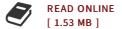# Fuzzy Logic Based Mobile Robot Navigation

By Farooq, Umar / Mahmood ul Hasan, Khalid

Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | Hurdle Avoidance, Wall Following and Path Tracking Behaviours | Design and implementation of fuzzy logic controller for mobile robot navigation in unknown environments is presented. The task of navigation is divided into three behaviors namely hurdle avoidance, wall following and goal seeking. The outputs from these behaviors are combined to generate collision free motion of robot amongst obstacles in reaching the target. The controllers for these behaviors are designed using Fuzzy Logic toolbox of MATLAB® and their implementation is realized with readily available and inexpensive AT89C52 microcontrollers. Finally, the robot with these controllers is tested in indoor environments containing obstacles with changing destination places and is found to reach the set targets successfully which shows the validity of the designed controllers in achieving the required task. | Format: Paperback | Language/Sprache: english | 112 pp.

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