

Comparing Semantics of Strategic Ability

Alternating-time temporal logics (ATL) have been studied extensively in previous years. However, most of the research was focused on the way such logics can be used for the specification and verification of multi-agent systems. Studies of other decision problems and meta-properties of these logics were mostly limited to the basic variant of ATL where agents possess perfect information and perfect memory.

In this talk, we show that different assumptions about agents' knowledge and memory in ATL give rise to different validity sets. As a consequence, we show that different notions of ability induce different strategic logics and different general properties of games.