State Points Connection: Optimal Boundary Value Problem

Cost Function:



State:



Hamiltonian Function:



Canonical Equation:



Transversality Condition:



Control Equation:



Optimal State:



Optimal Cost:



Trajectory Optimization:

Cost Function



Smooth Cost:



Obstacle Cost:









Time Cost:



Inequality Constrain:





Trajectory Optimization for MATLAB Solve

System State Equation：



Smooth Cost:



Obstacle Cost：



Fast\_planner



Obstacle Cost



Dynamic Cost





Oval Cost



OvalCostGrad at T



OvalCostGrad at c



Numerical Optimization:





