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Computation of Nash equilibria in restricted games

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Abstract

For bimatrix games and general n-person games in normal form, it is well-known from John Nash's results that there exists an equilibrium ("Nash equilibrium"). The question of efficient algorithmic computation is connected to many general questions of polyhedral computation. For the special case of zero-sum games the question of computing equilibria is understood well.

The talk is concerned restricted games which allow efficient (approximate) computation of Nash equilibria. In particular, we discuss a new hierarchy of bimatrix games which is naturally given by a rank condition ("games of fixed rank").

Based on joint work with Ravi Kannan.