

## عنوان مقاله:

Numerical Solution of Time Fractional Cable Equation via the Sinc-Bernoulli Collocation Method

## محل انتشار:

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## خلاصه مقاله:

An important equation usually used in modeling neuronal dynamics is cable equation. In this work, a numerical method for the fractional cable equation which involves two Riemann-Liouville fractional derivatives is proposed. Our computational technique is based on collocation idea where a combination of Bernoulli polynomials and Sinc functions are used to approximate the solution to this problem. The constructed approximation by our method convert the fractional cable equation into a set of algebraic equations. Also, we provide two numerical examples to confirm the accuracy and effectiveness of the present method.

## کلمات کلیدی:

Fractional cable equation, Bernoulli polynomials, Riemann-Liouville fractional derivative, Sinc function, Numerical solution

## لینک ثابت مقاله در پایگاه سیویلیکا:

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