

Impressions from TRA 2026 - Budapest

In May 2026, I had the opportunity to participate in the Transport Research Arena (TRA) conference in Budapest and present a poster describing our research on capacity-aware Multi-Agent Path Finding for traffic networks, together with my research partner Gadi Hasson.

One of my main impressions from the conference was the broad range of participants and topics. The conference brought together researchers, transportation professionals, industry representatives, and policymakers, and covered many different aspects of smart and sustainable transportation. Coming from a software engineering and algorithmic research background, it was especially interesting for me to see how computational approaches such as artificial intelligence, optimization, routing, and data-driven methods are being applied to real transportation problems.

Several of the sessions dealing with smart mobility, traffic management, digitalization, and the use of AI in transportation were closely related to the direction of our research. Our work focuses on adapting Multi-Agent Path Finding algorithms to road networks while considering road capacities and congestion. Seeing other approaches to traffic management and optimization helped me place our work in a broader transportation research context rather than viewing it only as an algorithmic problem.

Presenting the poster was an important part of the experience. The poster session gave me the opportunity to explain our research directly to participants from different backgrounds and discuss the motivation, methodology, and results of the work. These conversations encouraged me to think further about aspects such as algorithm scalability, the representation of real traffic conditions, and how capacity constraints can be modeled in a way that better reflects real road networks.

The conference was also useful because it exposed me to research outside the specific area of Multi-Agent Path Finding. Many transportation problems involve a combination of algorithms, infrastructure, data, human behavior, and operational constraints. This gave me a broader understanding of the challenges involved in moving from a theoretical or simulated solution toward approaches that may eventually be relevant to real transportation systems.

Beyond the professional sessions, meeting researchers and practitioners working on different aspects of intelligent transportation was a valuable experience. It provided an opportunity to exchange ideas, hear different perspectives, and become more familiar with current directions in transportation research.

Overall, participating in TRA 2026 was a very positive experience. It allowed me to present our research through the poster session, receive feedback and different perspectives on the work, and gain a broader understanding of the field in which our research is positioned. I returned from

the conference with several ideas and considerations that can contribute to the next stages of the research.

I would like to thank my advisors, Dr. Rina Azoulay, Dr. Esther David, Wafa Elias, and Tammar Shrot, for their guidance throughout this research, and the Israeli Smart Transportation Research Center (ISTRC) for supporting my participation in the conference and helping make this opportunity possible.

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