

# Yi-Chi Liao

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## EDUCATION

### Aalto University, Helsinki, Finland

- Ph.D. in Communications and Networking, School of Electrical Engineering May 2018 –
  - Adviser: Dr. Antti Oulasvirta
  - Focus: Computational Interaction, Haptic and Touch Interface Design.

### National Taiwan University, Taipei City, Taiwan

- M.B.A. in Information Management Sep 2014 – Jun 2017
  - Focus: HCI, Haptic Interface.
  - Thesis: Effective Character Output Using a Wrist-Worn Tactile Display
  - Adviser: Dr. Bing-Yu Chen and Dr. Liwei Chan.
- B.B.A. in Information Management Sep 2010 – Jun 2014

## PUBLICATIONS

## CONFERENCES

- [1] Yi-Chi Liao, Sunjun Kim, Byungjoo Lee and Antti Oulasvirta, “Button Simulation and Design via FDVV Models,” in *Proceedings of the CHI 2020*, Honolulu, HI, May 2020.
- [2] Yi-Chi Liao, Sunjun Kim, Byungjoo Lee and Antti Oulasvirta, “Press’Em: Simulating Varying Button Tactility via FDVV Models,” in *Proceedings of the CHI 2020 Adjunct*, Honolulu, HI, May 2020.
- [3] Yi-Chi Liao, Sunjun Kim and Antti Oulasvirta, “One Button to Rule Them All: Rendering Arbitrary Force-Displacement Curves,” in *Proceedings of the UIST’18 Adjunct*, Berlin, Germany, Oct 2018.
- [4] Yi-Chi Liao, Yen-Chiu Chen, Liwei Chan and Bing-Yu Chen, “Dwell+: Multi-Level Mode Selection Using Vibrotactile Cues,” in *Proceedings of the UIST’17*, Québec City, QC, Canada, Oct 2017.
- [5] Yung-Ta Lin, Yi-Chi Liao, Shan-Yuan Teng, Yi-Ju Chung, Liwei Chan and Bing-Yu Chen, “Outside-In: Visualizing Out-of-Sight Regions-of-Interest in a 360° Video Using Spatial Picture-in-Picture Previews,” in *Proceedings of the UIST’17*, Québec City, QC, Canada, Oct 2017.
- [6] Yi-Chi Liao, Yi-Ling Chen, Jo-Yu Lo, Rong-Hao Liang, Liwei Chan and Bing-Yu Chen, “EdgeVib: Effective Alphanumeric Character Output Using a Wrist-Worn Tactile Display,” in *Proceedings of the UIST’16*, Tokyo, Japan, Oct 2016.
- [7] Yi-Chi Liao, Shun-Yao Yang, Rong-Hao Liang, Liwei Chan and Bing-Yu Chen, “ThirdHand: wearing a robotic arm to experience rich force feedback,” in *Proceedings of the Siggraph Asia’15 Emerging Technology*, Kobe, Japan, Nov 2015.
- [8] Chin-Yu Chien, Cheng-Yuan Li, Liwei Chan, Yi-Chi Liao, Rong-Hao Liang, Hao-hua Chu and Bing-Yu Chen, “fStrip: a malleable shape-retaining wearable strip for interface on-demand,” in *Proceedings of the UbiComp/ISWC’15 Adjunct*, Osaka, Japan, Sep 2015.

## AWARDS & SCHOLARSHIPS

- Best Implementation Award, Student Innovation Competition, UIST’16. Oct 2016  
EMS Air Guitar, US\$ 1,000 award.
- Best Award & Most Innovative Award, HackNTU 2014. Jun 2014  
Novel cushion for detecting sitting posture, US\$ 500 award.
- Academic Achievement Awards, National Taiwan University, 2014. Jun 2014  
NT\$ 2,000 award for GPA in top 5% of the students in a class of 48 students.

## PROFESSIONAL ACTIVITIES & EXPERIENCES

- Paper Reviewing.
  - CHI 2016 - 2020.
  - MobileHCI 2017 - 2020, UbiComp/ISWC 2017, TEI 2017 - 2018, Augmented Human 2017, DIS 2020.
- Teaching Assistant at Aalto University. Apr 2019 – Jun 2019
  - Engineering for Humans by Prof. Antti Oulasvirta.
- Teaching Assistant at National Taiwan University. Sep 2014 – Jun 2017

- Introduction to HCI by Prof. Bing-Yu Chen.
- Computer Architecture by Prof. Bing-Yu Chen.
- Student Volunteer for International Conference.
  - Siggraph Asia 2016.
- Software Engineer at Deloitte, Taiwan.
  - Implementing information management systems.

Sep 2014 – Feb 2015

## SKILLS

- Machine Learning.
  - Reinforcement learning using OpenAI Gym (DQN, PPO, etc).
  - Deep learning using Pytorch and Keras.
  - Computer Vision with CNN architectures.
- Modeling and Simulation of Physical Systems.
  - Reality-based modeling based on capture physical events (sensors, OptiTrack).
  - Data processing and feature engineering.
  - Controller (from theory to implementation).
- Physical Prototyping and Fabrication.
  - Arduino and other microprocessors.
  - 3D Modeling & printing, laser cutting.
  - Circuits and soldering.
- User Interface Analysis and Design.
  - Usability testing.
  - Quantitative and qualitative analysis.
  - Interface design based on modeling user behaviors.