

## **Non-magnetic and non-inductive wire guided vehicle**

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### **ABSTRACT**

This paper introduces a vehicle system which can follow non-magnetic and non-inductive wire installed on roads. This vehicle can autonomously steer using sensors information with the accuracy of human being.

Unlike existing vision systems, high reliability is guaranteed under bad weather conditions such as snow, rain or poor illumination. Futhermore, compared with magnetic pavement marking system, the installation and maintenance of wire is easily made at lower cost.

We have implemented a wire guided vehicle using neural networks technique and the vehicle can autonomously drive at 20-40 Km/h in straight road, at 15-30 Km/h in curved road (radius of curve : 10m). Currently, we are undergoing tests for better performance. Future applications of this system include lane(wire) following for vehicles on highway or shuttle buses in factory or on campus.