

عنوان مقاله:

$C^{\{3\}}$ -spline Methods for Solving Fractional Integro-differential Equations

محل انتشار:

فصلنامه ریاضی و علوم محاسباتی، دوره 5، شماره 1 (سال: 1403)

تعداد صفحات اصل مقاله: 13

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خلاصه مقاله:

Fractional integro-differential equations (FIDEs) constitute an important mathematical tool in modeling many dynamical processes. To solve FIDEs, several analytical and numerical methods have been proposed, namely those based on symmetry and spline approaches. This paper proposes quartic and sextic $C^{\{3\}}$ -spline methods for the numerical solution of FIDEs. The convergence analysis of the proposed strategy is examined in detail. Finally, three numerical examples are given to illustrate the numerical accuracy and efficiency of the proposed strategy.

کلمات کلیدی:

Fractional integro-differential equation, Quartic and sextic $C^{\{3\}}$ -splines, Convergence analysis

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