

Young-Jin Lee

CONTACT
INFORMATION

1122 W. Campus Road, Room 413
Lawrence, KS 66045

E-mail: yjlee@ku.edu
Office: 785-864-0625
Fax: 785-864-4697

ACADEMIC DEGREES **University of Illinois at Urbana-Champaign**, Champaign, Illinois USA

Ph.D., Educational Psychology, June 2003

- Dissertation Title: “Efficient Web Searching for Open-Ended Questions: The Effects of Visualization and Data Mining Technology”
- Specialty: Educational Computing
- Advisor: James A. Levin

Seoul National University, Seoul, Korea

M.Ed., Science Education, February 1996

Seoul National University, Seoul, Korea

B.S., Earth Science, February, 1994

CURRENT POSITION **The University of Kansas**

Department of Educational Leadership and Policy Studies

Lawrence, Kansas USA *Assistant Professor*

July 2007 – Present

INSTRUCTION

- Instructional Technology in Elementary/Middle Education (University of Kansas)
- Instructional Technology in Middle/Secondary Education (University of Kansas)
- Educational Media Development (University of Kansas)
- Constructivist Learning Technologies (University of Kansas)
- Computer Use in Education (University of Illinois at Urbana-Champaign)
- Content Area Application of Educational Technology (University of Illinois at Urbana-Champaign)

PROFESSIONAL
EXPERIENCE

Massachusetts Institute of Technology (MIT)

RELATE (REsearch in Learning, Assessing, and Tutoring Effectively) Group

Cambridge, Massachusetts USA

Research Associate

August 2005 – July 2007

- Developing a Web-based physics tutoring system
- Extending Item Response Theory (IRT) into the regime where students have multiple attempts to answer each item and are given tutoring in between

National Center for Supercomputing Applications (NCSA)

Automated Learning Group

Champaign, Illinois USA

Visiting Senior Research Programmer

January 2004 – August 2005

- Developed a Web-based learning environment for medical students of the University of Illinois
- Developed a virtual microscope system facilitating informal science learning (<http://virtual.itg.uiuc.edu/>)

Research Assistant

August 2002 – December 2003

- Developed Reveal, a Web-based knowledge management system for educators

Beckman Institute of Advanced Science and Technology

Research Assistant

August 1999 – December 2003

- Developed VisSearch (<http://students.ed.uiuc.edu/ylee12/VisSearchPages/index.htm>), a Web-enabled collaborative knowledge construction environment transforming students' Web search activities to resolve ill-structured, open-ended question into reusable and shareable concept maps.
- Developed VisIT (<http://www.vizit.uiuc.edu>), a Web-based knowledge management system allowing educators to annotate and share useful Web-based information

Electronics and Telecommunications Research Institute (ETRI), Taejeon, Korea

Research Scientist

December 1995 – February 1999

- Developed educational software to teach college students FEM (Finite Element Method)
- Developed a Computer Supported Collaborative Work (CSCW) system for Korean automotive industry
- Developed a safety diagnosis system for large-scale structures

PEER-REVIEWED
JOURNALS

Lee, Y.-J. (accepted for publication). Utilizing formative assessments to guide student learning in an interactive learning environment. *Journal of Educational Technology Systems*.

Lee, Y.-J. (accepted for publication). Scratch: Multimedia programming environment for young gifted learners. *Gifted Child Today*.

Macpherson, G. L., **Lee, Y.-J.**, & Steeples, D. (in press). Group-examination improves learning for low-achieving students. *Journal of Geoscience Education*.

Lee, Y.-J. (in press). Empowering teachers to create educational software: A constructivist approach utilizing Etoys, pair programming and cognitive apprenticeship. *Computers & Education*.

Lee, Y.-J. (2010). Developing a mobile physics learning environment based on physics misconception research and e-learning design principles. *Journal of Computers in Mathematics and Science Teaching*, 29(3), 307-326.

Lee, Y.-J. (2010). Developing computer programming concepts and skills via technology-enriched language-art projects: A case study. *Journal of Educational Multimedia and Hypermedia*, 19(3), 307-326.

Lee, Y.-J. (2010). Effects of instructional preparation strategies on problem solving in a Web-based learning environment. *Journal of Educational Computing Research*, 42(4), 385-406.

Palazzo, D. J., **Lee, Y.-J.**, Warnakulasooriya, R., & Pritchard, D. E. (2010). Patterns, correlates, and reduction of homework copying. *Physical Review Special Topics: Physics Education Research*, 6, 010104, DOI: 10.1103/PhysRevSTPER.6.010104

Pritchard, D. E., **Lee, Y.-J.**, & Bao, L. (2008). Mathematical learning models that depend on prior knowledge and instructional strategies. *Physical Review Special Topics: Physics Education Research*, 4, 010109, DOI: 10.1103/PhysRevSTPER.4.010109

Lee, Y.-J., Palazzo, D. J., Warnakulasooriya, R., & Pritchard, D. E. (2008). Measuring student learning with Item Response Theory, *Physical Review Special Topics: Physics Education Research*, 4, 010102, DOI: 10.1103/PhysRevSTPER.4.010102

Lee, Y.-J. (2005). VisSearch: A collaborative Web searching environment. *Computers & Education*, 44(4), 423-439.

