

Kotaro Hara | CV

Robotics Institute & HCI Institute
Carnegie Mellon University
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Education

- 08/2010 – 12/2016 **PhD, Computer Science, University of Maryland, College Park**
Advisor: Dr. Jon E. Froehlich
Research Interests: Human-Computer Interaction, Crowdsourcing, Accessibility
- 04/2006 – 03/2010 **Bachelor of Engineering, Information Engineering, Osaka University**
Advisor: Dr. Fumio Kishino
Bachelor Thesis: Investigation on extension detection of textile materials for push-pull-based interface

Research and Work Experience

- From 11/2017 **Assistant Professor in the School of Information Systems at the Singapore Management University**
- 11/2016 – Present **Postdoctoral Researcher at the Carnegie Mellon University**
Mentors: Dr. Jeffrey P. Bigham and Dr. Aaron Steinfeld
- 01/2013 – 11/2016 **Graduate Research Assistant at the University of Maryland, College Park**
Research Advisor: Dr. Jon Froehlich
- 06/2014 – 08/2014 **Research Intern at Microsoft Research**
Mentor: Dr. Shamsi T. Iqbal
- 06/2011 – 08/2011 **Web Developer at The Center for Public Integrity**
- 08/2010 – 12/2012 **Teaching Assistant at the University of Maryland, College Park**
- 01/2009 – 03/2010 **Undergraduate Thesis Research**
Research Advisor: Dr. Fumio Kishino

Awards and Fellowship

- 2017 W4A 2017 Best Paper Nomination
- 2015 The ACM Computing Reviews Best of Computing 2014
- 2014 Google US/Canada PhD Fellowship (declined)
- 2014 IBM PhD Fellowship 2014-2015
- 2013 Jacob K. Goldhaber Travel Award
- 2013 HCIL Conference Travel Award
- 2013 The International Conference Student Support Award
- 2012 2011-2012 Distinguished Teaching Assistant
- 2010 - 2011 Dean's Fellowship
- 2010 JASSO Long-term Fellowship for Study Abroad (declined)

Journal Publications

- [J.1] **Hara, K.**, Azenkot, S., Campbell, M., Bennett, C., Le, V., Pannella, S., Moore, R., Minckler, K., Ng, R., and Froehlich, J. (2015). "Improving Public Transit Accessibility for Blind Riders by Crowdsourcing Bus Stop Landmark Locations with Google Street View: An Extended Analysis" *ACM Transactions on Accessibility*.

Conference Publications

- [C.7] **Hara, K.** and Bigham, J. (2017) "Introducing People with ASD to Crowd Work" *Proceedings of ASSETS 2017*, Baltimore, USA.
- [C.6] Swaminathan, S., **Hara, K.**, and Bigham, J. (2017) "The Crowd Work Accessibility Problem" *Proceedings of W4A 2017*, Perth, Australia
- [C.5] **Hara, K.**, Chen, C and Froehlich, J. (2016). "The Design of Assistive Location-based Technologies for People with Ambulatory Disabilities: A Formative Study" *Proceedings of CHI 2016*, San Jose, USA.
- [C.4] **Hara, K.** and Iqbal, S.T. (2015). "Effect of Machine Translation in Interlingual Conversation: Lessons from a Formative Study" *Proceedings of CHI 2015*, Seoul, Korea.
- [C.3] **Hara, K.**, Sun, J., Jacobs, D., and Froehlich, J. (2014). "Tohme: Detecting Curb Ramps in Google Street View Using Crowdsourcing, Computer Vision, and Machine Learning" *Proceedings of UIST 2014*, Honolulu, Hawaii, USA. **ACM CR Best of Computing Notable Books and Articles**

- [C.2] **Hara, K.,** Azenkot, S., Campbell, M., Bennett, C., Le, V., Pannella, S., Moore, R., Minckler, K., Ng, R., and Froehlich, J. (2013). “Improving Public Transit Accessibility for Blind Riders by Crowdsourcing Bus Stop Landmark Locations with Google Street View” Proceedings of ASSETS 2013, Bellevue, Washington, USA, **Best paper award**
- [C.1] **Hara, K.,** Le, V., Froehlich, J. (2013). “Combining Crowdsourcing and Google Street View to Identify Street-level Accessibility Problems” Proceedings of CHI 2013, Paris, France

Poster Publications

- [P.3] **Hara, K.,** Hajiaghayi, T., Bederson, B. (2015). “FluTCHA: Using Fluency to Distinguish Humans from Computers”, Poster Proceedings of WWW 2015, Florence, Italy
- [P.2] **Hara, K.,** Sun, J., Chazan, J., Jacobs, D., and Froehlich, J. (2013). “An Initial Study of Automatic Curb Ramp Detection with Crowdsourced Verification using Google Street View Images” Poster Proceedings of HCOMP 2013, Palm Springs, California, USA
- [P.1] **Hara, K.,** Le, V., Froehlich, J. (2012). “A Feasibility Study of Crowdsourcing and Google Street View to Determine Sidewalk Accessibility” Poster Proceedings of ASSETS 2012, Boulder, Colorado, USA

Invited Article

- [I.1] **Hara, K.** and Froehlich, J. (2015). “Characterizing and Visualizing Physical World Accessibility at Scale Using Crowdsourcing, Computer Vision, and Machine Learning” SIGACCESS Newsletter, Issue 113. 2015.

