

# Teng Han

Email: hanteng [at] cs.umanitoba.ca  
Mobile: +1 (204) 688-2215  
Webpage: <http://teng-han.com/>

## Research Interests

Human Computer Interaction (HCI), in the areas of innovative input and output methodologies, computer aided creative tools, and mobile interfaces and pedagogical systems.

## Education

- Feb, 2015 - now      **PhD Student | University of Manitoba, Canada**  
HCI Lab  
Supervisor: Prof. Pourang Irani
- Sep, 2009 - July 2012      **Master of Science by Research | University of Bristol, UK**  
Interaction and Graphics Group  
Supervisor: Prof. Sriram Subramanian  
Thesis Title: Kicking Gestures for Mobile Interaction
- Sep, 2005 - Jul, 2009      **Bachelor of Engineering | Xi'an Jiaotong University, China**  
Department of Industrial Design  
Supervisor: Prof. Leshan Li  
Thesis Title: Design of China Phone for the Youth

## Experiences in TA and Marker

- 16 Summer      **Instructor | University of Manitoba, Canada**  
COMP 1010, Introductory Computer Science
- 15 Fall      **Marker | University of Manitoba, Canada**  
COMP 3020, Human Computer Interaction 1

## Employments & Internship

- May, 2017 - Sep, 2017      **Research Intern | Honda Research Institution, Japan**  
Mentors: Dr. Keisuke Nakamura and Dr. Randy Gomez
- Jan, 2017 - Mar, 2017      **Visiting Student | Dartmouth College, USA**  
Mentor: Dr. Xing-dong Yang
- Nov, 2014 - Feb, 2015      **IOS Programmer | Xiaoxiaoni Creative, China**  
Worked with Dr. Xiang Cao
- Jul, 2014 - Nov, 2014      **Algorithm Engineer | Zepp Labs, China**  
Manager: Dr. Xiaowei Dai
- Jan, 2014 - Jun, 2014      **Intern | Lenovo Research, China**  
Mentor: Dr. Xiang Cao
- May, 2013 - Dec, 2013      **Research Assistant | University of Pittsburgh, USA**  
Supervisor: Dr. Jingtao Wang
- Oct, 2011 - May, 2012      **Research Intern | Microsoft Research Asia, China**  
Mentor: Dr. Xiang Cao

## **Publications**

google scholar: <https://scholar.google.co.jp/citations?user=kHKwQ9gAAAAJ&hl=en&oi=ao>  
dblp: <http://dblp.uni-trier.de/pers/hd/h/Han:Teng>

### **Journal**

[J1] Jessica R. Cauchard, Mike Fraser, Teng Han, and Sriram Subramanian. 2012. Steerable projection: exploring alignment in interactive mobile displays. *Personal Ubiquitous Comput.* 16, 1 (January 2012), 27-37. <http://dx.doi.org.uuml.idm.oclc.org/10.1007/s00779-011-0375-3>

### **Conference**

[C10] **Teng Han**, Qian Han, Michelle Annett, Fraser Anderson, Da-Yuan Huang, and Xing-Dong Yang. Frictio: Passive Kinesthetic Force Feedback for Smart Ring Output. In *Proceedings of the 30th annual ACM symposium on User interface software and technology (UIST '17)*. ACM. (In press)

[C9] **Teng Han**, Khalad Hasan, Keisuke Nakamura, Randy Gomez, and Pourang Irani. 2017. SoundCraft: Enabling Spatial Interactions on Smartwatches using Hand Generated Acoustics. In *Proceedings of the 30th annual ACM symposium on User interface software and technology (UIST '17)*. ACM. (In press)

[C8] William Delamare, **Teng Han**, and Pourang Irani. 2017. Designing a gaze gesture guiding system. In *Proceedings of the 19th International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI '17)*. ACM, New York, NY, USA, Article 26, 13 pages. <https://doi-org.uuml.idm.oclc.org/10.1145/3098279.3098561>

[C7] Barrett Ens, Ahmad Byagowi, **Teng Han**, Juan David Hincapié-Ramos, and Pourang Irani. 2016. Combining Ring Input with Hand Tracking for Precise, Natural Interaction with Spatial Analytic Interfaces. In *Proceedings of the 2016 Symposium on Spatial User Interaction (SUI '16)*. ACM, New York, NY, USA, 99-102. <https://doi-org.uuml.idm.oclc.org/10.1145/2983310.2985757> (Best short paper award)

[C6] **Teng Han**, David Ahlström, Xing-Dong Yang, Ahmad Byagowi, and Pourang Irani. 2016. Exploring Design Factors for Transforming Passive Vibration Signals into Smartwear Interactions. In *Proceedings of the 9th Nordic Conference on Human-Computer Interaction (NordiCHI '16)*. ACM, New York, NY, USA, Article 35, 10 pages. <https://doi-org.uuml.idm.oclc.org/10.1145/2971485.2971558>

