

# JUNLEI LI

## RESEARCH STATEMENT

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To bridge cognitive science and teaching practices in K-12 classrooms. To investigate how scientific research can inform educational practice and policy, particularly in urban and underserved settings.

## EDUCATION

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1991 – 1995	University of Notre Dame	South Bend, IN
	<i>Sum Cum Laude B.S. in Computer Science</i>	
1999 – 2001	Carnegie Mellon University	Pittsburgh, PA
	<i>M.A. in Instructional Science</i>	
2003	Carnegie Mellon University	Pittsburgh, PA
	<i>Ph.D. in Psychology (Developmental and Cognitive)</i>	

## RESEARCH EXPERIENCE (CARNEGIE MELLON UNIVERSITY)

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2001 – 2003 *Co-PI and Project Director*, leading a three-year project (funded by U.S. Department of Education, Institute of Education Sciences) to improve science education and narrow achievement gap in urban middle schools. Through lesson study, in-classroom teaching, and professional development, this project aims to apply cognitive research to address practice and policy issues of science education in urban schools.

2001 – 2003 *Dissertation research*, extending the basic research on scientific reasoning and collaborative discovery to collaborative learning in science classrooms. Conducted studies in laboratory and urban classrooms. Recipient of APA Dissertation Award, 2003.

1999 – 2001 *Lead education designer and assessor* for two collaborative projects between NASA Learner Technologies and Carnegie Mellon University. The EventScope project brought 3-D geological data from NASA space missions to classrooms. The Big Signal 2000 project linked classrooms to a field robot on live mission in Antarctica. Designed, implemented, and assessed curriculum and technological products in 20 schools for 1800 students.

## PUBLICATIONS, CONFERENCE PRESENTATIONS, & DEVELOPED CURRICULUMS

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- Klahr, D. & Li, J. (2005) Cognitive Research and Elementary Science Instruction: From the Laboratory, to the Classroom, and Back. *Journal of Science Education and Technology*, Vol. 14 (2), 217-238.
- Li, J. & Klahr, D. (2006). The Psychology of Scientific Thinking: Implications for Science Teaching and Learning. In J. Rhoton & P. Shane (Eds.) *Teaching Science in the 21st Century*. National Science Teachers Association and National Science Education Leadership Association: NSTA Press.
- Klahr, D., Cary, M., Li, J. & Siler, S. (2005). "Traversing the interface between basic research and classroom in elementary science education", Cognitive Development Society Fourth Biennial Meeting, Symposium on Bridging Cognitive Development and Education, San Diego
- Li, J. & Klahr, D., (2004) "From psychology laboratory to urban classrooms: the training and transfer of the control of variable strategy", XXVIII International Congress of Psychology, Beijing, China

- Li, J. (2004) "*Exploring Collaborative Discovery*", XXVIII International Congress of Psychology, Beijing, China
- Li, J. & Hayes, J.H., (2003) "*Do Collaborating Individuals Learn, as well as They Perform?*" Paper presentation at American Education Research Association 2003, Chicago
- Li, J. (2003) "*Bridging Collaborative Performance and Individual Learning*" Pre-doctoral Dissertation presentation at Computer Support for Collaborative Learning Conference 2003, Norway
- Coppin, P., Wagner, M., & Li, J. (2001) Collective intelligence via robotic communication. In *Systems, Social and Internationalization Design Aspects of Human-Computer Interaction*. Lawrence Erlbaum Associates, Inc.
- Coppin, P., Pell, R., Wagner, M., Hayes, J., Li, J., Hall, J., Fischer, K., Hirschfield, D., & Whittaker, R. (2000) *EventScope: Amplifying Human Knowledge and Experience via Intelligent Robotic Systems and Information Interaction*. IEEE International Workshop on Robot-Human Interaction, Osaka, Japan
- EventScope Mission to Mars Curriculum, 1999 – 2001, [www.eventscope.org](http://www.eventscope.org)
- BigSignal Exploring Antarctica Curriculum, 2000, [www.bigsignal.net](http://www.bigsignal.net)

#### GRANTS, AWARDS, & PROFESSIONAL ACTIVITIES

- U.S. Department of Education, Cognition and Student Learning Program, \$750,000
- APA-nominated Young Scientist and Travel Grant for International Congress of Psychology, 2004; APA Dissertation Award, Research Grant, 2004
- Member, Churches and Families Pulling Together, a Pittsburgh coalition to close the achievement gap in public education
- Member, American Education Researcher Association, American Psychological Association, American Psychological Society; Reviewer, AERA 2004, 2005
- President, Notre Dame Chapter, Association of Computer Machinery (ACM), 1993-1995
- Secretary, Notre Dame Chapter, Tau Beta Pi Engineering Honor Society

#### TEACHING EXPERIENCES

- Disciplined Inquiry in Urban Education, University of Pittsburgh, School of Education, Masters of Arts in Teaching, Elementary Education Program (2006)
- Research Methods for Developmental Psychology, CMU, Psychology Department (2005)
- Graduate Seminar, Scientific Research in Education, CMU, Program for Interdisciplinary Education Research (PIER), (2004 - 2005)
- Curriculum Development Teacher Workshops, mixed group school teachers (1999-2001), Lesson Study and Lesson Planning Workshops, urban school teachers (2003-2005)
- Urban League enrichment program (1999) and CMU gifted children program (1999-2001)
- (P&G, Inc.) Internet & E-Commerce Service operation certification courses (1996-2001)
- Teaching assistant for undergraduate physics, computer programming courses (1992-1995)

#### PROFESSIONAL EXPERIENCE (PROCTER & GAMBLE CO.)

- 1995 – 1999, as *Global Service Manager*, managed Internet services (serving 100,000 employees worldwide) including local, regional, and global support staff, infrastructure, and business applications to provide technological solutions for Procter & Gamble worldwide. Responsible for managing policy, business, support, and training.
- 1999 – 2001, as *Senior E-Commerce consultant*, provided business to business E-Commerce consultations and planning for Procter & Gamble's E-Commerce portals, integrating legacy mainframe systems, order and purchasing processes, and electronic commerce infrastructure.