

# CURRICULUM VITAE FOR SHERRY HSI

ADDRESS: 1442A Walnut Street #442 1125 Walnut Street  
Berkeley, CA 94709 Berkeley, CA 94707  
(510) 898-0733 Work (510) 528-8562 Home  
  
sherry@metacourse.com

EDUCATION: B.S. Engineering Science, Bioengineering, University of California at Berkeley, 1986  
  
M.S. Mechanical Engineering, University of California at Berkeley, 1988  
  
Ph.D. Interdisciplinary program in Science, Mathematics, and Engineering Education  
University of California at Berkeley, May 1997

APPOINTMENTS: Post-Doctoral Scholar, Center for Innovative Learning Technologies, 1998-2000  
  
Consultant, Science Education Group, Los Alamos National Laboratory, NM 1997-98  
  
Consultant, The Concord Consortium, 1997-1999  
  
Graduate Student Researcher, UC Berkeley, 1991-1997  
  
Software Engineer, Abe Publishing Corporation, Tokyo, Japan 1988-1990

AWARDS: NSF Education Technology and Design Traineeship Award 1996-1997  
University of California Regent's Fellowship 1995-1996  
University of California Graduate Opportunity Fellowship 1994-1995  
Lydia Lo Scholarship 1994-1995  
California Alumni Association Fellowship 1994-1995  
U.C. President's Undergraduate Fellowship, 1985-1986

## RESEARCH & WORK EXPERIENCE:

- 2001-present **President, Metacourse, Inc. [www.metacourse.com](http://www.metacourse.com)**
- Founded a start-up company in eLearning, currently managing 10 part-time consultants.
  - Designer of online professional development for topics in learning technology, online pedagogy, online apprenticeships, and assessment.
  - Consulting services to clients designing online professional development programs
- 1998-2000 **Post-doctoral Scholar, Center for Innovative Learning Technologies**
- Collaborated on a Water Quality Synergy project, a curricular design process, leading to a \$3M funded NSF grant.
  - Conducted classroom-based research with teachers engaged in science inquiry using Palm computers
  - Designed Web-based science curricula for 6<sup>th</sup> grade science

- Led and organized a Palm application software competition
  - Collaborated with the Berkeley Wireless Research Center and Human-Centered Computing Center to form research partnerships.
- 7/97- 98      **Consultant, Science Education Group, Los Alamos National Laboratory**
- designed curricula and learning assessments for Internet-based teacher science programs, analyzed statistical and qualitative data
  - conducted evaluation of science teacher professional development programs, designed interview protocols, focus groups.
  - delivered workshops on education technology, user-interface design, and cognitive sciences for Laboratory staff.
  - strategic planning and proposal writing for long term goals in science and technology education
- 3/97-99      **Faculty, Virtual High School Cooperative, Concord Consortium**
- studied on-line collaboration, learning, and teacher discourse
  - designed graduate-level Web course on education reform and distance learning for secondary school teachers
  - conducted formative evaluation of teacher training course
- 9/93 - 5/97      **Graduate Student Researcher, UC Berkeley**
- Conducted education research and assessment of learning related to electronic discussion, multimedia interfaces, and the Internet-based science curriculum as part of dissertation research. Designed two electronic discussion tools.
- 9/91 - 8/93      **Graduate Student Researcher, UC Berkeley**
- Participated in assessment of learning and program evaluation for the NSF Synthesis Coalition (8 university collaboration)
- Designed and evaluated multimedia engineering curricula using surveys, interviews, video, ethnographic analyses
  - Surveyed student perceptions about learning engineering
  - Designed assessment to evaluate gender differences in spatial reasoning ability.
- 1992      **Summer Intern, Apple Computer, Cupertino, CA**
- designed various knowledge representations for information access
  - collaborated on projects at the Apple Multimedia Laboratory in San Francisco
  - prototyped user interfaces for multimedia bulletin boards
- 10/90-8/91      **Assistant Specialist, Engineering Systems, UC Berkeley**
- developed CD-ROM multimedia cases for engineering instruction
  - supervised software design team in multimedia development
  - designed learning assessments and evaluation
- 8/88-8/90      **Software Engineer-Project Lead, Abe Corporation, Tokyo, Japan**
- prototyped a schema-based expert system to diagnose faults in copiers
  - directed a bi-cultural AI team in full design and development of expert system
  - studied search and control strategies for various inference methods
  - investigated human factors in user-interface design
  - conducted meetings and negotiations with Japanese clients

## **TEACHING & PROFESSIONAL DEVELOPMENT EXPERIENCE**

### **President, Metacourse, Inc.** (February 2001 to present)

Created and offered five 6-week long online professional development courses for teachers, staff developers, school of education faculty, and industry professionals; Developed online moderator communities among online faculty; Delivered online facilitator training to over 200 instructors apprenticed in reform-based mathematics teaching.

### **Faculty, The Virtual High School** (Spring 97-Fall 99)

Developed curricula and taught online teacher professional development for high school teachers in a virtual high school serving over 500 online students as part of a U.S. Department of Education Technology Challenge Grant.

