

CURRICULUM VITAE

Koji Yatani

July, 2010

PERSONAL DETAILS

Home Address [removed for privacy reasons]
Office Address Bahen Center 40 St. George St. Room 5170, Toronto, Ontario M5S 2E4 CANADA
Phone [removed for privacy reasons]
E-mail koji@dgp.toronto.edu
Website <http://www.yatani.jp>
Nationality Japan

RESEARCH INTERESTS

My research interests lie in Human-Computer Interaction (HCI) with an emphasis on hardware and sensing technologies. More specifically, I am interested in developing interactive systems for mobile devices, and developing new hardware and sensing technologies to support user interactions in mobile/ubiquitous computing environments. I am also interested in understanding user practices and uncovering problems in difficult interaction contexts through quantitative and qualitative approaches. Beyond HCI, I am interested in machine learning, computational linguistics, statistics, psychology, and physiology.

EDUCATION

09/2006 – present **Department of Computer Science, University of Toronto**, Toronto, Canada
Ph.D. candidate

04/2005 – 08/2006 **Department of Frontier Informatics, Graduate School of Frontier Sciences, University of Tokyo**, Tokyo, Japan
Ph.D. candidate

04/2003 – 03/2005 **Department of Frontier Informatics, Graduate School of Frontier Sciences, University of Tokyo**, Tokyo, Japan
Degree conferred: **Master of Science**
Thesis title: *Intuitive Interaction Techniques for Mobile Devices with Human Gestures*

04/1999 – 03/2003 **Department of Information and Communication Engineering, Faculty of Engineering, University of Tokyo**, Tokyo, Japan
Degree conferred: **Bachelor of Engineering**
Thesis title: *A System for Supporting Children's Collaborative Learning in a Museum with Handheld Devices* (written in Japanese)

WORK EXPERIENCE

- 04/2009 – 07/2009 **Internship at Microsoft Research (Redmond)**
I worked on a user interface design combining pen input and touch input called *Manual Deskterity*. I mostly worked with Dr. Ken Hinckley, but also had great support from Michel Pahud, Nicole Coddington, Jenny Rodenhouse, Andy Wilson, Hrvoje Benko, and Bill Buxton. This work resulted in a full paper publication at UIST 2010, an alt.chi publication at CHI 2010, and 23 US patent applications.
- 05/2007 – 08/2007 **Internship at PARC**
I worked on a selection technique on a mobile touch-screen device called *Escape*. I worked with Dr. Kurt Partridge and Dr. Marshall Bern at PARC, and Prof. Mark W. Newman at University of Michigan. This work resulted in a full paper publication at CHI 2008 and a US patent application.

PUBLICATIONS

This list does not include the papers written in Japanese and published in Japanese journals and conferences. The complete publication list including Japanese publications is available upon request.

Journal Papers

- [J4] Koji Yatani, and Khai N. Truong. An Evaluation of Stylus-based Text Entry Methods on Handheld Devices Studied in Different Mobility States. *Pervasive and Mobile Computing*, Vol. 5, No. 5, pp. 496 – 506, October 2009.
- [J3] Elaine M. Huang, Koji Yatani, Khai N. Truong, Julie A. Kientz, and Shwetak N. Patel. Understanding Mobile Phone Situated Sustainability: The Influence of Local Constraints and Practices on Transferability. *IEEE Pervasive Computing*, Vol. 8, No. 1, pp. 46 – 53, January 2009.
- [J2] Koji Yatani, Koiti Tamura, Keiichi Hiroki, Masanori Sugimoto, and Hiromichi Hashizume. Toss-It: Intuitive Information Transfer Techniques for Mobile Devices Using Toss and Swing Actions. *IEICE Transactions on Systems and Computers*, Vol. E89-D, No. 1, pp. 150 – 157, January 2006.
- [J1] Koji Yatani, Mayumi Onuma, Masanori Sugimoto, and Fusako Kusunoki. Musex: A System for Supporting Children’s Collaborative Learning in a Museum with PDAs” *Systems and Computers in Japan*, Vol. 35, No. 14, pp. 54 – 63, December 2004.

Conference Full Papers

- [P10] Ken Hinckley, Koji Yatani, Michel Pahud, Nicole Coddington, Jenny Rodenhouse, Andy Wilson, Hrvoje Benko, and Bill Buxton. Pen + Touch = New Tools. *To appear in the ACM Symposium on User Interface Software and Technology (UIST 2010)*, October 2010.
- [P9] James Scott, David Dearman, Koji Yatani, and Khai N. Truong. Sensing Foot Gestures from the Pocket. *To appear in the ACM Symposium on User Interface Software and Technology (UIST 2010)*, October 2010.
- [P8] Eunyong Chung, Carlos Jensen, Koji Yatani, Victor Kuechler, and Khai N. Truong. Sketching and Drawing in the Design of Open Source Software. *To appear in IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC 2010)*, September 2010.

