

A REAL TIME COLLISION AVOIDANCE ALGORITHM FOR MOBILE ROBOT BASED ON ELASTIC FORCE

Kyung Hyun, Choi, Minh Ngoc, Nong, and M. Asif Ali, Rehmani

TÓM TẮT:

This present paper proposes the modified Elastic Strip method for mobile robot to avoid obstacles with a real time system in an uncertain environment. The method deals with the problem of robot in driving from an initial position to a target position based on elastic force and potential field force. To avoid the obstacles, the robot has to modify the trajectory based on signal received from the sensor system in the sampling times. It was evident that with the combination of Modification Elastic strip and Pseudomedian filter to process the nonlinear data from sensor uncertainties in the data received from the sensor system can be reduced. The simulations and experiments of these methods were carried out.