

## عنوان مقاله:

A Chebyshev collocation method for nonlinear fractional Fisher s equation

## محل انتشار:

اولین کنفرانس بین المللی مسائل مقدار مرزی و کاربردها (سال: 1397)

تعداد صفحات اصل مقاله: 5

## نویسندگان:

S Mockary - *Shahr-e-Rey Branch, Islamic Azad University, Department of Mathematics*

E Babolian - *Shahr-e-Rey Branch, Islamic Azad University, Department of Mathematics*

A.R Vahidi - *Shahr-e-Rey Branch, Islamic Azad University, Department of Mathematics*

B Shiri - *University of Tabriz, Faculty of Mathematical Science*

## خلاصه مقاله:

The fractional Fisher s equation can be used for anomalous population, such as an anomalous population of human, trees, cells or neutrons in a nuclear reactor. In this paper, we use collocation method based on Chebyshev polynomials to solve nonlinear fractional Fisher s equation. To this end, we obtain a system of nonlinear equations which can be solved by Newton s method. Numerical examples show the efficiency and effectiveness of the method. Like other spectral methods we observe that the approximation is exact for solutions of polynomial types.

## کلمات کلیدی:

Chebyshev collocation method, Nonlinear fractional partial differential equations, Diffusion equation, Fisher s equation

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/801089>

