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\textbf{A nondominated adversarial search algorithm for a three-player chess game}


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\textbf{Abstract}

Three-player (3P) chess is a variation of chess game specially designed for three players. The winning condition that the first player will wins if the player captures any of the other's King, arises the playing strategies that a player can form a temporarily alliance with another player or a player can take advantage from the other's attacking to defeat either two of the opponents. This paper proposes a search algorithm called the nondominated adversarial search (NAS) for the three-player chess game which does not only maximize the own score but also minimize the opponents' scores. The experiment shows that the NAS algorithm can take advantage from the other's attacking to win the game. © 2013 IEEE.

\textbf{Author Keywords}

artificial intelligence; game; Minimax algorithm; Nondominated sorting; three player chess

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