



**TRAJECTORY PLANNING AND FABRICATION OF UGV FOR  
HAZARDOUS APPLICATIONS**

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## ABSTRACT

This report is basically concern on the trajectory planning and fabrication of UGV for hazardous applications. At the beginning of the report, the objectives, scope of works, methodology and the significance of the report had been stated. This will be the guidance for the whole process of the report writing. Moving into the second chapter, it will concentrate more on the general terminologies, definition and concept of the UGV. A few examples of UGVs had been shown here to give a better understanding what UGV is all about. In this chapter also, there is an introduction on topic of Computer Aided Design (CAD) that had been applied for the drawings of the UGV. The software that had been used here is CATIA. In the third chapter, the consideration is on the design methodology and processes of the UGV. This chapter basically prepared for selecting the best design of the UGV before the fabrication process took placed. Several comparison and calculation had been done to get the optimum solution. It is also concern on other factors such as the material and the cost of the fabrication. Modeling of the trajectory planning for UGV is the main objective in the fourth chapter. The trajectory of the UGV designed here is just the simple trajectory system. It involves only point to point and continuous motion. There will be simulation done in this chapter. The simulation of the UGV is run using MATLAB software. General information about MATLAB also had been discussed here. For the fifth chapter, it will be the detailed design and fabrication stage. Here, the best solution obtained in the third chapter will be realized. Kinematics concern of the UGV was taken seriously here so that the motion of the UGV is logical and applicable. Fabrication processes will took placed here and the explanation on every processes involve had been clearly described. It will also present the selected drawing of the UGV's part drawn using CATIA software. The last chapter will be the recommendation and conclusion of this report. The findings through out this project accomplishment also stated here.

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