

Ji SOO YI

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RESEARCH INTERESTS

The primary research area is human-computer interaction, especially as applied to the healthcare industry. More specifically, topics of interest include information visualization, ubiquitous computing, and universal design.

EDUCATION

- Ph.D., School of Industrial and Systems Engineering 8/2003 – 8/2008
Georgia Institute of Technology, Atlanta, Georgia
- Specialty: Human Integrated Systems
 - Dissertation topic: “Visualized Decision Making: Development and Application of Information Visualization Techniques to Improve Decision Quality of Nursing Home Choice”
 - Dissertation committee: Drs. John T. Stasko (chair), Mary Czerwinski, Gregory Abowd, Brani Vidakovic, and Stephen E. Cross.
 - GPA: 4.0 / 4.0
- B.S., Industrial Engineering 3/1994 – 2/1998
Seoul National University, Seoul, Republic of Korea
- GPA: 3.66 / 4.0 (Cum Laude)

RESEARCH EXPERIENCE

- ASSISTANT PROFESSOR** 8/2008 – present
School of Industrial Engineering
Purdue University, West Lafayette, Indiana
- GRADUATE RESEARCH ASSISTANT** 8/2003 – 8/2008
H. Milton Stewart School of Industrial and Systems Engineering
Georgia Institute of Technology, Atlanta, Georgia
- Conducted various empirical studies about evaluating mobile computing, supported by National Science Foundation ITR funding under Grant No. IIS-0121570.
 - Developed a multivariate information visualization tool, Dust & Magnet (For more information, please visit <http://www.gvu.gatech.edu/ii/dnm/>).
 - Conducted research on Universal Design in Practice (UDiP), supported by the National Institute on Disability and Rehabilitation Research (NIDRR) for Field Initiated Projects program (Grant number: H133G040151). (For more information, please visit <http://www.hsi.gatech.edu/cise/udip/>)
 - Conducted research on applying information visualization techniques to medical decision making (e.g., nursing home choice), supported by GVV Seed Grants (06-07).

TEACHING EXPERIENCE

- INSTRUCTOR** 8/2008 - present
School of Industrial Engineering
Purdue University, West Lafayette, Indiana

Curriculum Vitae

- Instructed an undergraduate course titled “Computing in Industrial Engineering” (IE 332, 3 credit hours, 84 students)

GRADUATE TEACHING ASSISTANT

9/2004 - 12/2004

H. Milton Stewart School of Industrial and Systems Engineering
Georgia Institute of Technology, Atlanta, Georgia

- Assisted students an undergraduate course titled “Human Integrated Systems” (ISyE 4009)

INSTRUCTOR

5/2004 - 8/2004

H. Milton Stewart School of Industrial and Systems Engineering
Georgia Institute of Technology, Atlanta, Georgia

- Co-instructed an undergraduate course titled “Human Integrated Systems” (ISyE 4009, 3 credit hours, 70 students)

INDUSTRY EXPERIENCE

SOFTWARE ENGINEER

9/2001 - 5/2003

Namo Interactive Inc., Seoul, Republic of Korea / Stoneham, Massachusetts

- Developed HandStory Suite (<http://www.handstory.com>), a versatile media converter and browser for Palm and Pocket PC.
- Developed a desktop counter part of HandStory Suite using Carbon for Macintosh, which supports both Mac OS 9 and X.
- Developed a desktop counter part of HandStory Suite for MS Windows.

EMBEDDED LINUX PROGRAMMER

8/2000 - 3/2001

Mizi Research, Inc., Seoul, Republic of Korea

- Developed Linu@™ (<http://www.mizi.com>), the Embedded Linux for ARM-based Personal Digital Assistants (PDAs) and Smart Phones.
- Developed device drivers for Linu@™ for a touch screen and a button.
- Maintained a data collecting system using PDA in the Samsung semiconductor production line.

PROGRAMMER/CONSULTANT

1/1998 - 7/2000

Insung Information Co., Ltd., Seoul, Republic of Korea

- Localized an Enterprise Resource Planning (ERP) solution, PowerCerv™ for the Korean language and business environment.
- Implemented a localized ERP system for several companies, such as R.P. Scherer, a pharmaceutical company, and Insung Information Co., Ltd.
- Instructed clients and partners in the use of the ERP system.

PART-TIME PROGRAMMER

7/1997 - 12/1997

BIME Tech, Seoul, Republic of Korea

- Developed Enterprise Resource Planning software, called “FirStep.”
- Developed ActiveX components for Enterprise Resource Planning software, FirStep

PUBLICATIONS

PUBLISHED BOOKS AND PARTS OF BOOKS

- [B.1] Leonard, V. K., Jacko, J. A., Yi, J. S., & Sainfort, F. (2006). Human Factors & Ergonomic Methods. In G. Salvendy (Ed.), *the Handbook of Human Factors & Ergonomics* (3rd Ed.). New York: John Wiley and Sons.

