عنوان مقاله:

Numerical solutions of mathematical model on fractional Lotka-Volterra equations

محل انتشار:

اولین همایش ملی ریاضیات زیستی (سال: 1397)

تعداد صفحات اصل مقاله: 5

نویسنده:

Haleh Tajadodi - *Department of Mathematics, University of Sistan and Baluchestan, Zahedan, Iran*

خلاصه مقاله:

In this paper, we present the solutions of fractional Lotka-Volterra equations with the help of linear B-spline polynomials. The key-idea is to expand unknown function in terms of the B-spline polynomials. In this way, we use the operational matrices of fractional integration and multiplication. By using these matrices, the given problem can be changed to the system of algebraic equations, and by solving this sys- tem, we obtain the solutions of problem. Numerical results are demonstrated the e ciency and simplicityof this technique for this historical biological model.

کلمات کلیدی:

Fractional dierential equations, Lotka-Volterra model, B-spline.

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/882671