Lee, Y.-J. (2004). Creating a concept map of your Web searches: A design rationale and Web-enabled application. *The Journal of Computer Assisted Learning*, 20, 103–113.

Lee, Y.-J. (2004). The effect of creating external representations on the efficiency of Web searching. *Interactive Learning Environments*, 12(3), 227 – 250.

INVITED BOOK
CHAPTERS

Lee, Y.-J. (2005). Knowledge visualization and information visualization - Search for synergies. In S.-O. Tergan & T. Keller (Eds.), *Facilitating Web Search with Visualization and Data Mining Techniques*. Berlin, Germany: Springer-Verlag.

CONFERENCE
PRESENTATIONS

Lee, Y.-J. (2010). *Learning physics on the go: From podcast to computer simulation*. Paper presented at the ISTE 2010, Denver, CO.

Lee, Y.-J., Bao, L., & Pritchard, D. E. (2009). *Modeling how pre/post gain depends on prior knowledge*. Paper presented at the American Association of Physics Teachers Annual Meeting, Ann Arbor, MI.

Lee, Y.-J. (2009). *Constructionist learning technology helps a young child learn computer programming*. Paper presented at Educational Multimedia, Hypermedia and Telecommunications 2009.

Lee, Y.-J., & Pritchard, D. E. (2009). *Effects of instructional preparations on the problem solving in a Web-based physics learning environment*. Paper presented at the American Educational Research Association Annual Meeting, San Diego, CA.

Pritchard, D. E., Palazzo, D. J., & **Lee, Y.-J.** (2009). *Copying online homework and declining student performance*. Paper presented at the American Association of Physics Teachers Annual Meeting, Ann Arbor, MI.

Lee, Y.-J., & Pritchard, D. E. (2008). *Scaffold Student Learning in a Web-based Tutoring Environment*. Paper presented at the American Educational Research Association Annual Meeting, New York, NY.

Pritchard, D. E., **Lee, Y.-J.**, & Bao, L. (2007). *How prior knowledge affects learning: Common leaning theories lead to different learning models*. Paper presented at the American Association of Physics Teachers Annual Meeting, Greensboro, NC.

Warnakulasooriya, R., **Lee, Y.-J.**, Palazzo, D. J., & Pritchard, D. E. (2006). *Expert-novice studies using a web-based Socratic tutor*. Paper presented at American Association of Physics Teachers winter meeting, Anchorage, AK.

Lee, Y.-J. & Bajcsy, P. (2005). *An information gathering system for medical image inspection*. Paper presented at the Medical Imaging 2005, San Diego, CA.

Lee, Y.-J. & Levin, J. (2004). *Facilitating Web searches for open-ended questions with a concept mapping technique*. Paper presented at the American Educational Research Association Annual Meeting, San Diego, CA.

Lee, Y.-J., & Levin, J. (2003). *Can visual representations improve efficiency of Web searching?* Paper presented at the NECC 2003, Seattle, WA.

Kauwell, D. A., Levin, J., **Lee, Y.-J.**, & Yu, H. (2000). *From square-riggers to the Internet, the search for information*. Paper presented at the ACM Hypertext 2000. San Antonio, TX.

Kauwell, D. A., Levin, J., **Lee, Y.-J.**, Yu, H. & Schiff, D. (2000). *Learning amidst a sea of information in the new millennium*. Paper presented at the ED-MEDIA. Montreal, Canada.

Kauwell, D. A., Levin, J., Yu, H. & **Lee, Y.-J.** (2000). *Visit: An advance in the location, analysis and archiving of Web information*. Paper presented at the WebNet. San Antonio, TX.

TECHNICAL REPORT **Lee Y-J.** & P. Bajcsy. (2004). *Software Tools for Recording Image Inspection Processes*, NCSA-ALG-04-0006.

HONORS AND AWARDS Conference Travel Award, 2003
MIT Postdoctoral Fellowship, 2005 - 2007

COMPUTER SKILLS • Statistical Packages: SPSS, SAS, S-Plus, R
• Languages: Java, C#, C/C++, SmallTalk, Python, Fortran, Pascal, MIPS, NetLogo, StarLogo, PHP
• Tools: Director, Authorware, JESS (Java Expert System Shell), Matlab, Mathematica
• Operating Systems: Unix/Linux, Windows, MacOS classic/X
• Courseware: Blackboard, Moodle

PROFESSIONAL ORGANIZATIONS • American Educational Research Associations
• Association for the Advancement of Computing in Education
• International Society for Technology in Education
• American Association of Physics Teachers