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Equilibrium Existence for Large Perfect Information Games[☆]

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Abstract

This paper provides a novel existence theorem for subgame perfect equilibria of potentially large extensive form games with perfect information and continuous preferences, allowing for infinite horizon and infinite action spaces. The approach is based on the properties of the topology on the space of outcomes and differs from all previous approaches in the literature. Furthermore, the existence proof relies on a new algorithm that is independent of the horizon, hence can also be applied to infinite-horizon games.

Keywords: Backwards Induction, Subgame Perfection, Equilibrium Existence, Large Extensive Form Games, Perfect Information
JEL: C72, C62

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