

Jingkun Zhang

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EDUCATION

Shanghai Jiao Tong University (SJTU), Shanghai, China

- B.Sc in Power and Energy Engineering Sep 2014 – Jun 2018
 - Overall GPA: 81.2/100 Major GPA: 82.1/100

National Chiao Tung University, Hsinchu, Taiwan

- Multidisciplinary Engineering and Innovation program Jul 2016 – Aug 2016
 - GPA: 85/100

RESEARCH EXPERIENCE

Control on a Novel Pick-and-place Robot, McGill University, Research Assistant

Advisor: Prof. Jorge Angeles, Centre for Intelligent Machines Jul 2018 – Dec 2018

- Transfer the current control scheme of robot to new software system
- Improve the control scheme to speed up the robot
- Add the new part such like Linear-quadratic regulator to control scheme

An Assistive System for Upper Limb Motion Combining Functional Electrical Stimulation and Robotic Exoskeleton, SJTU, Research Assistant

Advisor: Prof. Dingguo Zhang, School of Mechanical Engineering Dec 2017 – May 2018

- Designed a embedded system for robotics glove's control
- Programmed to control the movement of human's wrist joint, elbow joint and shoulder joint by Fuctional Electrical Stimulation and robotics exoskeleton
- Combined to an assistive system for upper limb motion and tested the system by conducting the experiments of grabbing subjects

An Energy Harvesting Device, UW-Madison, Research Assistant

Advisor: Prof. Tom Krupenkin, Department of Mechanical Engineering Jun 2017 – Sep 2017

- Designed and manufactured a system of energy harvester that can transfer mechanical energy to electric energy in human locomotion, which has a much higher energy conversion rate
- Built the actual experimental setup including LabView programming and measured the conversion rate
- Improved the design by changing the structure of locomotive part

Development of a multi-DOF Shoulder Joint Rehabilitation Facility, SJTU, Research Assistant

Advisor: Prof. YanPing Lin, School of Mechanical Engineering Sep 2016 – Jan 2017

- Added an extra training of the internal and external rotation of shoulder to help recover rotator cuff injury
- Used Arudino and Bluetooth to develop the control system

Ultrasonic Metal Additive Manufacturing, SJTU, Research Assistant

Advisor: Prof. Yansong Zhang, School of Mechanical Engineering Mar 2016 – Jun 2016

- Designed an ultrasonic metal additive manufacturing system for metal material welding
- Analyzed the relationship between the temperature and the quality of ultrasonic metal welding through adjusting technological parameters, including frequency of ultrasonic, welding time, welding amplitude and welding force
- Improved the metal welding system according to the optimized operation temperature and other parameters.

AWARDS

- Course design exhibition in SJTUME, The first prize, 1/63 Jan 2017
- Marketing competition division in Shanghai, Johnson Johnson Ltd, The fifth place 5/60 Mar 2016

SKILLS

- Adept in Mechanical Desgin, proficiency in Auto CAD, UG, SolidWorks, ProE.
- Experienced in embedded system design (PCB, Arduino), proficiency in Altium Designer.
- Adept in C, C#. familiar with Python, Matlab.
- Proficiency in Simulink, LabView, ABAQUS, Office, L^AT_EX.