

YUKANG YAN

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EDUCATION

- Tsinghua University, Beijing** *September 2015 - Present*
Ph.D. in Computer Science
Department of Computer Science and Technology
- Tsinghua University, Beijing** *September 2011 - July 2015*
Bachelor of Computer Science *GPA: 3.9 top 3%*
Department of Computer Science and Technology
- Tsinghua University, Beijing** *September 2012 - July 2015*
Bachelor of Economics *Dual Degree*
Department of Economics and Management

RESEARCH INTERESTS

My research area is Human-Computer Interaction (HCI), in which I focus on developing body movement-based interaction techniques (hand gesture, head gesture, body posture, facial behavior) to improve the user experience and interaction efficiency with VR/AR, wearable devices and voice user interfaces. I approach this through modelling the process of decision making, movement control of the users and developing novel sensing techniques.

PUBLICATIONS

- [1] Zhaoyuan Ma, **Yukang Yan**, Darren Edge, Hong Tan, Yuanchun Shi, and Ed Colgate. “eClover: A Combined Electrostatic and Four-Tactor Wearable System for Eyes-Free Interactions”. In: Illinois, USA, Apr. 2015.
- [2] Ke Sun, Yuntao Wang, Chun Yu, **Yukang Yan**, Hongyi Wen, and Yuanchun Shi. “Float: One-Handed and Touch-Free Target Selection on Smartwatches”. In: *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. CHI '17. Denver, Colorado, USA: ACM, 2017, pp. 692–704. ISBN: 978-1-4503-4655-9. DOI: 10.1145/3025453.3026027.
- [3] **Yukang Yan**, Xin Yi, Chun Yu, and Yuanchun Shi. “Gesture-Based Target Acquisition in Virtual and Augmented Reality”. In: *Virtual Reality and Intelligent Hardware*. (Apr. 2019), 24 pages. ISSN: 2474-9567.
- [4] **Yukang Yan**, Chun Yu, Xiaojuan Ma, Shuai Huang, Hasan Iqbal, and Yuanchun Shi. “Eyes-Free Target Acquisition in Interaction Space Around the Body for Virtual Reality”. In: *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*. CHI '18. Montreal QC, Canada: ACM, 2018, 42:1–42:13. ISBN: 978-1-4503-5620-6. DOI: 10.1145/3173574.3173616.
- [5] **Yukang Yan**, Chun Yu, Xiaojuan Ma, Xin Yi, Ke Sun, and Yuanchun Shi. “VirtualGrasp: Leveraging Experience of Interacting with Physical Objects to Facilitate Digital Object Retrieval”. In: *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*. CHI '18. Montreal QC, Canada: ACM, 2018, 78:1–78:13. ISBN: 978-1-4503-5620-6. DOI: 10.1145/3173574.3173652.
- [6] **Yukang Yan**, Chun Yu, Yingtian Shi, and Xie Mingxing. “PrivateTalk: Activating Voice Input with Hand-On-Mouth Gesture Detected by Bluetooth Earphones”. In: *The 32nd Annual ACM Symposium on User Interface Software and Technology*. UIST '19. New Orleans, LA, USA: ACM, 2019. ISBN: 978-1-4503-5620-6. DOI: 10.1145/3332165.3347950.
- [7] **Yukang Yan**, Chun Yu, Xin Yi, and Yuanchun Shi. “HeadGesture: Hands-Free Input Approach Leveraging Head Movements for HMD Devices”. In: *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.* 2.4 (Dec. 2018), 198:1–198:23. ISSN: 2474-9567. DOI: 10.1145/3287076.

AWARDS

National Scholarship for Doctoral Students	2018
Special-Class Award in "Challenge Cup" of Tsinghua University	2017
First Prize in GIX Global Innovation Competition	2016
Outstanding Undergraduate Awards, top 5%	2015
Outstanding Thesis Award of Tsinghua University, top 5%	2015
Rising Star Internship Awards of MSRA, top 5%	2015
Academic Excellence Scholarship of Tsinghua University	2014
Comprehensive Merit Scholarship of Tsinghua University	2013

RESEARCH EXPERIENCE

University of Michigan, MI Visiting researcher with Professor Michael Nebeling.	Start from October 2019
Microsoft Research of Asia, Beijing Research Intern in HCI group with Hong Tan. Conducting research on haptic feedback on the touchscreen of smartphones.	October 2014 - March 2015
University of Southern California, CA Research Intern in Information Sciences Institute with Professor Pedro Szekely. Developing tools to facilitate publication of data in the Linked Data cloud.	June - July 2014

TEACHING EXPERIENCE

Teaching Assistant , Tsinghua University Human Computer Interaction Technology. Graduate course on human-computer interaction. Organized Group projects and graded assignments.	Spring 2018 Spring 2015
Teaching Assistant , Tsinghua University Computer Science: An Overview. 1st undergraduate course on. Developed teaching tools (https://github.com/chyyuu/v8-cpu), designed and graded assignments.	Fall 2018 Fall 2017 Fall 2016 Fall 2015

PATENTS PENDING

- 1 Chun Yu, Yuanchun Shi, **Yukang Yan**, 2019, Gesture-based wake-up method for voice input, Chinese Patent: CN110164440A.
- 2 Chun Yu, Yizheng Gu, Zhican Yang, **Yukang Yan**, Yuanchun Shi, 2017, Hand gesture tracking device, Chinese Patent: CN207752443U.
- 3 Chun Yu, Yizheng Gu, Zhican Yang, **Yukang Yan**, Yuanchun Shi, 2017, Hand gesture tracking method, device and computing material, Chinese Patent: CN106980386A.