

2020-06-17

# A fuzzy rule based control system for fast line following robots.

Eleftheriou, G.

IEEE

---

<http://hdl.handle.net/11728/11654>

*Downloaded from HEPHAESTUS Repository, Neapolis University institutional repository*

## **A Fuzzy Rule-Based Control System for Fast Line-Following Robots**

### **Abstract:**

This paper focuses on the optimization of the line-tracking and following control technique used in high speed autonomous movable IoT devices such as line-following robotic vehicles. A fusion of a new proactive / feed-forward control system, based on the simultaneous use of computer vision and the use of an array of analog infrared reflective phototransistors with an optimised PID based feed-back implementation is proposed. Experimental evaluations demonstrate that the proposed approach aids and improves the performance of line-following robots compared to the traditional PID technique.

**Published in:** [2020 16th International Conference on Distributed Computing in Sensor Systems \(DCOSS\)](#)