Chi-Jung LEE

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RESEARCH INTEREST

Human-Computer Interaction (HCI), Ubiquitous Computing (UbiComp), Sensing, Wearable, Tangible, E-Textile

EDUCATION

Cornell University   Aug. 2022 – Present
Ph.D. Student in Information Science   Ithaca, New York, USA
- Advisor: Cheng Zhang

National Taiwan University (NTU)   Sep. 2019 – Jun. 2021
Master of Science in Computer Science and Information Engineering   Taipei, Taiwan
- Master Thesis Advisor: Bing-Yu Chen
- Thesis: HairTouch: Providing Stiffness, Roughness and Surface Height Differences Using Reconfigurable Brush Hairs on a VR Controller
- Graduation GPA: 4.12/4.3

National Tsing Hua University (NTHU)   Sep. 2015 – Jun. 2019
Bachelor of Science in Computer Science   Hsinchu, Taiwan
Bachelor of Business Administration in Management and Technology
- Undergraduate Research Advisor: Hung-Kuo Chu (Feb. 2018 – Jun. 2019)
- Received **Academic Excellence Award** (honored for top 5% in the department) three times over four years
- Graduation GPA: 4.06/4.3

PUBLICATION

Chi-Jung Lee*, Ruidong Zhang*, Devansh Agarwal, Tianhong Catherine Yu, Vipin Gunda, Oliver Lopez, James Kim, Sicheng Yin, Boao Dong, Ke Li, Mose Sakashita, Francois Guimbretiere, Cheng Zhang (2024). EchoWrist: Continuous Hand Pose Tracking and Hand-Object Interaction Recognition Using Low-Power Active Acoustic Sensing On a Wristband
CHI '24: Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems, Honolulu, HI, USA

Chi-Jung Lee, David Yang, Pin-Sung Ku, Hsin-Liu (Cindy) Kao (2024). SweatSkin: Rapidly Prototyping Sweat-Sensing On-Skin Interface Based on Microfluidics
IMWUT '24: Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies

Chi-Jung Lee, Chi-Huan Chiang, Ling-Chien Yang, Te-Yen Wu, Rong-Hao Liang, Bing-Yu Chen (2022). NFCStack: Identifiable Physical Building Blocks that Support Concurrent Construction and Frictionless Interaction
UIST '22: The 35th Annual ACM Symposium on User Interface Software and Technology, Bend, OR, USA

Huizhong Ye*, Chi-Jung Lee*, Te-Yen Wu*, Xing-Dong Yang, Bing-Yu Chen, Rong-Hao Liang (2022). Body-Centric NFC: Body-Centric Interaction with NFC Devices Through Near-Field Enabled Clothing
DIS '22: Designing Interactive Systems Conference, Virtual, Australia

Chi-Jung Lee, Hsin-Ruey Tsai, Bing-Yu Chen (2021). HairTouch: Providing Stiffness, Roughness and Surface Height Differences Using Reconfigurable Brush Hairs on a VR Controller
CHI '21: Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems, Yokohama, Japan

Chin-Yuan Lu*, Han-Wei Hsieh*, Rong-Hao Liang*, Chi-Jung Lee, Ling-Chien Yang, Mengru Xue, Jr-Ling Guo, Meng-Ju Hsieh, Bing-Yu Chen (2021). Combining Touchscreens with Passive Rich-ID Building Blocks to Support Context Construction in Touchscreen Interactions
CHI '21: Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems, Yokohama, Japan

POSTER & DEMO

Chi-Jung Lee, Hung-Kuo Chu (2018). Dual-MR: Interaction with Mixed Reality Using Smartphones
VRST '18: Proceedings of the 24th ACM Symposium on Virtual Reality Software and Technology, Tokyo, Japan
(Best Poster Award)

HONOR & AWARD

ETH's Student Summer Research Fellowship   Jul. 2020 – Aug. 2020
One of the 15-20 accepted applicants selected out of 2880 applicants   ETH Zurich, Zurich, Switzerland
- The fellowship provided by the Department of Computer Science at Eidgenössische Technische Hochschule Zürich (ETH Zurich) for select students to pursue a research project as part of a research group in the department

RESEARCH EXPERIENCE

SciFi Lab, Cornell University   May. 2023 – Present
Ph.D. Student   Ithaca, New York, USA
- Supervisor: Cheng Zhang
- Developing smart sensing devices

Hybrid Body Lab, Cornell University   Aug. 2022 – May. 2023
Ph.D. Student   Ithaca, New York, USA
- Supervisor: Cindy Hsin-Liu Kao
- Developed on-skin interfaces

