

## **Modeling and simulation of trajectory for a nonholonomic car-like mobile platform**

### **Abstract**

This paper briefly discusses about the physical properties of a mobile platform. In recent years, vehicles that move autonomously have received a good deal of attention where the US federal government through its various agencies has been the major sponsor of research in this field. Natural disaster such as earthquake or storm would be extremely dangerous and hazardous for search and rescue operation. Autonomous vehicle would be a great piece of equipment which could response to the incidence. Dubins curve is used in the study to obtain the shortest path for navigation of mobile platform. This research is ongoing where the expected result is the ability of the mobile platform to travel from initial location until target location in an unknown environment. As the platform maneuvers, it will be able to reroute a new path when obstacle is detected in order to reach the final destination.

**Keywords** — Autonomous vehicle, dubins curve, mobile platform, Reeds-Shepp curve, shortest path planning