

## عنوان مقاله:

Population based algorithms for approximate optimal distributed control of wave equations

## محل انتشار:

مجله ایرانی آنالیز عددی و بهینه سازی، دوره 4، شماره 2 (سال: 1393)

تعداد صفحات اصل مقاله: 12

## نویسندگان:

.a.h Borzabadi - *School of Mathematics and Computer Science, Damghan University, Damghan, Iran*

.s Mirassadi - *School of Mathematics and Computer Science, Damghan University, Damghan, Iran*

.m Heidari - *School of Mathematics and Computer Science, Damghan University, Damghan, Iran*

## خلاصه مقاله:

In this paper, a novel hybrid iterative scheme to find approximate optimal distributed control governed by wave equations is considered. A partition of the time-control space is considered and the discrete form of the problem is converted to a quasi assignment problem. Then a population based algorithm, with a finite difference method, is applied to extract approximate optimal distributed control as a piecewise linear function. A convergence analysis is proposed for discretized form of the original problem. Numerical computations are given to show the proficiency of the proposed algorithm and the obtained results applying two popular evolutionary algorithms, genetic and particle swarm optimization algorithms.

## کلمات کلیدی:

Optimal control problem; Evolutionary algorithm; Finite difference method; Wave equation

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/630540>

