

# Hsiao-Sheng Chen

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Graduate Degree Program Of Robotics, EE622  
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## Education

M.S. in Graduate Degree Program Of Robotics, National Chiao Tung University  
B.S. in Electrical Engineering, I-Shou University

## Research Knowledge/Experiences

Robotics, Mechanical Design, Automatic Control Systems, Computer Vision

## Recent Projects and Professional Experiences

### **DARPA Subterranean Challenge Urban Circuit - 8th place (2020/02)**

This is the second round of the DARPA Subterranean. In this circuit, we have to complete our task in a coal mine. I am responsible for the improvement of “Husky”, we upgrade the control system and increase the mobility.

### **DARPA Subterranean Challenge Tunnel Circuit - 7th place (2019/08)**

This is an international challenge which is held by Defense Advanced Research Projects Agency (DARPA). We build our own robot groups includes UGV, UAV, and communication module to solve the search and rescue mission problem with low light source, indoor environment, multi-floors, and constrained passage. In this circuit, we have to complete our task in a coal mine. I am responsible for the development of autonomous blimp system “Husky”, which is our main ground vehicle system, and we have to design all the hardware platform and software control.

### **2018 Maritime RobotX Challenge - 5th place (2018/12)**

This is an international challenge which is held in Hawaii, USA. The main purpose of this challenge is to develop an autonomous marine system, and to complete numerous of the tasks such as: obstacle avoidance, docking, detect and delivery, launch and recovery, etc. In this challenge, I am responsible for the electrical design of the WAM-V.

## **Professional Skill**

**Programming Languages** C/C++, C#, Python

**Mechanical Design** Solidworks, Cura

**Middleware and Libraries** Robotic Operating System (ROS),

**Machining Tools** Drilling Machine, Shearing Machine, Lath, CNC,  
Eletric Welding, Argon Welding, Grinder, 3D Printer,  
Laser Marking, Laser Cutting