- [P7] Koji Yatani and Khai N. Truong. SemFeel: A User Interface with Semantic Tactile Feedback for Mobile Touch-screen Devices. In *Proceedings of the ACM Symposium on User Interface Software and Technology (UIST 2009)*, pp. 111 – 120, October 2009.
- [P6] Koji Yatani, Eunyoung Chung, Carlos Jensen, and Khai N. Truong. Understanding How and Why Open Source Contributors Use Diagrams in the Development of Ubuntu. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2009)*, pp. 995 – 1004, April 2009.
- [P5] Koji Yatani, Kurt Partridge, Marshall Bern, and Mark W. Newman. Escape: A Target Selection Technique Using Visually-cued Gestures. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2008)*, pp. 285 – 294, April 2008.
- [P4] Koji Yatani, and Khai N. Truong. An Evaluation of Stylus-based Text Entry Methods on Handheld Devices in Stationary and Mobile Scenarios. In *Proceedings of the ACM SIGCHI International Conference on Human Computer Interaction with Mobile Devices and Services (MobileHCI 2007)*, pp. 145 – 152, September 2007.
- [P3] Hiromichi Hashizume, Ayumu Kaneko, Yusuke Sugano, Koji Yatani, and Masanori Sugimoto. Fast and Accurate Positioning Technique Using Ultrasonic Phase Accordance Method. In *Proceedings of the IEEE Region 10 Conference (TenCon 2005)*, pp. 826 – 831, November 2005.
- [P2] Fusako Kusunoki, Takako Yamaguti, Takuichi Nishimura, Koji Yatani, and Masanori Sugimoto. (2005) Interactive and Enjoyable Interface in Museum. In *Proceedings of the ACM SIGCHI International Conference on Advances in Computer Entertainment Technology (ACE 2005)*, pp. 1 – 8, June.
- [P1] Koji Yatani, Koiti Tamura, Masanori Sugimoto, and Hiromichi Hashizume. Information Transfer Techniques for Mobile Devices by Toss and Swing Actions. In *Proceedings of the IEEE Workshop on Mobile Computing Systems and Applications (WMSCA 2004)*, pp. 144 – 151, December 2004.

Tech Notes and Short Papers

- [N1] Koji Yatani, Masanori Sugimoto, and Fusako Kusunoki. Musex: A System for supporting children’s collaborative learning in a museum with PDAs. In *Proceedings of the IEEE Workshop on Wireless and Mobile Technology in Education (WMTE 2004)*, pp. 109 – 113, March 2004.

Posters, Demos, and Work-in-Progress Papers

- [PD3] Ken Hinckley, Koji Yatani, Michel Pahud, Nicole Coddington, Jenny Rodenhouse, Andy Wilson, Hrvoje Benko, and Bill Buxton. Manual Deskterity: An Exploration of Simultaneous Pen + Touch Direct Input. In *Extended Abstracts of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2010)*, pp. 2793 – 2802, April 2010 (alt.chi paper, oral presentation).
- [PD2] Koji Yatani, Masanori Sugimoto, and Hiromichi Hashizume. A Multiplayer Whack-A-Mole Game Using Gestural Input in a Location-Sensitive and Immersive Environment. In *Extended Abstracts of International Conference on Entertainment Computing (ICEC 2005)*, pp. 9 – 12, September 2005 (demo presentation).
- [PD1] Koji Yatani, Koiti Tamura, Keiichi Hiroki, Masanori Sugimoto, and Hiromichi Hashizume. Toss-It: Intuitive Information Transfer Techniques for Mobile Devices. In *Extended Abstracts of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2005)*, pp. 1881 – 1884, April 2005 (poster presentation).

Doctoral Symposium

- [DS1] Koji Yatani. Towards Designing User Interfaces on Mobile Touch-screen Devices for People with Visual Impairment. In *Extended Abstract of the ACM Symposium on User Interface Software and Technology (UIST 2009)*, pp. 37 – 40, October 2009.

Conference and Workshop Presentations without Proceedings

- [CP2] Frank Chun Yat Li, Alyssa Rosenzweig, Koji Yatani, and Leila S. Rezai. Rollotext: A User Interface with Coarse User Input on a Pressure-sensitive Keyboard. UIST Student Innovation Competition, October 2009. **Won the 2nd place award for most useful interfaces**
- [CP1] Koji Yatani, Masanori Sugimoto, and Hiromichi Hashizume. ARHunter: A Multiplayer Game Using Gestural Input in a Location-Sensitive and Immersive Environment. *Workshop on Ubiquitous Computing, Entertainment and Games in the Seventh International Conference on Ubiquitous Computing (Ubicomp 2005)*, September 2005.