[C5] **Teng Han**, Xiang Xiao, Lanfei Shi, John Canny, and Jingtao Wang. 2015. Balancing Accuracy and Fun: Designing Camera Based Mobile Games for Implicit Heart Rate Monitoring. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI '15)*. ACM, New York, NY, USA, 847-856. <https://doi-org.uuml.idm.oclc.org/10.1145/2702123.2702502>

[C4] Xiang Xiao, **Teng Han**, and Jingtao Wang. 2013. LensGesture: augmenting mobile interactions with back-of-device finger gestures. In *Proceedings of the 15th ACM on International conference on multimodal interaction (ICMI '13)*. ACM, New York, NY, USA, 287-294. <http://dx.doi.org.uuml.idm.oclc.org/10.1145/2522848.2522850>

[C3] Yupeng Zhang, **Teng Han**, Zhimin Ren, Nobuyuki Umetani, Xin Tong, Yang Liu, Takaaki Shiratori, and Xiang Cao. 2013. BodyAvatar: creating freeform 3D avatars using first-person body gestures. In *Proceedings of the 26th annual ACM symposium on User interface software and technology (UIST '13)*. ACM, New York, NY, USA, 387-396. <http://dx.doi.org.uuml.idm.oclc.org/10.1145/2501988.2502015>

[C2] Jason Alexander, **Teng Han**, William Judd, Pourang Irani, and Sriram Subramanian. 2012. Putting your best foot forward: investigating real-world mappings for foot-based gestures. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '12)*. ACM, New York, NY, USA, 1229-1238. <http://dx.doi.org.uml.idm.oclc.org/10.1145/2207676.2208575>

[C1] **Teng Han**, Jason Alexander, Abhijit Karnik, Pourang Irani, and Sriram Subramanian. 2011. Kick: investigating the use of kick gestures for mobile interactions. In *Proceedings of the 13th International Conference on Human Computer Interaction with Mobile Devices and Services (MobileHCI '11)*. ACM, New York, NY, USA, 29-32. <https://doi-org.uml.idm.oclc.org/10.1145/2037373.2037379>

### **Work-In-Progress, Posters**

[WIP1] **Teng Han**, Lanfei Shi, Xiang Xiao, John Canny, and Jingtao Wang. 2014. Designing engaging camera based mobile games for implicit heart rate monitoring. In *CHI '14 Extended Abstracts on Human Factors in Computing Systems (CHI EA '14)*. ACM, New York, NY, USA, 1675-1680. <http://dx.doi.org.uml.idm.oclc.org/10.1145/2559206.2581234>

### **Patent**

[US Patent App. 14/770,800, 2013] Xiang Cao, Yang Liu, Teng Han, Takaaki Shiratori, Nobuyuki Umetani, Yupeng Zhang, Xin Tong, Zhimin Ren. Object Creation Using Body Gestures.

### **Skillsets**

*Programming & Platform* | C++, C#, Java, Python | Desktop and Android Applications | Arduino etc. | Vision and graphics tools e.g. OpenCV, OpenGL | Machine learning tools e.g. Weka | Signal Processing tools e.g. Matlab.

*Study & Data Analysis* | T-Test, Anova | Practical with user study, e.g. brainstorming, in-depth interview, questionnaire.

*Design* | Visualization, UI design and prototype modeling with Processing, Photoshop, CorelDraw, Rhino, Pro/E.

### **Awards and Honors**

2016-17	PhD sponsored by Honda Research Institute, Japan
2014	1st place in the Pitt CS Day (2014) digital media competition
2013	1st place in the Pitt CS Day (2013) digital media competition & runner up in the poster competition
2012 - 13	GSR Fellowship, Intelligent Systems Program, PITT
2008	Third-class academic excellence scholarship, XJTU
2008	Second Prize for the 3rd National College Mechanical Design Competition (provincial ), Xi'an, China
2007	Third-class CASC excellence scholarship, XJTU
2006	Second-class academic excellence scholarship, XJTU
2006	Freshmen scholarship, XJTU

## **Activities**

External Reviewer      ACM MobileHCI'12, 15, ACM CHI'14-17, ACM ISS'17, IEEE THMS, TEI'16-17

Others      Demo | Mobile VCE Annual Research Review 2010, London, UK

Assistant | UPA CHINA Seminar 2009, Beijing, China

Project team leader | the 3rd National College Mechanical Design Competition (provincial) 2008, Xi'an, China

Hobbies      Basketball, Cinema

## **References**

Dr. Xing-dong Yang      Assistant Professor at Dartmouth College, USA  
xing-dong.yang [at] dartmouth.edu

Dr. Xiang Cao      Founder and CEO of Xiaoxiaoni Creative, China  
Former researcher at Microsoft Research Asia  
xiangcao [at] acm.org

Dr. Jingtao Wang      Assistant Professor at University of Pittsburgh, USA  
Jingtaow [at] cs.pitt.edu

Dr. Sriram Subramanian      Professor at University of Sussex, UK  
Co-founder of UltraHaptics, UK  
sriram [at] sussex.ac.uk

Dr. Pourang Irani      Professor at University of Manitoba, Canada  
pourang.Irani [at] cs.umanitoba.ca