AUTONOMOUS FIVE LEGS RESCUE ROBOT NAVIGATION IN CLUTTERED ENVIRONMENT

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ABSTRACT

To realize the intelligent system in the robot that does not depend on the environment model. This research focused on five legs robot that inspired from sea star (phylum echinodermata). For cluttered environment, it is necessary to uses more than one learning module to control navigation of five legs robot. This paper proposes the use of hybrid coordination node to coordinate multi fuzzy Q-learning module. The fuzzy Q-learning was incorporated in behavior-based control structure and was considered as generation of primitive behavior like obstacle avoidance. The results of this research through simulation with webots version 6.1.0.and implemented through experiments

Keywords: five legs robot, Q-learning, hybrid coordination node, behavior based control