Travel Data. *Transportation Research Part C.*, Vol. 38, pp. 44–55.
- Greene, D. L., Z. Lin, and J. Dong. 2013. Analyzing the Sensitivity of Hydrogen Vehicles Sales to Consumers' Preferences. *International Journal of Hydrogen Energy*, Vol. 38, No. 36.

PROFESSIONAL AFFILIATIONS, HONORS, AND SERVICE

- Editor, *Journal of Advanced Transportation*, 2020–present
- Associate Editor for the IEEE Conference on Intelligent Transportation Systems
- Senior Member, Institute of Electrical and Electronics Engineers, 2019–present
- Committee Member, Transportation Research Board (TRB) Standing Committee on Alternative Fuels and Technologies (AMS40), 2023–present
- Committee Member, TRB Standing Committee on Transportation Network Modeling (AEP40), 2015–present
- Committee Member, TRB Standing Committee on Traffic Flow Theory and Characteristics (ACP50), 2011–2021
- 2021 Charles W. Schafer Award for Excellence in Teaching, Research and Service in the Department of Civil, Construction and Environmental Engineering at Iowa State University