Other Presentations

- [OP8] Koji Yatani. Interactive Systems with User-generated Data and Content. Talk at DCS Symposium on Trends in Computing, University of Toronto, May 2010.
- [OP7] Koji Yatani. Interactions in Difficult Contexts. Talk at Human Interface Engineering Lab, Osaka University, January 2010.
- [OP6] Koji Yatani. Users and Mobile Devices: Interactions and Implications. Talk at ERATO Igarashi Design Interface Lab, University of Tokyo, December 2009.
- [OP5] Koji Yatani. Users and Mobile Devices: Interactions and Implications. Talk at Graduate School of Information Science and Technology, University of Tokyo, December 2009.
- [OP4] Koji Yatani. Users and Mobile Devices: Interactions and Implications. Talk at NTT DoCoMo Research Center, December 2009.
- [OP3] Koji Yatani. Interactions in Difficult Contexts. Talk at Accessibility Group, IBM Research Tokyo, December 2009.
- [OP2] Koji Yatani. Interactions in Difficult Contexts. Talk at Yairi Lab, Sophia University, December 2009.
- [OP1] Koji Yatani, and Khai N. Truong. A User Interface with Semantic Tactile Feedback for Mobile Touch-screen Devices. Demo presentation at University of Toronto Research in Action Showcase, March 2009.

Patent

(23 US patents are currently under submission.)

- [PA1] Kurt Partridge, Koji Yatani, Mark W. Newman, and David Goldberg. Method and apparatus for selecting an object within a user interface by performing a gesture. United States Patent Application 20090077501.

Selected Press Coverage

- Manual Deskterity
 - “Microsoft’s Manual Deskterity project reveals pen and touch input, Courier’s future?” *Engadget*, April 2010.
 - “Microsoft Shows Off Finger/Stylus Combo Multitouch Magic” *Gizmode*, April 2010.
 - “New Computer Interface Goes Beyond Just Touch” *MIT Technology Review*, April 2010.
 - “TechBytes: Microsoft’s Mystery Event” *ABC News*, April 2010.
- Toss-It
 - “Exchanging Data by ‘Throwing’” *Nihon Keizai Shibun (Japan Economic Times)*, March 2005.
 - “Toss-It” *TV Tokyo World Business Satellite, Trend Tamago*, March 2005.

AWARDS

10/2009 **UIST Student Innovation Competition 2nd place award for most useful interfaces**

FELLOWSHIPS AND SCHOLARSHIPS

09/2008 – 08/2010 **Wolfond Fellowship**

09/2006 – 08/2007 **Wolfond Fellowship**

04/2005 – 03/2006 **Japan Society for the Promotion of Science Research Fellowship for Young Scientists (DC1)**

10/2003 – 03/2005 **NTT Docomo Scholarship**

PROFESSIONAL SERVICE ACTIVITIES

Reviewer (Journal)

- **IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences**
- **IEICE Transactions on Information and Systems**

Reviewer (Conference)

- **APSIPA Annual Summit and Conference Interaction and Interface Track (2010)**
- **CHI: ACM SIGCHI Conference on Human Factors in Computing Systems (2008 – 2010)**
- **CSCW: ACM Conference on Computer Supported Cooperative Work (2010)**

- **Internet of Things Conference** (2008)
- **IUI**: ACM International Conference on Intelligent User Interfaces (2010)
- **MobileHCI**: ACM International Conference on Human-Computer Interaction with Mobile Devices and Services (2008, 2009)
- **Pervasive**: International Conference on Pervasive Computing (2010)
- **TableTop**: IEEE Symposium on Tabletops and Interactive Surfaces (2008)
- **Ubicomp**: International Conference on Ubiquitous Computing (2009, 2010)
- **UIST**: ACM Symposium on User Interface Software and Technology (2008 – 2010)
- **3DUI**: IEEE Symposium on 3D User Interfaces (2009)

Student Volunteer

- **CHI**: ACM SIGCHI Conference on Human Factors in Computing Systems (2010)

TEACHING EXPERIENCE

Teaching Assistant (Department of Computer Science, University of Toronto)

- | | |
|-------------------|---|
| 01/2010 – 04/2010 | Course: CSC 318 The Design of Interactive Computational Media
Lecturer: Ilona Posner |
| 09/2009 – 12/2009 | Course: CSC 428/2514 Human-Computer Interaction
Lecturer: Khai N. Truong |
| 01/2009 – 04/2009 | Course: CSC 108 Introduction to Computer Programming
Lecturer: Diane Horton |
| 09/2008 – 12/2008 | Course: CSC 309 Programming on the Web
Lecturer: Nan Niu |
| 01/2008 – 04/2008 | Course: CSC 108 Introduction to Computer Programming
Lecturer: Karen Reid |
| 09/2006 – 12/2006 | Course: CSC 428/2514 Human-Computer Interaction
Lecturer: Tovi Grossman |

MEMBERSHIP

- **ACM:** Association for Computer Machinery, Student member (2003 – present)
- **IEEE:** Institute of Electrical and Electronics Engineers, Student member (2004 – present)

LANGUAGE ABILITY

- Japanese: Native
- English: Fluent (I have lived in North America more than 3.5 years; 273 (L: 28, S/W: 26, R: 28, W: 4.5) at TOEFL (CBT) as of September 2005)
- Italian: Beginner – Intermediate