
Simplex method for solving the brachistochrone problem at state and control constraints

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In this paper we consider the solution of the brachistochrone problem for linear time invariant objects with the scalar constrained control and state parallelepiped constraints. In the given algorithm we employ the transition from the brachistochrone problem to a problem of linear programming which is solved by the simplex method. The proposed method belongs to the group of control parameterization methods.

Keywords: brachistochrone problem, state constraints, state constraint, linear programming, simplex method.

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