

This thesis formalizes a model of bounded rationality in extensive-form games called game-playing schemata. In this model, the strategies are represented by a structure consisting of a deterministic finite automaton and two computational functions. The automaton represents a structured memory of the player, while the functions represent the ability of the player to identify efficient abstractions of the game. Together, the schema is a realization of a pure strategy which can be implemented by a player in order to play a given game. The thesis shows how to construct correctly playing schema for every pure strategy in any multi-player extensive-form game with perfect recall and how to evaluate its complexity. It proves that equilibria in schemata strategies always exist and computing them is PPAD-hard. Moreover, for a class of efficiently representable strategies, computing MAXPAY-EFCE can be done in polynomial time.