Numerical Minimum Time Control to a Class of Singular Integro-Differential Equations

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Abstract

This study presents a numerical method to find the minimum time for the states of one class of integro-differential equations of the first kind to reach its attainable region by assuming the forcing terms of the equations as controls. These equations consist of integro-differential parts with weakly singular kernels. Feasibility of the numerical method is demonstrated by comparisons of minimum time and a corresponding possible time using extreme controls to reach the attainable region for different initial conditions.