

On the Value of Information Structures in Stochastic Games

abstract:

This paper examines how improved monitoring affects the limit equilibrium payoff set for stochastic games with imperfect public monitoring. We introduce a novel notion of garbling called weighted garbling in order to compare different information structures for this class of games. It is weaker than the standard notion of garbling, hence enables us to compare a larger class of information structures. Our main result is the monotonicity of the PPE payoff set with respect to this information order: we show that the limit PPE payoff set for an information structure is larger than the limit PPE payoff set for another information structure at each state if the latter information structure is a weighted garbling of the former.