عنوان مقاله:

A numerical method for controllability of the heat equation

محل انتشار:

دومین همایش ملی ریاضیات و کاربردهای آن در علوم مهندسی (سال: 1394)

تعداد صفحات اصل مقاله: 7

نویسندگان:

Hoda Saffaran - *Department of Mathematics, Islamic Azad University, Quchan Branch, Quchaan, Iran*

Mojtaba Baymani - *Department of Mathematics, Quchan University of advanced technology, Quchan, Iran*

خلاصه مقاله:

In this paper a numerical method based on the double Fourier series is developed for obtaining the solution to boundary controllability of the 1D heat equation. The Fourier series of the solution is written subject to the boundary, initial and final conditions satisfied exactly. Then the Fourier seriescoefficients are obtained by solving an optimization problem. The details of the method are discussed and the capabilities of the method are illustrated by solving heat problem with different boundary conditions.

کلمات کلیدی:

Heat equation, Boundary controllability, Double Fourier series

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/420692