

# Chiao Fang

PHD STUDENT · HCI GROUP AT HASSO-PLATTNER-INSTITUT

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## Research Statement

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My research interest is in Human-Computer Interaction, focusing on personal fabrication. I worked on enabling increased complexity with laser cutters to build complex 3-dimensional objects with ease. I am also interested in applying personal fabrication techniques in tangible interaction and sensing, or using augmented/virtual reality to support fabrication.

## Education

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### Hasso Plattner Institute (HPI)

PHD STUDENT

Advised by Prof. Dr. Patrick Baudisch

Oct. 2022 - Present

Potsdam, Germany

### National Taiwan University (NTU)

BACHELOR OF SCIENCE IN COMPUTER SCIENCE & INFORMATION ENGINEERING WITH A MINOR IN MECHANICAL ENGINEERING

Sep. 2017 - Jan. 2022

Taipei, Taiwan

- GPA: 4.03/4.30

## Publications

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- [1] Chiao Fang<sup>†</sup>, Vivian Hsinyueh Chan<sup>†</sup>, and Lung-Pan Cheng. 2022. **Flaticulation: Laser Cutting Joints with Articulated Angles**. In *Proceedings of the 35th Annual ACM Symposium on User Interface Software and Technology (UIST '22)*. [\[link\]](#)
- [2] Bo-Cheng Ke, Min-Han Li, Yu Chen, Chia-Yu Cheng, Chiao-Ju Chang, Yun-Fang Li, Shun-Yu Wang, Chiao Fang, and Mike Y. Chen. 2023. **TurnAhead: Designing 3-DoF Rotational Haptic Cues to Improve First-person Viewing (FPV) Experiences**. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23)*. [\[link\]](#)

<sup>†</sup> indicates equal contribution

## Research Experience

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### Human Computer Interaction Lab, HPI

PHD STUDENT, SUPERVISED BY PROF. DR. PATRICK BAUDISCH

- Researching on digital fabrication and laser cut assembly instructions

Oct. 2022 - Present

Potsdam, Germany

### Computational Physicality Lab, NTU

RESEARCH ASSISTANT, SUPERVISED BY PROF. LUNG-PAN CHENG

- Research focuses on personal fabrication and tangible interface

Feb. 2022 - Jul. 2022

Taipei, Taiwan

### Computational Physicality Lab, NTU

UNDERGRADUATE RESEARCHER, SUPERVISED BY PROF. LUNG-PAN CHENG

- Proposed special laser-cut joint to facilitate the assembly of 3D objects
- Constructed a large, interactive mid-air surrounding shape display

Sep. 2020 - Jan. 2022

Taipei, Taiwan

### Human Computer Interaction Lab, NTU

UNDERGRADUATE RESEARCHER, SUPERVISED BY PROF. MIKE Y. CHEN

- Researched on haptics using compressed air in VR to alleviate cybersickness and improve viewing experience for immersive videos
- Designed haptic feedback for impacts, analyzed data from user studies, and provided visualizations of the data

Feb. 2020 - Sep. 2020

Taipei, Taiwan

## Teaching Experience

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## Building Interactive Systems

TEACHING ASSISTANT

Hasso Plattner Institute, Instructor: Prof. Patrick Baudisch

Summer 2023

Potsdam, Germany

## Computer Systems Laboratory

TEACHING ASSISTANT

CSIE3311 at National Taiwan University, Instructor: Prof. Lung-Pan Cheng

Fall 2021

Taipei, Taiwan

## Honors & Awards

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**Scholarship in Software Systems Engineering (€22 800)**, Hasso Plattner Institute

May. 2022

**1st Place (NT\$30 000)** (out of 20 research projects), Undergraduate Research Project, NTU CSIE

Jun. 2022

**Best Presentation** (out of 20 research projects), Undergraduate Research Project, NTU CSIE

Jun. 2020

**Dean's List (3 times)**, NTU (GPA in top 5% of the department)

Fall '17, Spring '18, Fall '19

## Design Projects — [CHIAOFANG.TW/#PORTFOLIO](https://chiao.fang.tw/#portfolio)

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I have been building various design projects to explore different materials and fabrication methods. I picked up woodworking and sewing skills among other fabrication skills through out the process. Those projects are showcased in my portfolio. Integrating my enthusiasm for technology, design, and maker culture has led to / built up my research interest in personal fabrication.



## Skills

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

**Library/Toolkit** OpenCV

**CAD** AutoCAD, Fusion 360, Inventor, SolidWorks, Rhinoceros 3D

**Graphics/Video** Photoshop, Illustrator, Premiere, DaVinci Resolve

**Prototyping/Fabrication** Arduino, Electronics, PCB, 3D printing, Laser cutting, Woodworking, Sewing, Molding

**Other**  $\LaTeX$

**Languages** Mandarin Chinese (native), English (TOEFL: 107)

## Extracurricular Activities

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### Organizing Taiwan Night @ CHI '23

TAIWANESE ASSOCIATION OF COMPUTER HUMAN INTERACTION

Organized party at CHI to connect people and promote works from the Taiwanese CHI community

Apr. 2023

Hamburg, Germany

### Organizing UCCU 2021

TAIWANESE ASSOCIATION OF COMPUTER HUMAN INTERACTION

Organized event for Taiwanese HCI researchers to meet up and share papers published at UIST/CHI/CSCW/UbiComp as conferences went virtual

Oct. 2021 - Dec. 2021

Taipei, Taiwan

### Bicycle Maintenance Volunteer on Campus

NATIONAL TAIWAN UNIVERSITY

Learned the practice of fixing bicycles and provided bicycle maintenance service on the campus to promote cycling safety

May. 2018

Taipei, Taiwan