

The Literature of Path Planning*

*Note: Sub-titles are not captured in Xplore and should not be used

1st Wenxing Lan
dept. name of organization (of Aff.)
name of organization (of Aff.)
City, Country
email address or ORCID

2nd Given Name Surname
dept. name of organization (of Aff.)
name of organization (of Aff.)
City, Country
email address or ORCID

3rd Given Name Surname
dept. name of organization (of Aff.)
name of organization (of Aff.)
City, Country
email address or ORCID

Abstract—This document is a model and instructions for L^AT_EX. This and the IEEEtran.cls file define the components of your paper [title, text, heads, etc.]. *CRITICAL: Do Not Use Symbols, Special Characters, Footnotes, or Math in Paper Title or Abstract.

Index Terms—component, formatting, style, styling, insert

REFERENCES

- [1] O. Khatib, “Real-time obstacle avoidance for manipulators and mobile robots,” in *Proceedings. 1985 IEEE International Conference on Robotics and Automation*, vol. 2, 1985, pp. 500–505.

I. LOCAL PATH PLANNING IN A COMPLEX ENVIRONMENT FOR SELF-DRIVING CAR

A. Abstract

- 1) This paper introduces an local path planning algorithm for the self-driving car in a complex environment.
- 2) Novelty:
 - a) The novel path representation.
 - b) The collision detection and the path modification using a voronoi cell.
 - c) The novel path representation provides convenience for checking the collision and modifying the path and continuous control input for steering wheel rather than way point navigation.

B. Introduction

- 1) Path planning can be categorized into Potential-field approach [1], Roadmap based approach, and Cell decomposition based approach.
 - a) The cell decomposition based approach is to divide free space where no collision against obstacles is found into a certain size of cells and find a path by connecting adjacent cells.
 - b) The roadmap based approach is divided into deterministic roadmap and probabilistic roadmap. A typical example of the probabilistic roadmap is using RRT.

2)

ACKNOWLEDGMENT

The preferred spelling of the word “acknowledgment” in America is without an “e” after the “g”. Avoid the stilted expression “one of us (R. B. G.) thanks ...”. Instead, try “R. B. G. thanks...”. Put sponsor acknowledgments in the unnumbered footnote on the first page.

Identify applicable funding agency here. If none, delete this.