

# Hao Ju

RESEARCH ASSISTANT

18 Tat Hong Avenue, Kowloon Tong, Hong Kong  
City University of Hong Kong

☎ (+86) 151-8437-4963 | ✉ haojuuestc@outlook.com | 🏠 haojuuestc.github.io | 📱 HaoJuUESTC

## Research Interests

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**Human Computer Interaction** Interaction Techniques, Wearables, Usability

## Education & Employment

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### City University of Hong Kong

RESEARCH ASSISTANT

- Collaborating with Dr. Kening Zhu

*Hong Kong, P.R.China*

*Sept 2018 - Present*

### School of Electronic Engineering, UESTC (985,211)

B.ENG. IN ELECTRONIC INFORMATION

- GPA: 3.86/4, Average Score: 87.51/100, Ranking: 5/42
- Honorary Graduate of UESTC
- IELTS: Total 8.0; Reading 9.0, Listening 9.0, Speaking 8.0, Writing 6.5
- GRE: Total 326; Verbal 161, Quantitative 165, Analytical Writing 3.0

*Chengdu, P.R.China*

*Sep. 2014 - July 2018*

### Shared Reality Lab, McGill University

MITACS GLOBALINK INTERN

- Supervised by Prof. Jeremy Cooperstock (<http://www.cim.mcgill.ca/jer/>)

*Montreal, Canada*

*July 2017 - Oct. 2017*

### Ngee Ann Polytechnic

SHORT-TERM VISITING STUDENT

*Singapore*

*May 2017*

### Siglent Co. Ltd.

INTERN

*Shenzhen, P.R.China*

*Aug. 2016*

## Publications

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### Pressure or Movement? Usability of Multi-Functional Foot-Based Interfaces

SECOND AUTHOR

*Sep. 2017*

- Taeyong Kim, Hao Ju, and Jeremy Cooperstock. 2018. In proceedings of ACM SIGCHI Conference on Designing Interactive Systems (DIS) 2018. ACM. 1219-1227.

## Research Projects

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### A Thermal-Based Displaying Device for the Visually Impaired

RESEARCH ASSISTANT

*Hong Kong*

*Aug. 2018 - Present*

- We are prototyping a thermal-based displaying device, set in the context of geographical education for the visually impaired schoolchildren. We are planning to investigate its usability (especially in picture displaying) compared with traditional Brailles.

### Target Recognition and Tracking based on XGBoost (Thesis)

UNDERGRADUATE RESEARCHER, UESTC

*Chengdu, China*

*Oct. 2017 - May 2018*

- Developed a supervised learning based target tracking algorithm and estimated its performance versus traditional target tracking algorithms (filtering algorithm: Kalman, LSM, target co-relating algorithms: JPDA, NNJPDA). Implemented in MATLAB and Python
- Received as poster presentation for IET International Radar Conference 2018

## Raising the Heat

Montreal, Canada

RESEARCH ASSISTANT, SHARED REALITY LAB, MCGILL UNIVERSITY

Sep. 2017 - Oct. 2017

- A following-up research of the UIST Student Innovation Contest 2016 project "Raising the Heat", where the possibility of using Electro-Muscular Stimulation to simulate a burning-hot temperature was explored. Hardware and firmware prototype enhanced for more precise experiment results.

## Usability of Multi-Functional Foot-based Interfaces

Montreal, Canada

RESEARCH ASSISTANT, SHARED REALITY LAB, MCGILL UNIVERSITY

Jul. 2017 - Sep. 2017

- We compared the performance of two mainstream foot interaction methods (foot rocking and heel-pivoted rotation) in selection and parameter controlling tasks, set in the use case of a hands-free interface designed for seated musicians.

## Data Secured USB Mass Storage Device

Chengdu, P.R.China

UNDERGRADUATE RESEARCHER, SCHOOL OF ELECTRONIC ENGINEERING, UESTC

Mar. 2017 - Present

- Developed a data secured USB Flash Disk capable of data encrypting, sending anti-losing alerts and data retrieving.
- Ranked 7th among 125 teams in the provincial final of the National 'Internet Plus' Innovation and Entrepreneurship Competition.

## Network-based RF Device Analyzer

Chengdu, P.R.China

UNDERGRADUATE RESEARCHER, SCHOOL OF ELECTRONIC ENGINEERING, UESTC

Mar. 2016 - July 2016

- Developed a network-based RF device analyzer with 4 GHz bandwidth and 125 MHz baseband bandwidth based on Xilinx Virtex VC707.
- Awarded second prize of Southwest China in 2016 National College Student Smarter Connected System Innovation Competition

# Honors and Awards

## HONORS AND SCHOLARSHIPS

### Mitacs Globalink Graduate Fellowship

CAD 15,000, GIVEN TO FORMER GLOBALINK RESEARCH INTERNS RETURNING TO CANADA FOR GRADUATE STUDIES

### Honorary Graduate of UESTC

10%

Oct. 2017

### Renmin Scholarship 2017

FIRST CLASS IN 2017, CNY 1,500 (USD 226)

Oct. 2017

### National Internet Security Scholarship

CNY 30,000 (USD 4,556), 100 AMONG ALL UNDERGRADUATES AND GRADUATE STUDENTS IN CHINA PER YEAR

Aug. 2017

### Jiuzhou Scholarship 2016

CNY 1,000 (USD 150), 2 PER SCHOOL PER YEAR

Sep. 2016

### Renmin Scholarship 2015

THIRD CLASS, CNY 500 (USD 75)

Oct. 2015

## AWARDS

### 2017 'Internet Plus' Innovation and Entrepreneurship Competition

SECOND PRIZE (PROVINCIAL LEVEL)

Jul. 2017

### OpenHW 2016 National College Student 'Smarter Connected' System Innovation Competition

SECOND PRIZE OF SOUTHWEST CHINA AREA

Jul. 2016

### National English Competition for College Students 2016

SPECIAL PRIZE IN NATIONAL FINAL (CLASS C, FOR NON-ENGLISH PROFESSIONALS), 0.1%

May. 2016

### COMAP Interdisciplinary Contest In Modeling

HONORABLE MENTION, 30 %

Apr. 2016

# Relevant Skills

## Programming

C, C#, MATLAB, VHDL, LaTeX, Python

## Tools

Altium Designer, Quartus II, VICON, Unity 3D, AutoCAD

## Embedded Systems

Arduino, STM32, MCS 8051

## Languages

Chinese (native), English (fluent, IELTS 8.0), French (basic, CEFR A1, certified by Alliance Française)