

Shan-Yuan Teng

PhD student at the University of Chicago, USA

email: tengshanyuan@uchicago.edu / web: tengshanyuan.com

Research Interests

human-computer interaction (HCI), haptics, virtual/augmented reality (VR/AR)

Education

- June 2019 - current PhD student, Department of Computer Science
University of Chicago, Chicago, Illinois, United States
advisor: Prof. Pedro Lopes
- Sept. 2016 - June 2018 MS, Graduate Institute of Networking and Multimedia
National Taiwan University, Taipei, Taiwan
advisor: Prof. Bing-Yu Chen
- Sept. 2012 - June 2016 BS, Department of Electrical Engineering
National Taiwan University, Taipei, Taiwan

Work

- Aug. 2018 - May 2019 Research Assistant, IoX Center
National Taiwan University, Taipei, Taiwan

Publications

- UIST 2021 Paper Yujie Tao, **Shan-Yuan Teng**, Pedro Lopes.
Altering perceived softness of real rigid objects by restricting fingerpad deformation.
 *Best Paper Award*
 *Best Demo Award*
- UIST 2021 Paper Romain Nith, **Shan-Yuan Teng**, Pengyu Li, Yujie Tao, Pedro Lopes.
DextrEMS: increasing dexterity in electrical muscle stimulation by combining it with brakes.
 *Best Demo People's Choice Award*
- CHI 2021 Paper **Shan-Yuan Teng**, Pengyu Li, Romain Nith, Joshua Fonseca, Pedro Lopes.
Touch&Fold: a foldable haptic actuator for rendering touch in mixed reality.
 *Best Paper Honorable Mention Award*
- CHI 2021 Paper Alex Mazursky, **Shan-Yuan Teng**, Romain Nith, Pedro Lopes.
MagnetIO: passive yet interactive soft haptic patches anywhere.
- CHI 2021 Paper Jas Brooks, **Shan-Yuan Teng**, Jingxuan Wen, Romain Nith, Jun Nishida, Pedro Lopes.
Stereo-smell via electrical trigeminal stimulation.
- Science Advances Qi Su, Q. Zou, Yang Li, Yuzhen Chen, **Shan-Yuan Teng**, Jane Tunde Kelleher, Romain Nith, Ping Cheng, Nan Li, Wei Liu, Shilei Dai, Youdi Liu, Alex Mazursky, Jie Xu, Lihua Jin, Pedro Lopes, Sihong Wang.
A stretchable and strain-unperturbed pressure sensor for motion-interference-free tactile monitoring on skins.
- UIST 2020 Paper Jun Nishida, Soichiro Matsuda, Hiroshi Matsui, **Shan-Yuan Teng**, Ziwei Liu, Kenji Suzuki, Pedro Lopes.
HandMorph: a passive exoskeleton that miniaturizes grasp.
 *Best Paper Award*

- CHI 2020 Paper Yuxin Chen*, Huiying Li*, **Shan-Yuan Teng***, Steven Nagels, Zhijing Li, Pedro Lopes, Ben Y. Zhao, Haitao Zheng. (*equal contribution)
Wearable microphone jamming.
 *Best Paper Honorable Mention Award*
- UIST 2019 Paper **Shan-Yuan Teng**, Cheng-Lung Lin, Chi-huan Chiang, Tzu-Sheng Kuo, Liwei Chan, Da-Yuan Huang, Bing-Yu Chen.
TilePoP: tile-type pop-up prop for virtual reality.
 *Best Paper Honorable Mention Award*
 *Best Talk Honorable Mention Award*
- CHI 2019 Paper **Shan-Yuan Teng**, Da-Yuan Huang, Chi Wang, Teddy Seyed, Jun Gong, Xing-Dong Yang, Bing-Yu Chen.
Aarnio: passive kinesthetic force output for foreground interactions on an interactive chair.
- UIST 2018 Paper **Shan-Yuan Teng**, Tzu-Sheng Kuo, Chi Wang, Chi-huan Chiang, Da-Yuan Huang, Liwei Chan, Bing-Yu Chen.
PuPoP: pop-up prop on palm for virtual reality.
- UIST 2017 Paper Yung-Ta Lin, Yi-Chi Liao, **Shan-Yuan Teng**, Yi-Ju Chung, Liwei Chan, Bing-Yu Chen.
Outside-In: visualizing out-of-sight regions-of-interest in a 360 video using spatial picture-in-picture previews.

Demonstrations

- SIGGRAPH 2021 Emerging Technologies **Shan-Yuan Teng**, Pengyu Li, Romain Nith, Joshua Fonseca, Pedro Lopes.
Demonstrating Touch&Fold: a foldable haptic actuator for rendering touch in mixed reality.
- SIGGRAPH 2021 Emerging Technologies Alex Mazursky, **Shan-Yuan Teng**, Romain Nith, Pedro Lopes.
Demonstrating MagnetIO: passive yet interactive soft haptic patches anywhere.
- SIGGRAPH ASIA 2016 Emerging Technologies Long-Fei Lin, **Shan-Yuan Teng**, Rong-Hao Liang, Bing-Yu Chen.
Stylus Assistant: designing dynamic constraints for facilitating stylus inputs on portable displays.

Student Research Projects

- CHI 2017 Student Game Competition **Shan-Yuan Teng**, Mu-Hsuan Chen, Yung-Ta Lin
Way Out: a multi-layer panorama mobile game using around-body interactions.
- UIST 2016 Student Innovation Contest **Shan-Yuan Teng**, Yung-Ta Lin, Yi-Chi Liao
Introducing the first real air guitar.
 *Best Implementation Award*

Professional Services

teaching assistant at the University of Chicago for
 Introduction to Human-Computer Interaction (CMSC 20300), Fall 2019
 Emerging Interface Technologies (CMSC 33240/CMSC 23240), Winter 2020
 Engineering Interactive Electronics onto Printed Circuit Boards (CMSC 23230/CMSC 33230), Spring 2021
reviewer for ACM CHI 2020/2021/2022, UIST 2020, TEI 2020/2021, IEEE VR 2020, AH 2020
demo co-chair for AugmentedHumans 2021

Languages

English, Mandarin

Skills

programming (C, Python, web)
 electronic circuits (PCB)
 digital fabrication (CAD, 3D printing, laser cutting)