**Hand Gesture Controlled Wheelchair**

**Abstract**

The aim of this paper is to prepare a Hand Gesture Controlled Wheelchair for the physically disabled people who face difficulty in moving from one place to another in day today life. An accelerometer is used as a sensor which gives an analog signal on its movement in any of the 6 axis directions, that is positive X axis, negative X axis, positive Y axis, negative Y axis, positive Z axis, negative Z axis. In this project we have considered X and Y axis for the direction. Further the input from sensor is given to microcontroller, Based on data received the from accelerometer the microcontroller sends the signal accordingly to motor driver module to move the wheelchair in forward, backward, left, right directions. The accelerometer used here is MEMS (micro-electromechanical system).

This research paper is an advance approach of changing the physical gesture of hand into the electrical signal and then to process that signal into digital signal of appropriate magnitude we use a microcontroller. This paper provides an instrumental solution to the people who have difficulty in moving or their body part has paralyzed, or they have lost their limb in an accident. This wheelchair is going to bring a paradigm shift between man and machine. Where this machine will be working on the user commands, we can also say its human machine interface. With the growth of technology there has always been an effort to use the technology for the betterment of mankind. Time and again the technocrats of the world had proved their metal in bringing the comfort to the people who are in need with the help of technology. Bringing the technology and economy parallel to each other is paramount aim of this paper.

**Block Diagram**

BUZZER

ATMEGA 328/8

DC MOTOR

L293D MOTOR DRIVER

16\*2 LCD MODULE

GY61 accelerometer for Tilt Detection

GY61 accelerometer for movement