JOURNAL ARTICLES

- [J.10] Law, C. M., Yi, J. S., Choi, Y. S., & Jacko, J. A. (2008). A Systematic Examination of Universal

Curriculum Vitae

Design Resources: Part 2, Analysis of the Development Process. *Universal Access in the Information Society*, 7(1-2), 55-77.

- [J.9] Law, C. M., Yi, J. S., Choi, Y. S., & Jacko, J. A. (2008). A Systematic Examination of Universal Design Resources: Part 1, Heuristic Evaluation. *Universal Access in the Information Society*, 7(1-2), 31-54.
- [J.8] Yi, J. S., Jung, Y. Y., Jacko, J. A., Sainfort, F., and Vidakovic, B. (2007) Two-Step Wavestrapping: Simulating Non-Stationary Acceleration Data in the Mobile Computing Context. *Current Development in Theory and Applications of Wavelets*, 1(3), 251-272.
- [J.7] Yi, J. S., Kang, Y. A., Stasko, J., & Jacko, J. A. (2007). Toward a Deeper Understanding of the Role of Interaction in Information Visualization. *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 13(6). Presented in InfoVis 2007, Sacramento, CA, October 28 - November 1, 1224 - 1231.
- [J.6] Law, C. M., Yi, J. S., Choi, Y. S., & Jacko, J. A. (2007). Unresolved Problems in Accessibility and Universal Design Guidelines. *Ergonomics in Design: The Quarterly of Human Factors Applications*, 15(3), 7-11(5).
- [J.5] Barnard, L., Yi, J. S., Jacko, J. A., & Sears, A. (2007). Capturing the effects of context on human performance in mobile computing systems. *Personal and Ubiquitous Computing*, 11(2), 81-96.
- [J.4] Yi, J. S., Melton, R., Stasko, J., & Jacko, J. A. (2005). Dust & Magnet: Multivariate Information Visualization using a Magnet Metaphor. *Information Visualization*, 4(4), 239-256.
- [J.3] Barnard, L., Yi, J. S., Jacko, J. A., & Sears, A. (2005). An Empirical Comparison of Use-in-Motion Evaluation Scenarios for Mobile Computing Devices. *International Journal of Human-Computer Studies*, 62, 487-520.
- [J.2] Edwards, P. J., Barnard, L., Leonard, V. K., Yi, J. S., Moloney, K. P., Kongnakorn, T., et al. (2005). Understanding users with Diabetic Retinopathy: Factors that affect performance in a menu selection task. *Behaviour & Information Technology*, 24(3), 175-186.
- [J.1] Jacko, J. A., Barnard, L., Yi, J. S., Edwards, P. J., Leonard, V. K., Kongnakorn, T., et al. (2005). Empirical validation of the Windows® accessibility settings and multimodal feedback for a menu selection task for users with Diabetic Retinopathy. *Behaviour & Information Technology*, 24(6), 419-434.

CONFERENCE PROCEEDINGS

- [C.5] Law, C. M., Yi, J. S., Choi, Y. S., & Jacko, J. A. (2006, November 20-24). Are disability-access guidelines designed for designers? Do they need to be? Proceedings of the Australia Computer-Human Interaction annual conference (OZCHI) (pp. 357-360). Sydney, Australia.
- [C.4] Choi, Y. S., Yi, J. S., Jacko, J. A., & Law, C. M. (2006, October 23-25). Are "Universal Design Resources" Designed for Designers? Proceedings of the 8th International Conference on Assistive Technologies (pp. 87-94). Portland, OR.
- [C.3] Law, C. M., Jacko, J. A., Yi, J. S., & Choi, Y. S. (2006, April 4-6). Developing new heuristics for evaluating universal design standards and guidelines. Proceedings of the Ergonomics Society Annual Conference. Cambridge, UK.
- [C.2] Yi, J. S., Choi, Y. S., Jacko, J. A., & Sears, A. (2005, September 19-22). Context Awareness via a Single Device-Attached Accelerometer during Mobile Computing. Proceedings of the 7th International Conference on Human Computer Interaction with Mobile Devices and Services (MobileHCI '05) (pp. 303-306). Salzburg, Austria.
- [C.1] Edwards, P. J., Barnard, L., Emery, V. K., Yi, J. S., Moloney, K. P., Kongnakorn, T., et al. (2004, October 18-20). Strategic design for users with Diabetic Retinopathy: Factors influencing performance in a

Curriculum Vitae

menu-selection task. Proceedings of the 6th International Conference on Assistive Technologies (ASSETS '04) (pp. 118-125). Atlanta, GA.

VIDEO DEMONSTRATION

- [D.1] Yi, J. S., Ponder, R. M., Stasko, J., & Jacko, J. A. (2005, October 23-25). Dust & Magnet: Interactive Visualization of Everyday Data (Video submission). Proceedings of the eleventh annual IEEE Symposium on Information Visualization (InfoVis 2005) (pp. 81-82). Minneapolis, MN.

