Abstract

Navigation and obstacle avoidance in an unknown environment is proposed in this paper using hybrid neural network with fuzzy logic controller. The overall system is termed as Adaptive Neuro Fuzzy Inference System (ANFIS). ANFIS combines the benefits of fuzzy logic and neural networks for the purpose of achieving robotic navigation task. Simulation results are presented using Khepera Simulator (KiKs) within MATLAB environment. Moreover, experimental results are obtained using Khepera III platform.

References

Mobile Robot Navigation and Obstacle-avoidance using ANFIS in Unknown Environment


Index Terms

Computer Science Automated Systems

Keywords

Fuzzy logic controller neural network ANFIS mobile robot navigation Khepera III.