13th Symposium of the European Association for Research in Transportation

10th June - 12th June 2025 | Technical University of Munich

Summary Report

By Keren-Or Grinberg-Rosenbaum

From **June 10th-12th, 2025**, I presented my research at the **13th Symposium of the European Association for Research in Transportation (hEART)** at the Technical University of Munich. My paper, "Predicting Public Transport Resilience to Climate Extremes: A Hybrid Dynamical Systems Thinking Approach," was co-authored with my PhD supervisors: **Prof. Yoram Shiftan** (TECHNION - Israel Institute of Technology, Israel), **Prof. Francisco Camara Pereira** (Technical University of Denmark, Denmark), and **Dr. Bat Hen Nahmias-Biran** (Tel Aviv University, Israel). The 30-minute presentation in Session 3A: Public Transport generated valuable feedback from the international research community and opened pathways for future collaborations with fellow PhD researchers.

Our presentation showcased the **Hybrid Dynamical Systems Thinking Approach (HDSTA)**, which represents a significant advancement in transportation research methodology. The approach's uniqueness lies in its foundation on **data-driven insights and domain knowledge** rather than relying solely on traditional survey-based methodologies that dominate current research. The conference's emphasis on expandable AI-based knowledge models for decision-making aligned perfectly with our research objectives, validating the relevance and timeliness of our approach. The experience reinforced the importance of data-driven methodologies in transportation research and demonstrated the competitive advantage of approaches that integrate systems thinking with empirical data analysis over traditional survey-based methods.

The conference provided an exceptional professional opportunity to meet face-to-face with my international supervisory team - **Prof. Yoram Shiftan**, **Prof. Francisco Camara Pereira**, and **Dr. Bat Hen Nahmias-Biran** - with all supervisors from their respective countries present at the event. This rare convergence allowed for intensive collaborative discussions and strategic planning for future research directions.