Characterizations of Stable Equilibria of Games

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Abstract

Kohlberg and Mertens (1986) propose the solution concept of hyperstable sets of equilibria. In joint work with Srihari Govindan, we show that this concept has an exact characterization: a component of the Nash equilibria is hyperstable if and only its topological index is nonzero. We also show that two axioms that justify the weaker concept of stable sets of equilibria: one axiom is invariance to adding redundant strategies and the other axiom requires that every perturbation of players' strategies in continuation from an information set of an extensive-form game induces a quasi-perfect equilibrium in the selected set of Nash equilibria.