CREST, The University of Tokyo   Apr. 2022 – Jul. 2022
Research Assistant   Tokyo, Japan
- Supervisor: Takeo Igarashi
- Developed a design tool that facilitates the design and fabrication of deformable and stretchable circuits on hand-knitted fabrics

Interactive Graphics Laboratory, NTU   Jul. 2021 – Apr. 2022
Research Assistant   Taipei, Taiwan
- Supervisor: Bing-Yu Chen
- Developed a scalable coil extender design on skin or garments that enables body-centric interactions for a commodity near-field communication (NFC) device (Published in DIS '22)
- Developed a portable rich-ID building block system based on NFC technology (Published in UIST '22)

Interactive Graphics Laboratory, NTU   Sep. 2019 – Jun. 2021
Master Student   Taipei, Taiwan
- Supervisor: Bing-Yu Chen
- Developed a pin-based handheld device providing tactile feedback using cosmetic brush hairs in virtual reality (Published in CHI '21)
- Developed two building block systems based on the ultra-high frequency (UHF) radio-frequency identification (RFID) sensing, rear-projection, and capacitive touch sensing in collaboration with Prof. Rong-Hao Liang from Eindhoven University of Technology (Published in CHI '21)

- Built and demonstrated a system of batteryless and wireless modular hardware designs of 2D touch sensor pads based on the UHF RFID technology

HCI Lab, NTU
Project Collaborator

Feb. 2020 – Aug. 2020

Taipei, Taiwan

- Supervisor: Mike Y. Chen
- Developing a VR haptic device improving the comfort and the overall first-person viewing (FPV) experience

Computer Graphics & Vision Lab, NTHU
Undergraduate Research Student

Feb. 2018 – Jun. 2019

Hsinchu, Taiwan

- Supervisor: Hung-Kuo Chu
- Developed a mixed reality interaction system enabling co-located collaboration of a head-mounted device and handheld smartphone (Poster Presentation at VRST '18)
- Built two online slot games

CoAI, Tsinghua University
Visiting Student

Jul. 2017 – Aug. 2017

Beijing, China

- Supervisor: Minlie Huang
- Analyzed the algorithms and applications of four off-the-shelf chatbots
- Collected and labeled 5000+ dialogues for the development of a chatbot

TEACHING ASSISTANCE

Introduction to Rapid Prototyping and Physical Computing
INFO 4320, Prof. Cheng Zhang

Jan. 2024 – Present

Cornell University, Ithaca, NY, USA

Introductory Design and Programming for the Web
INFO 1300, Prof. Kyle J. Harms and Prof. Benjamin Soltoff

Aug. 2023 – Dec. 2023

Cornell University, Ithaca, NY, USA

Introduction to Data Science
INFO 2950, Prof. Benjamin Soltoff

Jan. 2023 – May 2023

Cornell University, Ithaca, NY, USA

Information Ethics, Law, and Policy
INFO 1200, Prof. Steven Jackson and Prof. Gili Vidan

Aug. 2022 – Dec. 2022

Cornell University, Ithaca, NY, USA

Computing in Humanities
GenEdu1005, Prof. Jason S. Chang

Feb. 2020 – Jun. 2020

NTU, Taipei, Taiwan

Introduction to Game Programming
CS550300, Prof. Hung-Kuo Chu

Sep. 2018 – Jan. 2019

NTHU, Hsinchu, Taiwan

PROFESSIONAL SERVICE

TAICHI X UIST Online Talk
Event Planner

Jul. 2021 – Oct. 2021

Taipei, Taiwan

- Organized a series of online talks regarding UIST (User Interface Software and Technology)
- Invited 13 speakers, including professors, researchers, engineers, and Ph.D. students

Communications and Multimedia Laboratory
Purchaser

Jun. 2020 – Jun. 2021

NTU, Taipei, Taiwan

- Researched and acquired equipment and materials worldwide
- Researched and recommended future purchases

OpenHCI Workshop
Program co-Chair

Aug. 2019

Taipei, Taiwan

- Organized a five-day workshop that introduced Human-Computer Interaction to select students in Taiwan
- Led a staff team of about 50

INVITED TALK

TAICHI '21   Jul. 2021
Invited to present the two papers accepted by CHI '21 at Best of HCI session   Virtual, Taiwan
- TAICHI is the top domestic HCI conference in Taiwan

LANGUAGE

Native in Mandarin
Fluent in English : IELTS: 7.5; TOEIC: 920; General English Proficiency Test: High-intermediate level