

# ROBOTICS

In the field of Robotics, CSIR-CMERI is executing various R&D Projects to address requirements of civilian, industrial, strategic as well as societal sector both on the land and under the water. CSIR-CMERI is also engaged in providing automated solution for various requirements to relieve human operators from remote, repetitive and hazardous activities.

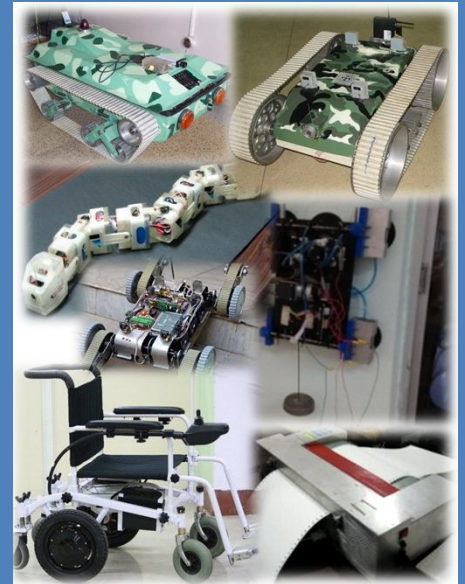
## UNDERWATER, FIELD & BIO ROBOTICS

- Autonomous Underwater Vehicles(AUV-500 & AUV-150)
- Remotely Operated Vehicles (ROV-500& ROV-100)
- Soft Robots – Flexible Robot Joint with Variable Stiffness
- Biomimetic Robots
- Compliant Actuators with Mechanical Impedance Variability
- Human-Centered Robotics on Field and Bio-Medical Rehabilitation
- Light weight soft exoskeleton suit
- Mob Control Vehicle (MCV)



## FIELD ROBOTICS

- All Terrain Mobile Robot (ATR)
- Outdoor Mobile Robot (OMR-I & II)
- Sub Terranean Robot (SR)
- Serpentine Robot
- Stair Climbing Robot
- Wall Climbing Robot



Not only CSIR-CMERI has placed its milestones in underwater robotics, but also in the field of Field Robotics, various robots have been developed for remote surveillance and inspection of buildings, structures and assisting to disaster rescue team, etc. Robotics has also been applied for the visually and physically challenged.

## Industrial Applications

- Coal Mining Robot
- Robotic System for Inspection & Health Monitoring of Cooling Water storage pit/sump/pump – NTPC Ltd. NETRA