

عنوان مقاله:

Feedback controller design for optimal control of linear time-delay systems via variational iteration method

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خلاصه مقاله:

This article presents a new approach for solving the optimal control problem (OCP) of linear time-delay systems with a quadratic cost functional. In this approach is employed to convert the original time-delay optimal control problem (TDOCP) into a sequence of linear two-point boundary value problems (TPBVPs). The variational iteration method (VIM) is adopted to easily solve TPBVPs by use of iteration formulas derived from the correction functionals corresponding to equations. Also it provides a sequence which converges to the solution of the problem without discretization of the variables. Illustrative examples are included to demonstrate the validity and applicability of the technique.

کلمات کلیدی:

(Optimal control; Time delay system; Pontryagin's maximum principle; Variational iteration method)

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