

Young Sang Choi

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EDUCATION

- Ph.D.**, The Georgia Institute of Technology
in progress (expected in Summer 2009), Industrial and Systems Engineering
Thesis: A Study of Human-Robot Interaction with An Assistive Robot to Help People with Severe Motor Impairments
Adviser: Dr. Charlie Kemp
- M.Sci.**, Seoul National University
1999, Industrial Engineering
- B.S.**, Seoul National University
1997, Industrial Engineering

RESEARCH EXPERIENCE

- Doctoral Thesis** Industrial and Systems Engineering, The Georgia Institute of Technology, proposed in February 2008, defended in April 2009, and expected to complete in August 2009
Committee: Professors Charlie Kemp, Jonathan Glass, Paul Griffin, Ayanna Howard, and Andrea Thomaz
- Research Assistant** The Healthcare Robotice Lab, The Georgia Institute of Technology, May 2008 – present
Designed and conducted a user needs assessment and user studies in a Translational Research Partnership in Biomedical Engineering Award, "An Assistive Robot to Fetch Everyday Objects for People with Severe Motor Impairments" funded by the Wallace H. Coulter Foundation. (in progress).
- Research Assistant** Industrial and Systems Engineering, The Georgia Institute of Technology, August 2004 - March 2006
Conducted field studies and design study as a graduate assistant in Universal Design in Practice project funded by NIDRR, US Department of Education
Developed a data collection software on a handheld computer for a research project studying the visually impaired, patients with age-related macular degeneration (AMD)
- Research Engineer** Samsung Electronics, Korea, January 1999 – August 2004
Designed and implemented a mobile software platform used in third generation mobile services in Europe and Korea
Developed first generation WAP browser for mobile phone and advanced second generation WAP 2.0 browser for mobile phones in the global market
- Research Assistant** Engineering Research Institute, Seoul National University, March 1997 – January 1999
Conducted as the main researcher the High-Speed Network Application Technology project funded by Ministry of Information and Communication, Republic of Korea
Developed Environment Assessment System a database application for Samsung Electronics

Master's Research Industrial Engineering, Seoul National University, March 1997 - February 1999
Thesis: Geometry-Behavior Integrated Product Design
Research Adviser: Yeongho Kim

RESEARCH INTERESTS

Human-robot interaction

Healthcare robotics

Human-computer interaction

Intelligent system design and analysis

PUBLICATIONS

- Young Sang Choi, Travis Deyle, Tiffany Chen, Jonathan D. Glass, and Charles C. Kemp. "A List of Household Objects for Robotic Retrieval Prioritized by People with ALS." *In Proceedings of the International Conference of Rehabilitation Robotics, ICORR2009* (2009).
- Young Sang Choi, Cressel Anderson, Travis Deyle, and Charles C. Kemp. "Human-Robot Interaction Studies for Autonomous Mobile Manipulation for the Motor Impaired ." *Experimental Design for Real-World Systems, AAAI Spring 2009 Symposium* (2009).
- Young Sang Choi, Cressel D. Anderson, Jonathan D. Glass, and Charles C. Kemp. "Laser Pointers and a Touch Screen: Intuitive Interfaces for Autonomous Mobile Manipulation for the Motor Impaired." *Proceedings of the 10th international ACM SIGACCESS conference on Computers and accessibility* (2008).
- Chris M. Law, Ji Soo Yi, Choi Young Sang, and Julie A. Jacko. "Unresolved Problems in Accessibility and Universal Design Guidelines." *Ergonomics in Design: The Quarterly of Human Factors Applications* **15**, 7–11 (2007).
- Chris M. Law, Ji Soo Yi, Choi Young Sang, and Julie A. Jacko. "A Systematic Examination of Universal Design Resources: Part 2, Analysis of the Development Process." *Universal Access in the Information Society* (2007).
- Chris M. Law, Ji Soo Yi, Choi Young Sang, and Julie A. Jacko. "A Systematic Examination of Universal Design Resources: Part 1, Heuristic Evaluation." *Universal Access in the Information Society* (2007).
- Chris M. Law, Ji Soo Yi, Choi Young Sang, and Julie A. Jacko. "Are disability-access guidelines designed for designers? Do they need to be?" *In Proceedings of the Australia Computer-Human Interaction annual conference (OZCHI)* pp. 357–360 (2006).
- Young Sang Choi, Ji Soo Yi, Chris M. Law, and Julie A. Jacko. "Are "Universal Design Resources" Designed for Designers?" *In Proceedings of the 8th international ACM SIGACCESS Conference on Computers and Accessibility (Portland, Oregon, USA, October 23 - 25, 2006). Assets '06* (2006).
- Chris M. Law, Julie A. Jacko, Ji Soo Yi, and Choi Young Sang. "Developing new heuristics for evaluating universal design standards and guidelines." *Presented at the Ergonomics Society Annual Conference, Cambridge, UK* (2006).
- Yi Ji Soo, Young Sang Choi, Julie A. Jacko, and Andrew Sears. "Context awareness via a single device-attached accelerometer during mobile computing." *In Proceedings of 7th International Conference on Human Computer Interaction with Mobile Devices and Services (MobileHCI '05), Salzburg, Austria*, pp. 303–306 (2005).
- Yeongho Kim and Youngsang Choi. "Brokering and 3D Collaborative Viewing of Mechanical Part Models on the Web." *International Journal of Computer Integrated Manufacturing* **4**, 55–64 (2001).

Young Sang Choi, Tiffany Chen, Advait Jain, Cressel Anderson, Jonathan Glass, and Charles C. Kemp.
“Hand It Over or Set It Down: Object Delivery with an Assistive Mobile Manipulator.” *In 18th IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN 2009)* (submitted).

TEACHING

Guest Lecture Introduction to Cognitive Science, CS/ISYE/PSYC/PST 3790, Spring 2009, Georgia Institute of Technology
lecture title, “Human Studies for Assistive Mobile Manipulation Robots”

Teaching Assistant Industrial Engineering, Seoul National University, Fall 1998
“System Analysis and Design”

PRESENTATIONS, POSTERS AND DEMONSTRATIONS

AAAI Spring Symposium: Experimental Design in Real World Applications Palo Alto, California, March 25, 2009
presentation, “Human-Robot Interaction Studies for Autonomous Mobile Manipulation for the Motor Impaired”

Tenth international ACM SIGACCESS Conference on Computers and Accessibility Halifax, Nova Scotia, Canada, October 15, 2008
presentation, “Laser Pointers and Touch Screen: Intuitive Interfaces for Autonomous Mobile Manipulation for the Motor Impaired”

INFORMS Annual Meeting Washington DC, October 12, 2008
presentation, “Understanding User Needs in Developing an Autonomous Manipulation Robot to Help the Motor Impaired”

Seventh International Conference on Human Computer Interaction with Mobile Devices and Services Salzburg, Austria, September 22, 2005.
presentation, “Context awareness via a single device-attached accelerometer during mobile computing”

HONORS AND AWARDS

Best Master’s Thesis Award Department of Industrial Engineering, Seoul National University 1999

CITIZENSHIP

Republic of Korea