

Optimum control problem solver

1 Problem

Solve

$$\min \quad J \quad \left\{ \begin{array}{l} J = \int_{t_0}^{t_1} g(y_{state}, u_{control}, t) dt + S(y_{state}(t_n)) \\ y' = f(y_{state}, u_{control}, t) \end{array} \right.$$

Provided

$$\frac{\partial f}{\partial u} \quad \frac{\partial g}{\partial u}$$

$$\frac{\partial f}{\partial y} \quad \frac{\partial g}{\partial y}$$

$$S \quad f$$

$$g$$