

## عنوان مقاله:

A New Modification of Legendre-Gauss Collocation Method for Solving a Class of Fractional Optimal Control Problems

## محل انتشار:

دوفصلنامه مرکز پژوهشی ریاضی ماهانی، دوره 6، شماره 2 (سال: 1396)

تعداد صفحات اصل مقاله: 14

## نویسندگان:

samaneh soradi zeid - *University street*

mostafa yousefi - *NIOADC*

S. M. Mousavi Shams Abad - *Valiasr Rafsanjan University, Rafsanjan, Iran*

## خلاصه مقاله:

In this paper, the optimal conditions for fractional optimal control problems (FOCPs) were derived in which the fractional differential operators defined in terms of Caputo sense and reduces this problem to a system of fractional differential equations (FDEs) that is called twopoint boundary value (TPBV) problem. An approximate solution of this problem is constructed by using the Legendre-Gauss collocation method such that the exact boundary conditions are satisfied. Several example are given and the optimal errors are obtained for the sake of comparison. The obtained results are shown that the technique introduced here is accurate and easily applied to solve the FOCPs

## کلمات کلیدی:

Fractional optimal control problem, Fractional differential equation, Legendre-Gauss collocation method

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/857217>

