



DOUBLE LAYERS FUZZY LOGIC BASED MOBILE ROBOT PATH PLANNING IN UNKNOWN ENVIRONMENT

YILI FU, HAN LI, ZAINAN JIANG, SHUGUO WANG

Robotics Institute, Harbin Institute of Technology

No. 92, the WestDa-zhi Street

Harbin, Heilongjiang, China, 150001

Mail: meylfu@hit.edu.cn

ABSTRACT—A path planning method of mobile robot using both fuzzy logic and driver's driving experience is proposed. Double layers fuzzy logic is used to control both the speed and the turning angle of the mobile robot. A method of "virtual target" is introduced to deal with the problem of local minimal, which often occurs in local path planning. The results of simulation and experiment show its effectiveness and feasibility.

Key Words: mobile robot; fuzzy logic; trap escaping; path planning