### **Lecturer, Mills College** (Spring 1997)

Taught introductory computer science to undergraduates and conducted laboratories with computers.

## **INSTRUCTIONAL TECHNOLOGY PROJECTS & PRODUCTS:**

**Electronic Guidebook Project** – Conducted research on wireless handhelds and mobile inquiry in science museum setting to study role and interplay of virtual and physical spaces in learning.

**Integrated Science with Pocket Computers and Web** – Organized the CILT Synergy project; Designed and evaluated web-based curricular units about creeks focused on understanding ecosystems, water quality concepts, and causal relationships for middle and high school students.

**The Multimedia Forum Kiosk** – Designed, implemented, and evaluated a structured multimedia tool for collaborative discussion and reflection. MFK has been used as a medium for supporting communities of learners in science among pre-college and engineering students.

**The SpeakEasy** – Co-designed a World Wide Web version of the Multimedia Forum Kiosk to support on-line discussion and science instruction using multiple representations of discourse.

**Human Powered Vehicle Case Study** – For a full year, I followed the Berkeley HPV team and design competition with a video camera capturing their design process and decision-making. I documented their story in a multimedia instructional case available on CD-ROM.

**Scaffolding Spatial Reasoning and Visualization** – I designed instruction using two computer-based learning activities (BlockStacking & Display Object) to build students' intuitions in spatial reasoning and 3D visualization. I studied gender differences in problem-solving performance and strategy use and developed interventions to improve learning in all students.

## SELECTED PUBLICATIONS & PRESENTATIONS

### 2001

Hsi, S., Haavind, S., West, M. and Yoder, M. **Metacourses for Online Professional Development.** Featured Presentation at NECC 2001, Chicago, June 24-27,2001

### 2000

Linn, M.C. and Hsi, S. **Computers, Teachers, Peers: Science Learning Partners.** Lawrence Erlbaum Associates. Mahwah, NJ. 2000

Hsi, S. **Using Handheld Technologies to Connect Web-based Learning to Outdoor Investigations.** NARST 2000, National Association for Research in Science Teaching Annual Meeting. April 30-May 3, 2000.

Hsi, S.,Collison, J. and Staudt, C. **Bridging Web-based Science Learning with Outdoor Inquiry using Palm Computers.** AERA 2000, American Education Researcher Association Annual Meeting. New Orleans, April 24-28, 2000.

### 1999

Hsi,S. **Challenges to Innovative Research Partnerships.** The Concord Consortium Newsletter, Spring 1999, p. 11

Hsi, S. **Fostering Effective Instruction in a Virtual High School: A Netcourse for Teachers.** Paper presented at the Annual Meeting of the American Education Researcher Association for Division C: Section 7, Technology Research. Montreal, April 19-23, 1999.

Hsi, S. and Rose, R. **Large-scale Online Teacher Professional Development.** National Educational Computing Conference. Atlantic City, NJ. June 24, 1999.

Hsi, S. **Ubiquitous Computers in Education.** Presentation at the Berkeley Wireless Research Center Retreat. Berkeley, California. May 16-17, 1999.

Baumgartner, E., Brophy, S., Gray, J. and Hsi, S. "**Synergy Research and CILT**". Presentation at the Annual Conference of the Center for Innovative Learning Technologies, April 30, 1999. [Presentation slides, ppt]

### 1998

Hsi, S. and Soloway, E. (1998) **Learner-centered Design: Specifically addressing the needs of learners, A CHI 98 Workshop.** ACM Special Interest Group on Computer-Human Interaction, SIG CHI Bulletin, Vol. 30, No. 4, October, pp.53-55

Linn, M.C, Bell, P and Hsi, S. (1998) **Lifelong Science Learning on the Internet: The Knowledge Integration Environment.** *Interactive Learning Environments.* Vol. 6(1-2), pp. 4-38.

Hsi, S. **The Multimedia Forum Kiosk: Using Design Experiments to Understand Electronic Scientific Discussions.** Paper presentation at the American Education Researcher Association, San Diego, April 1998 (<http://www.kie.berkeley.edu/events/aera98.html>)

Hsi, S. (1998) **A Teacher's Reflection on the Virtual High School Cooperative.** *Learning Technology Review.* Summer Issue: <http://ed.info.apple.com/LTRReview/current/main.html>

Hsi, S. (1998) **Review of Software Goes to School: Teaching for Understanding with New Technology**. *Journal of Educational Computing Research*, Vol 18, No. 1, pp.99-104.

