

ISTRC conference grant request

Conference report - IJCAI-ECAI 2022

October 23, 2022

IJCAI-ECAI is the 31st International Joint Conference on Artificial Intelligence in collaboration with the 25th European Conference on Artificial Intelligence. IJCAI is a top-tier conference on the broad spectrum of artificial intelligence (AI), as such its research topics are diverse, and sometimes even (too) sparse on specific research topics. The IJCAI conference is a relatively prestigious one, with a low acceptance rate of around 15 percent this year. The main conference schedule started from July 26 to July 29, preceded by workshops from July 23 to July 25. I attended the main conference from July 27 to July 29.

My main research interest lies in planning and decision-making (under uncertainty), and so the review of the conference presented here is from this perspective. A large part of the planning paradigms presented at the conference focus on deterministic planning. Furthermore, many of those approaches discuss classical planning methods, such as STRIPS, PDDL, temporal logic, and heuristic search within trees. The planning sessions also covered reinforcement learning approaches, which deal with Markov Decision Processes. Unfortunately, most papers seem to be concerned with more heuristic, application-oriented (e.g. deep reinforcement learning), and less mathematically rigorous solutions. Last, the number of papers on Partially Observable Markov Decision Processes, where our research interest lies, was highly sparse with somewhere around 3-4 papers at the conference. This number is probably too low to be beneficial at the conference itself, and I would advise students from smaller research communities to attend more subject-specific conferences or conferences with a large number of attendees.

In conclusion, given the wide variety of AI topics and the medium-sized conference, it is possible that in some research topics, the number of relevant research papers and attending colleagues may be quite small. Since those topics may change from year to year, I would advise students of smaller research communities to verify the conference focus as much as possible a-priori. Nevertheless, IJCAI is a highly valued conference, which may be beneficial in the long term regardless of the immediate gain from the conference itself.

Moran Barenboim