

The Israeli Smart Transportation Research Center

Autonomous Agents and Multiagent Systems (AAMAS) 2023 - Conference Report

Tzvika Geft

AAMAS is premier conference in the area of agents and multi-agent systems, bringing together researchers and practitioners in all areas of agent technology and providing an internationally renowned high-profile forum for publishing and finding out about the latest developments in the field.

The topics covered are diverse and include algorithmic game theory (e.g., auctions, voting, and mechanism design), societal modeling and simulation, knowledge representation, planning, robotics, and more. While smart transportation is not necessarily the focus of AAMAS, the conference provides a good platform for various agent-based perspectives relevant to smart transportation.

My particular area of coordinated motion planning for multi-agent/robot systems had a few relevant sessions and workshops this year. A few interesting variants of a key problem in this area, Multi-Agent Path Finding (MAPF), were discussed. These included variants of the online setting called Multi-Agent Pickup and Delivery (MAPD), where goals/tasks appear on the fly (as opposed to having all start and target positions of the agents being given initially). In another variant, goals had individual deadlines, which could better model some applications, e.g., order fulfillment in a warehouse. Finally, an interesting new variant added a fairness take to the problem by aiming to equalize the delay among the agents.

A few aspects of the organization this year made it easier to explore other works and connect with fellow researchers. First, all attendees had access to an app where you could easily message other attendees. You could also post in forums, which allowed meetups to be easily set up, among other useful discussions. Second, each paper also had a poster which appeared in a session both before and after the paper's presentation, on the same day. This allowed for getting a better idea of the upcoming talks and even gaging the audience before my presentation. While somewhat more intense, the format enhanced interactions.

Overall, attending AAMAS allowed me to share my work with relevant audiences, connect with fellow researchers, and learn about on-going research trends. I am grateful for the continued support of the Israeli Smart Transportation Research Center for enabling this meaningful and useful experience.

Sincerely,
Tzvika Geft