WORKSHOP PAPERS

- [W.1] Yi, J. S., Kang, Y. A., Stasko, J., & Jacko, J. A. (2008, April 5). Understanding and Characterizing Insights: How do People Gain Insights Using Information Visualization. Proceedings of BELIV '08 (pp.39 - 44), Florence, Italy, April 2008.

INVITED TALKS

- [I.7] Yi, J. S. (2007) "Information Visualization: Present, Our Research, and Future." Presented at Yonsei University, Seoul, Republic of Korea, December 28, 2007.
- [I.6] Yi, J. S. (2007) "Information Visualization: Present, Our Research, and Future." Presented at Seoul National University, Seoul, Republic of Korea, December 26, 2007.
- [I.5] Yi, J. S. (2007) "Information Visualization: Present, Our Research, and Future." Presented at Korea University, Seoul, Republic of Korea, December 20, 2007.
- [I.4] Yi, J. S. (2007) "Visualized Decision Making and Beyond: Application of Information Visualization to Medical Decision Making." Presented at Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea, December 13, 2007.
- [I.3] Yi, J. S. (2007) "Visualized Decision Making: Information Visualization Techniques to Improve Decision Quality of Nursing Home Choice." Presented at Brown Bag Event, GVI Center, Georgia Institute of Technology, Atlanta, Georgia, March 8, 2007.
- [I.2] Yi, J. S. (2004) "Mobile Devices and Consideration for Design and Evaluation." Presented at the Introduction to Human-Integrated Systems undergraduate course, School of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, Georgia, November 4, 2004
- [I.1] Barnard, L. & Yi, J. S. (2003) "Mobile Usability." Presented at the Introduction to Human-Integrated Systems undergraduate course, School of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, Georgia, October 7, 2003

SERVICE

SESSION CHAIR

- "HCI Overviews V: Methodologies, Toolkits, and Performance (Hall M, 121)" for the ACM Conference on Human Factors in Computing Systems (CHI 2004) on April 29, 2004.
- "Papers: Accessibility Infrastructure and Supporting Tools" for the ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2004) on October 19, 2004.

STUDENT VOLUNTEER

- Served as a student volunteer at the ACM Conference on Human Factors in Computing Systems (CHI 2004), April 24 to 29, 2004.

REVIEWER

- International Journal of Human-Computer Interaction (IJHCI)

Curriculum Vitae

- International Journal of Human-Computer Science (IJHCS)
- Universal Access in the Information Society (UAIS)
- Transactions on Computer-Human Interaction (TOCHI)
- International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS): 2005
- IEEE InfoVis Conference: 2007
- IEEE VAST Symposium: 2007
- ACM Conference on Human Factors in Computing Systems (CHI): 2007
- International Conference on Intelligent User Interfaces (IUI): 2008

PROFESSIONAL AFFILIATIONS

- IEEE Membership: 2008 - present
- Human Factors and Ergonomics Society (HFES), Georgia Institute of Technology Chapter: 2004 – 2008
- Association for Computing Machinery (ACM), Special Interest Group on Computer-Human Interaction (SIGCHI): 2007 – present
- Association for Computing Machinery (ACM), Special Interest Group on Computers and Accessibility (SIGACCESS): 2007 – present
- The Korean-American Scientist and Engineers Association (KSEA): 2005 – 2008
- The Korean-American Scientist and Engineers Association (KSEA), Georgia Chapter: 2006 – 2008

EXTRA-CURRICULAR ACTIVITIES

- IT Staff in the Georgia Chapter Korean-American Scientists and Engineers Association (KSEA). (Fall 2006 – Spring 2008)
- President of the Korean Student Association (KSA) in H. Milton Stewart School of Industrial and Systems Engineering (ISyE) at the Georgia Institute of Technology. (Fall 2005 – Summer 2006)

HONORS AND AWARDS

- Korea-U.S. Science Cooperation Center (KUSCO) - Korean-American Scientist and Engineers Association (KSEA) Scholarship (2007)
- Professional Award: Excellent Employee, Insung Information Co., Ltd. (2000)
- Academic Award: Merit-based fellowship, Seoul National University, 5 semesters (1994 – 1998)

SUMMARY OF INSTRUCTION OPINION SURVEYS

1. UNDERGRADUATE COURSES TAUGHT AT GEORGIA TECH

The data below summarize student opinion surveys constructed for use in the summer term of 2004 and later. The following items are rated on a scale of one to five; a score of one corresponds to “strongly disagree” and a score of five corresponds to “strongly agree.”

- Teaching effectiveness: The instructor was an effective teacher (Question #10)
- C1: Preparation and presentation of course (computed average of Questions 1, 2, and 3)
- C2: Interaction with students (computed average of Questions 4, 5, and 6)
- C3: Assessment of student performance (computed average of Questions 7, 8, and 9)

Term/Year	Course Number: Course Name	# enrolled	# respond	Effective Teacher	C1	C2	C3
Summer 04	ISyE 4009: Human Integrated Systems (co-instructor)	70	10	3.80	4.03	3.63	3.97