#### 1997

Hsi, S. and Tinker, R. (1997) **A Scalable Model of Collaborative Learning: The Virtual High School Consortium**. The Proceedings from CSCL '97, the International Conference on Computer-supported Collaborative Learning, OISE, Toronto, Dec. 10-14, pp. 109-116

Hsi, S., Linn, M. C., and Bell, J. (1997) **The Role of Spatial Reasoning and the Design of Spatial Instruction**. *Journal of Engineering Education*. April , Vol. 86, No. 2, pp. 151-158

Hsi. S. and Hoadley, C. M. (1997) **Productive Discussion in Science: Gender Equity through Electronic Discourse**. *Journal of Science Education and Technology*, Vol. 6, No. 1, pp. 23-36

Hsi, S. (1997) (with Dorothy Bennett, Christina Allen, Laurie Edwards, & Marcia Linn) **Designing Interactive Learning Environments for Gender Equity**, Panel presentation at the American Education Researcher Association, Chicago, April 1997

Hsi, S. (with Hoadley, C. M., Fishman, B., Harasim, L., , Levin, J., Pea, R., Scardamalia, M., and Linn, M. C. ) (1997) **Collaboration, communication, and computers: what do we think we know about networks and learning?** Panel presented at the Annual Meeting of the American Education Researcher Association, Chicago, April, 1997.

#### 1995-1996

Hsi, S. **Learning in Collaborative Electronic Discussion vs. Classroom Discussion in Science**. Proceedings of the 18th Annual Conference of Cognitive Science Society, July 12-15,1996, ed. Garrison Contrell, pp. 777

Hsi, S., Hoadley, C. M., & Linn, M. C. (1995). **Lessons for the Future of Electronic Collaboration from the Multimedia Forum Kiosk**. *Speculations in Science and Technology*, 18 Dec (4), 265-277.

Hsi, S. and Agogino, A. M. **Scaffolded Knowledge Integration through Designing Multimedia Case Studies of Engineering Design**. *Engineering Education for the 21st Century: Proceedings of Frontiers in Education, FIE'95*, Nov. 1995, ASEE/IEEE, pp. 4d1.1-4d1.4.

Hsi, S. and Hoadley, C. **On-line Multimedia Assessment of Curricula: Experiences with the Multimedia Forum Kiosk**. paper presentation at the American Educational Researcher Association Annual Meeting, San Francisco, April 1995

Hoadley, C. , Hsi, S, and Berman, B. **Networked Multimedia for Communication and Collaboration**. paper presentation at the American Educational Researcher Association Annual Meeting, San Francisco, April 1995

#### 1993-1994

Hsi, S. and Agogino, A., (1994) **The Impact and Instructional Benefit of Using Multimedia Case Studies to Teach Engineering Design**. *Journal of Educational Multimedia and Hypermedia* , 3 (3/4), 351-376

Hsi, S. and Hoadley, C. **Designing an Interactive Multimedia Kiosk as a Tool for Collaborative Discourse, Reflection, and Assessment**, paper presentation at the American Educational Researcher Association Annual Meeting, New Orleans, April 1993

Hsi, S. and Agogino, A., **Use of Multimedia Technology in Teaching Engineering Design**, Proceedings from HCI International '93, 5th International Conference on Human-Computer Interaction jointly with 9th Symposium on Human Interface (Japan), August 8-13, 1993, Orlando, FL

Hoadley, C. and Hsi, S., **A Multimedia Interface for Knowledge Building and Collaborative Learning**, *Adjunct Proceedings of InterCHI '93*, International Conference on Human Factors in Computing Systems, April 1993, Amsterdam, pp. 103-104

## **RECENT PRESENTATIONS:**

National Educational Computing Conference, June 2001 – **Featured presentation**

ELearning Forum, SRI International, January 2001 – **Invited presenter**

TechInnovations 2000, U.C. Santa Cruz, October, 2000 - **Keynote Presentation**

CSCL '99, Stanford, December 1999 – **Invited panelist; Doctoral Consortium Co-Chair**

National Educational Computing Conference '99, Atlantic City, June 1999 – **Presenter**

National Science Teachers Association Meeting, Boston, March 1999 – **Presenter**

CILT '99 Annual Meeting, San Jose, May 1999 – **Ubiquitous Computing Workshop Co-chair**

AERA Annual Meeting, Montreal, April , 1999 - **Presenter & Chair**

CHI '98 Workshop on Learner-centered Design, Los Angeles, April 1999 – **Workshop Co-chair**

AERA Annual Meeting, San Diego, April , 1998 - **Presenter & Chair**

CSCL Computer Supported Collaborative Learning, OISE, Toronto, Dec. 10-14, 1997 - **Presenter**

UNESCO Colloquium on Virtual Learning Environments, April 27-29, 1997 - **Invited Speaker**

## **PROFESSIONAL ACTIVITIES:**

Journal of the Learning Sciences  
Editorial board

Journal of Women and Minorities in Science and Engineering  
Journal Reviewer

American Society of Engineering Education, ASEE  
Reviewer for Journal of Engineering Education  
SIG Education Research Methods

American Educational Research Association, AERA

Chair of SIG Education in Science & Technology, 1997-1998

Reviewer for Division C, Section 4 Interactive Learning Environments

Reviewer for Division C, Section 7, Technology Research

Reviewer for SIG Education in Science and Technology, Advanced Technologies for Learning

National Association of Research on Science Teaching, NARST - member

Association for Computing Machinery , ACM - member

ELearning Forum of Silicon Valley – member

ASTD, American Society for Training and Development – member