

Xiang Zhi Tan (Zhi)

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Research Interests

Human-Robot Interaction; Robotics; Human-Computer Interaction; Assistive Robotics

Education

<i>expected</i> Fall 2020	PhD in Robotics <i>Carnegie Mellon University, USA</i> Advised by Aaron Steinfeld
Fall 2017	Master of Science in Robotics <i>Carnegie Mellon University, USA</i>
Spring 2015	Bachelor of Science in Computer Science <i>University of Wisconsin–Madison, USA</i> <i>Honors in Major</i> Advised by Bilge Mutlu
Fall 2012	American Degree Transfer Program <i>INTI International University, Malaysia</i>

Research Experience

Sep 2015 - Present	Research Assistant <i>Assistive Robots Lab, Carnegie Mellon University</i> Conduct research in exploring novel interaction techniques for human-robot interaction and understanding how multiple robotics systems work together to provide meaningful services to users. Current research involves utilizing different robotic platforms to provide navigation information and other services to users (with an additional focus on users with visual impairments), creating computation models for human behavior, and exploring challenges with robot deployments and maintenance. Mentor undergraduate students and manage day-to-day administrative task for the lab.
June 2013 - Aug 2015	Research Assistant <i>Wisconsin Human-Computer Interaction Lab, University of Wisconsin-Madison</i> Conduct research in the field of human-robot interaction and human-computer interaction. Past research involved utilizing gaze cues in humanoid robots, investigating the role of robots in households, and using wearable computing to facilitate education in a classroom setting. Mentored undergraduate students, facilitated demonstration and outreach programs organized by the HCI Lab.

Work Experience

June 2013 - Jan 2014	Undergraduate Programmer <i>UW-Madison Graduate School IT Department, Madison, WI</i> Evaluated third-party solution to streamline office workflow; Led the Request For Proposal process for third-party products; Developed software in supporting day to day operation of the department
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Publications

Conference Papers

- C.4 **Xiang Zhi Tan**, Samantha Reig, Elizabeth J. Carter, and Aaron Steinfeld. "From One to Another: How Multi-Robot Interaction Affects Users' Perceptions Following a Transition". In *Proceedings of 2019 ACM/IEEE International Conference on Human-Robot Interaction, Daegu, South Korea, 2019 (HRI '19)*
- C.3 **Xiang Zhi Tan** and Aaron Steinfeld. 2018. "Spherical Robots as Means for Human Robot Communication." In *Robot and Human Interactive Communication (RO-MAN), 2018 27th IEEE International Symposium on*. IEEE, 2018.
- C.2 **Xiang Zhi Tan**, Marynel Vázquez, Elizabeth J. Carter, Cecilia G. Morales, and Aaron Steinfeld. 2018. "Inducing Bystander Interventions During Robot Abuse with Social Mechanisms". In *Proceedings of 2018 ACM/IEEE International Conference on Human-Robot Interaction, Chicago, IL, USA, March 5–8, 2018 (HRI '18)*
- C.1 Sean Andrist, **Xiang Zhi Tan**, Michael Gleicher, and Bilge Mutlu. "Conversational Gaze Aversion for Humanlike Robots". In *Proceedings of the 2014 ACM/IEEE International Conference on Human-robot Interaction. HRI '14. Bielefeld, Germany: ACM, 2014.*

Refereed Short Papers & Workshop Papers

- S.4 Amal Nanavati, **Xiang Zhi Tan**, and Aaron Steinfeld. 2018. Coupled Indoor Navigation for People Who Are Blind. In *HRI '18 Companion: 2018 ACM/IEEE International Conference on Human-Robot Interaction Companion, March 5–8, 2018, Chicago, IL, USA*. ACM, New York, NY, USA.
- S.3 Álvaro Castro-González, **Xiang Zhi Tan**, Elizabeth Carter, and Aaron Steinfeld. 2018. Social Haptic Interaction between Robots and Children with Disabilities. In *HRI '18 Companion: 2018 ACM/IEEE International Conference on Human-Robot Interaction Companion, March 5–8, 2018, Chicago, IL, USA*. ACM, New York, NY, USA.
- S.2 **Xiang Zhi Tan** and Aaron Steinfeld. 2017. Using Robot Manipulation to Assist Navigation by People Who Are Blind or Low Vision. In *Proceedings of the Companion of the 2017 ACM/IEEE International Conference on Human-Robot Interaction (HRI '17)*. ACM, New York, NY, USA.
- S.1 **Xiang Zhi Tan**, Aaron Steinfeld, and M. Bernardine Dias. "Communication through Movement: An Alternative Method of Interaction for HRI". Presented at *Robotics: Science and Systems 2016*

workshop on Socially and Physically Assistive Robotics for Humanity.

Honors and Awards

Fall 2016	Carnegie Mellon University Uber Presidential Fellowship
Fall 2014	Computing Research Association's (CRA) Outstanding Undergraduate Researcher Award for PhD-granting institutions 2015 - honorable mention.
Fall 2014	David H. Durra Scholarship
Spring 2014	DeWitt Undergraduate Fellowship
Spring 2014	Summer Research Assistantship
Spring 2014	2014-15 Hilldale Undergraduate/Faculty Research Fellowships
2013-2014	Dean's List

Services

Organization

2018	Publicity Chair for HRI Pioneers 2018
2018	Co-Organizer of CMU HRI Reading Group

Conference Referee (Year of Conference)

2019	Human-Robot Interaction Pioneers Workshop
2018, 2019	ACM/IEEE International Conference on Human Robot Interaction (HRI)
2018	ACM CHI Conference on Human Factors in Computing Systems (CHI)
2018	IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)
2017	International Conference on Social Robotics (ICSR)
2016	International Conference on Human-Agent Interaction (HAI)

Departmental Service

2018, 2019	PhD Admission Committee Student Member
2016-2018	Officer for RoboOrg (Graduate student organization for the Robotics Institute)

Press Coverage

Boston Globe

Afraid of robots? The feeling's mutual

PC Magazine

Lost? Ask This Robot for Directions