**ABSTRACT**

For search and rescue operations in either military actions or civil needs, remotely operated All-Terrain Vehicles (abbreviated as ATVs) are used. These rovers are designed to travel through rough terrains, debris, trash etc. and so, are expensive. The main motivating force behind this project is to design a 3D printable compact and low cost ATV to perform reconnaissance and surveillance for security purpose, as well as to perform urban search and rescue for civil defence purpose.

The scope of the project focused mainly on the mechanical design of an individually actuated robot (IAR) so that it is made feasible for an average consumer to assemble the robot’s 3D printed parts and at the same time, to make efficient maneuvering in rough terrains. It has a maximum speed of \_\_\_, and is able to overcome \_\_cm step, \_\_cm ditch, 45° slope and climb staircase.

This report gives a full documentation of the process of design developments and fabrication of the robot.