عنوان مقاله:

A Bernoulli Tau method for numerical solution of feedback Nash differential games with an error estimation

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خلاصه مقاله:

In the present study, an efficient combination of the Tau method with the Bernoulli polynomials is proposed for computing the Feedback Nash equilibrium in differential games over a finite horizon. By this approach, the system of Hamilton-Jacobi Bellman equations of a differential game derived from Bellman's optimality principle is transferred to a nonlinear system of algebraic equations solvable by using Newton's iteration method. Some illustrative examples are provided to show the accuracy and efficiency of the proposed numerical method.

کلمات کلیدی:

Differential games, Feedback Nash equilibrium, Bellman's optimality principle, Bernoulli Tau method