On repeated games with general information

by

Shmuel Zamir

Abstract For a class of repeated two-person zero-sum games with incomplete information it was proved by Aumann and Maschler that \( \lim n \) exists, \( n \) being the value of the game with \( n \) repetitions. If the players know at each stage the moves done by both players at all previous stages, Aumann and Maschler could prove that the error term \( \delta_n = \lim n \) satisfies \( \delta_n = \frac{c}{\sqrt{n}} \) for some \( c > 0 \). It was then shown by Zamir that this bound is the lowest possible. In this paper it is shown that if previous moves are not always announced, \( \delta_n \) may be of higher order of magnitude e.g. \( \delta_n \sim \frac{c}{n^{1/3}} \) for some \( c > 0 \). New upper bounds for \( \delta_n \) are given for two classes of games.