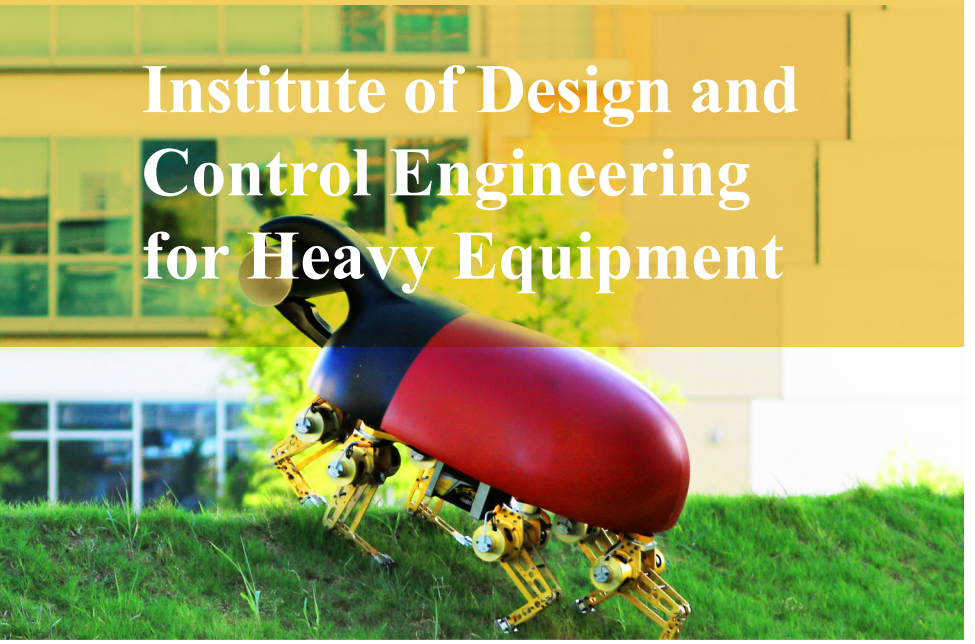
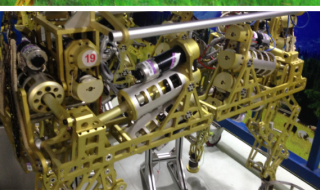
上海交通大學 SHANGHAI JIAO TONG UNIVERSITY | 机械与动力工程学院 School of Mechanical Engineering

Institute of Design and Control Engineering for Heavy Equipment





1. Description

Institute of Design and Control Engineering for Heavy Equipment was founded in 2007. The institute focuses on the design and theoretical research of parallel kinematic robots, and their application in legged walking machines and large-size high payload mechanical/ mechatronic equipment, such as large manipulators and equipment for forging operation and nuclear power plants' maintenance. The institute has completed many research projects from the State Key Fundamental Research Programs, State Science and Technology Support Program, National Natural Science Foundation (NSFC), National High-Tech Research and Development Program as well as the industrial partners. The institute is the headquarter of the China Mechanisms Committee of Chinese Mechanical Engineering Society (CMES). There are currently 6 professors, 7 associate professors and 1 assistant professor working in the institute.

2. Key Research Fields

- Design and Application of Parallel Robots
- Heavy-duty Manipulating Equipment
- Key Technologies of New Type Servo Mechanical Press
- Multi-legged Walking Machines
- Rescue Robots
- Micro-manipulating Robots
- Movable Soft Lander
- Special Robots for Nuclear Power Plants
- Application of Nuclear Technology and Reactor Safety

3. Labs, Centers and Groups

- Laboratory of intelligent walking robot (Institute of SJTU intelligent manufacturing)
- Laboratory of motion simulators with parallel mechanism
- Laboratory of micro-nano operation
- Laboratory of heavy intelligent equipment
- Laboratory of nuclear reactor safety research
- Laboratory of nuclear materials

4. Instrumentation & Facilities

- Six-legged walking robots
- Four-legged walking robot
- 9-DOF motion simulator
- 6-DOF automatic hydraulic forging manipulator
- Servo mechanical press
- Double beam laser interferometer
- API laser tracker
- High temperature creep tensile tester

5. Website

http://gf.sjtu.edu.cn/

6. Director

Director: Prof. GAO Feng
Email: fengg@sjtu.edu.cn