

# Hao Ju

UNDERGRADUATE STUDENT

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## Research Interests

**Electronic Engineering** Signal and Image Processing, Medical Application of Electronic Engineering, Human Computer Interaction

## Education

### School of Electronic Engineering, UESTC

Chengdu, P.R.China

B.ENG. IN ELECTRONIC INFORMATION

Sep. 2014 - Exp. Jul. 2018

- GPA: 3.85/4, Average Score: 87.22/100, 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

### Shared Reality Lab, McGill University

Montreal, Canada

MITACS GLOBALINK INTERN

July 2017 - Oct. 2017

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

### Ngee Ann Polytechnic

Singapore

SHORT-TERM VISITING STUDENT

May 2017

## Publications

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

SECOND AUTHOR

Sep. 2017

- Taeyong Kim, Hao Ju, and Jeremy Cooperstock. To appear in ACM SIGCHI Conference on Designing Interactive Systems (DIS) 2018.

## Experience

### RESEARCH AND PROJECTS

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

Chengdu, China

UNDERGRADUATE RESEARCHER, UESTC

Oct. 2017 - May 2018

- Developed a supervised learning based target tracking algorithm, and estimated its performance by comparing with traditional target tracking algorithms (including filtering algorithms like Kalman and LSM, and target co-relating algorithms such as JPDA and NNJPDA). Algorithm implemented in MATLAB and Python
- Paper submitted 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 was 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

- In this research, 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

## OTHER EXPERIENCE

### Siglent Co. Ltd.

Shenzhen, P.R.China

INTERN

Aug. 2016

- Internship at the leading domestic oscilloscope manufacturer demonstrated the actual production process.

### Technology Association for School of Electronic Engineering

Chengdu, P.R.China

CORE MEMBER

Oct. 2014 - Dec. 2015

- A student association dedicated to circuit design and DIY and technology innovation.
- Worked mainly on hardware design and DIY (especially communication systems: infrared, FM, etc.) and microcontroller programming.

## 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

Applied in Jan. 2018, Pending

#### 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)