Workshop and Doctoral Consortium

- [W.3] **Hara, K.** (2014). “Scalable Methods to Collect and Visualize Sidewalk Accessibility Data for People with Mobility Impairments” Doctoral Consortium of ASSETS 2014.
- [W.2] **Hara, K.** (2014). “Scalable Methods to Collect and Visualize Sidewalk Accessibility Data for People with Mobility Impairments” Doctoral Symposium of UIST 2014.
- [W.1] **Hara, K.,** Le, V., Sun, J., Jacobs, D., and Froehlich, J. (2013). “Exploring Early Solutions for Automatically Identifying Inaccessible Sidewalks in the Physical World using Google Street View” Human Computer Interaction Consortium 2013, Pacific Grove, California, USA.

Invited Talks

- [IT.15] “Characterizing Physical World Accessibility at Scale” GroupSight workshop at the HCOMP2016, Austin, TX, USA, Nov 3, 2016
- [IT.14] “Characterizing Physical World Accessibility at Scale” Human-Computer Interaction Institute, Carnegie Mellon University, Pittsburgh, PA, USA, Mar 29, 2016
- [IT.13] “Characterizing Physical World Accessibility at Scale” Microsoft Research, Redmond, WA, USA, Mar 14, 2016
- [IT.12] “Using Crowdsourcing, Automated Methods and Google Street View to Collect Sidewalk Accessibility Data” Yatani Lab, University of Tokyo, Tokyo, Japan, Jan 13, 2016
- [IT.11] “Using Crowdsourcing, Automated Methods and Google Street View to Collect Sidewalk Accessibility Data” IBM Research Tokyo, Tokyo, Japan, Jan 13, 2016
- [IT.10] “Using Crowdsourcing, Automated Methods and Google Street View to Collect Sidewalk Accessibility Data” Kashima Lab. Kyoto University, Kyoto, Japan, Jan 7, 2015
- [IT.9] “Characterizing Sidewalk Accessibility at Scale” UMD Honor’s Course, College Park, Maryland, USA, Oct 14, 2015
- [IT.8] “Characterizing Sidewalk Accessibility at Scale” MedStar Washington Hospital Center, Washington, DC, Aug 27, 2015
- [IT.7] “Characterizing Sidewalk Accessibility at Scale” Walk Hacknight, Aug 20, 2015
- [IT.6] “Characterizing Sidewalk Accessibility at Scale” Baltimore Transportation Tech Talk, Baltimore, Maryland, USA, July 27, 2015
- [IT.5] “Machine Learning-based Workflow Controller Efficient Semi-automatic Curb Ramp Detection in Google Street View” 32nd Annual HCIL Symposium, College Park, Maryland, USA, May 28, 2015
- [IT.4] “Scalable Methods to Collect and Visualize Sidewalk Accessibility Data for People with Mobility Impairments” Cornell Tech, New York, New York, Oct 31, 2014
- [IT.3] “Crowd Powered Street View Accessibility” 31st Annual HCIL Symposium, College Park, Maryland, USA, May 29, 2014

[IT.2] “Crowd Powered Street View Accessibility” IBM Research Tokyo, Tokyo, Japan, Jan 8, 2013.

[IT.1] “Combining Crowdsourcing and Google Street View to Identify Street-level Accessibility Problems” 30th Annual HCIL Symposium, College Park, Maryland, USA, May 22-23, 2013

Press

2016	The Diamondback	A UMD team made an app highlighting D.C. areas inaccessible to people with disabilities
2016	Next City	You Can Help Map the Accessibility of the World
2016	Greater Greater Washington	Missing sidewalks? There’s an app for that
2013	Engadget	Google Street View Could Be the Best Road Crew Ever
2013	NewScientist	Crowds prowl Google Street View to speed road repairs

Teaching

Fall 2012, Fall 2011	CMSC216 Introduction to Computer Systems
Spring 2012, Spring 2011	CMSC434 Introduction to HCI
Fall 2011	CMSC131 Object Oriented Programming I

Mentoring

Summer 2017	Lucas Rosenblatt	Undergraduate Student
Summer 2016	Daniil Zadorozhnyy	Undergraduate Student
Summer 2015	Anthony Li	High school intern
Summer 2015	Niles Rogoff	High school intern
Summer 2015	Christine Chan	Undergraduate student
09/2014 – 12/2015	Alex Zhang	Undergraduate student
09/2013 – 12/2015	Zachary Lawrence	Undergraduate student
Summer 2013	Jonah Chazan	High school intern
Fall 2012 – Fall 2013	Robert Moore	Undergraduate student
Fall 2012 – Fall 2013	Sean Panella	Undergraduate student
Fall 2012 – Spring 2013	Victoria Le	Former undergraduate student

Service/Reviewer

Associate Chair, ACM SIGACCESS Conference on Computers and Accessibility (ASSETS’17)
Program Committee, ACM User Interface Software and Technology Symposium (UIST’17)
ACM Human Factors in Computing Systems (CHI) 2013-2017
ACM Computer Supported Cooperative Work (CSCW) 2014-2017
ACM SIGACCESS (ASSETS) 2015-2017

Technical Skills

Programming	C/C++, Java, JavaScript, MATLAB, Markup languages (e.g., HTML), Python, PHP, Scala
Database	MySQL, PostgreSQL with PostGIS

References

Prof. Jon E. Froehlich (jonf@cs.umd.edu), Department of Computer Science, University of Maryland
Prof. David Jacobs (djacobs@cs.umd.edu), Department of Computer Science, University of Maryland
Shamsi T. Iqbal, Ph.D. (shamsi@microsoft.com), Microsoft Research