

May 4, 2023

## **Report on Attendance at the 102nd Transportation Research Board Annual Meeting 2023**

To: The Israeli Smart Transportation Research Center (ISTRC)

I am pleased to provide you with a report on my attendance at the Transportation Research Board (TRB) 102nd Annual Meeting, held in January 2023. I would like to express my gratitude to the Israeli Smart Transportation Research Center for providing me with the funding to attend this significant event.

The TRB Annual Meeting is a prestigious conference, gathering professionals and researchers from around the globe to discuss and share the latest advancements in transportation research. This year, the conference featured various lectures and poster presentations that covered a wide range of topics related to transportation planning, policy, infrastructure, and technology.

During the conference, I had the opportunity to present my research, titled "Constrained Deep Neural Networks for Discrete Choice Modeling." In this work, I developed a methodology to incorporate domain-knowledge in the form of constraints on the direction of effect of various variables on choice probabilities into machine learning approaches to discrete choice modeling. My poster presentation was well-received, and I engaged in numerous productive discussions with fellow researchers and professionals who showed interest in my work. These interactions allowed me to gain valuable feedback, which I believe will contribute to the improvement and expansion of my research.

In addition to presenting my work, I attended several lectures and poster presentations that were relevant to my field of research. Some notable presentations included:

1. "Data Science Meets Statistical Modeling" - This workshop explored the potential of integrated models combining traditional statistics and data-driven methods for travel demand and accident analysis. It aimed to map current research, discuss critical questions, and define future research directions.
2. "Research Need in Travel Demand Forecasting" - This workshop addressed the need for new research priorities in travel demand forecasting, considering factors such as Big transportation data, the COVID-19 pandemic, and emerging technologies.
3. "Revisiting Travel Demand Using Big Data" - This lecture examined the relationship between mobile device location data-based travel demand and various factors using explainable machine learning models. These techniques improve model accuracy and provide a deeper understanding of complex relationships.

These sessions provided me with valuable insights into the current trends and future directions in transportation research. Furthermore, attending the conference allowed me to establish new professional connections and broaden my network within the transportation research community.

I also actively participated in networking events and engaged in discussions with fellow attendees. These interactions proved to be invaluable in building professional connections at the TRB Annual Meeting, which have the potential to lead to future collaborations, research opportunities, and career advancement. I had the chance to meet researchers and professionals from diverse backgrounds and countries, allowing me to gain insights into different perspectives and approaches in the field of transportation research.

In conclusion, my attendance at the TRB 102nd Annual Meeting was an enriching experience, both personally and professionally. I am confident that the knowledge and connections gained at the conference will contribute to the advancement of my research and the overall mission of the Israeli Smart Transportation Research Center.

Once again, I would like to thank the ISTRC for their generous support.

Sincerely,

Shadi Haj Yahia