

## Trajectory tracking of steering system mobile robot

### Abstract:

In this paper, the kinematic model of nonholonomic differential wheeled mobile robot steering system is established. Based on the model, a nonlinear feedback path tracking controller is proposed, which causes the closed loop system state equation for the robot to have equilibrium condition at the origin. Lyapunov candidate function is used to prove that the closed loop system is asymptotically stable at origin. Simulation results verify the usefulness of the tracking control approach.