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NUMERICAL METHOD OF SOLUTION OF NONLOCAL BOUNDARY VALUE PROBLEMS FOR A LINEAR SYSTEM OF DIFFERENTIAL EQUATIONS

Abstract

In the paper we consider a problem on finding initial values of solutions of linear differential equations for nonlocal boundary conditions. A part of boundary conditions has a nonlocal form, and other part is represented in the integral form. The approximate formulas of computation of fundamental matrix for homogeneous system of differential equation are obtained. The algorithm of finding approximate solution of boundary value problem by the Runge-Kutt's two-stage method is constructed.