Autonomous Intelligent
Robotic Wheel Chair
Advanced mobility aid for physically challenged persons

Keeping in mind the various types of problems faced by people who rarely have access to domestic help, CSIR-CMERI scientists have developed this Autonomous Intelligent Robotic Wheel Chair. Being an intelligent and smart product, it can identify the hindrances at least one metre apart.

This cost-effective product has immense societal value for the physically challenged and elderly people. Many people across the country are unable to walk a quarter mile because of mobility impairment. A person’s capacity to carry out any mobility task can be compromised by impaired body parts.
With the intention to make mobility easier for persons with disability, researchers at CSIR-CMERI (Central Mechanical Research Institute), Durgapur, West Bengal, have developed an autonomous, intelligent and powered wheelchair by utilising the advantage of robotic technology for physically challenged people.

Being an advanced mobility aid for the physically challenged, it has many unique features which have been designed and developed for physically challenged persons with various levels of disability as well as elderly and ill people. Keeping in mind the various types of problems faced by people who rarely have access to domestic help, CSIR-CMERI scientists have developed this Autonomous Intelligent Robotic Wheel Chair. Being an intelligent and smart product, it can identify the hindrances at least one metre apart and can stay away from. It can likewise scale sloping pavements while keeping up stability and high mobility.

The wheelchair is differentially steered. It has a six-wheel configuration with active suspension to enhance stability and mobility to navigate smoothly. This advanced product has fully electronic soft touch control with joystick-based command and infrared-based safety interlock for emergency stop. The wheelchair is totally a modular design with easy & quick maintenance, on-board charging facility, collapsible foot rest and interchangeable seating. Its modular construction and special features enhance its endurance (12 hours for intermittent running) without affecting the safety measures.

The advanced wheelchair has a specialised design package to suit customised fabrication for various levels of disability along with joystick-based intelligent control system which reduces or eliminates the user’s task of driving a wheelchair. It can be used for rehabilitation purpose as well.

Earlier, such wheelchairs with advanced technology were imported at exorbitant prices. But the Autonomous Intelligent Robotic Wheel Chair is a cost-effective product that allows people with mobility impairment to lead an active and safe life.