

## **Abstract**

In this paper, we present a novel approach based on intelligent computing which offers to the autonomous mobile system the ability to realize these factors: recognition, learning, decision-making, and action (the principle obstacle avoidance problems). In most practical situations, the mobile robot can not take the most direct path from the start to the goal point. So, Motion finding techniques must be used in this situation, and the simplified kinds of planning mission involve going from the start point to the goal point while minimizing some cost such as time spent, chance of detection, or fuel consumption. The robot has to find a collision-free trajectory between the starting configuration and the goal configuration in a static unknown environment containing some unknown obstacles. These environments were randomly generated and are unknown. The input parameters Map contain the ground information. To deal with the principle, the robot needs the capability to build a map of the environment, which is essentially a repetitive process of moving to a new position, sensing the environment, updating the map, and planning subsequent motion. This is necessary to build the trajectory of sub positions " the feasible trace line towards the target without collisions". Hence, a mobile robot detects unknown hazardous obstacle on the path and finds its free path without collision. The main details of concept are clarified. The results are promising for next development.