

# Lisa Anthony

## Contact

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## Current Position

Ph.D. candidate (anticipated date of graduation: August 2008)  
Human-Computer Interaction Institute, Carnegie Mellon University, Pittsburgh, PA

## Education

Master of Science, Human-Computer Interaction, December 2006 Carnegie Mellon University, Pittsburgh, PA Cumulative GPA: 3.52 on 4.0 scale	Bachelor of Science/Master of Science, Computer Science, December 2002 Drexel University, Philadelphia, PA Cumulative GPA: 3.98 on 4.0 scale
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## HCI Skills

Contextual Inquiry, Cognitive Walkthrough, Think Aloud, Heuristic Analysis, Keystroke-Level Modeling, Interviews, Surveys/Questionnaires, Empirical Methods, Statistical Analysis

## Work Experience

### Graduate Research Assistant

Pittsburgh Science of Learning Center, Carnegie Mellon University, Pittsburgh PA  
August 2004 to present

- \* Conducted empirical study comparing various input modalities for entering algebraic equations on the computer for speed, errors, and user preferences
- \* Collected preliminary evidence on advantages of handwriting input for human learning
- \* Explored and adapted tools for handwriting recognition for use with students learning algebra equation solving and implemented prototype system

### Summer Intern

Fuji-Xerox Palo Alto Laboratory (FXPAL), Palo Alto, CA  
June 2007 to September 2007

- \* Member of interdisciplinary team designing and implementing a complex system
- \* Guided HCI design process of requirements analysis followed by iterative design and evaluation of prototypes (further details pending patent)

### Graduate Research Assistant

Pittsburgh Advanced Cognitive Tutor Center, Carnegie Mellon University, Pittsburgh PA  
September 2002 to August 2004

- \* Conducted Wizard-of-Oz study assessing feasibility of allowing students to ask directed questions during mathematics problem solving in a Cognitive Tutor
- \* Implemented in a team prototype system to support such question-asking
- \* Conducted research study comparing effectiveness of various instruction/answer styles given to students when they ask questions during problem solving

### Research Assistant

Geometric and Intelligent Computing Laboratory, Drexel University, Philadelphia PA  
September 2001 to Sept 2002; Sept 1999 to May 2000; Sept 2000 to May 2001

- \* Developed conceptual design tool with support for annotation of design intent, targeted at engineering designers in mechatronics domain
- \* Master's thesis work: using genetic programming to "solve" the board game Acquire

### Guest Researcher

OpenCASCADE, Matra DataVision, Paris France  
June 2001 to September 2001

- \* Forged alliance between OpenCASCADE in Europe & GICL in North America
- \* Self-trained in their 3D solid modeling kernel and application framework

### Summer Guest Researcher

Design Process Group, National Institute of Standards & Technology, Gaithersburg MD  
May 2000 to August 2000

- \* Part of international development team for NIST Design Repository Project
- \* Designed and developed web interface for querying the design repository

## Technical Skills

### Operating Systems

Windows 9x/NT/2000/XP  
Solaris 2.6/7, \*NIX

### Software

Macromedia Dreamweaver  
Macromedia Flash  
Adobe InDesign  
Adobe Photoshop  
Adobe Illustrator  
Microsoft Office Suite  
Maple V, Matlab  
SPSS, JMP for statistics

### Languages & APIs

Java & JFC/Swing  
C++  
Perl, Bash, shell scripting  
HTML, CSS  
LISP  
Tcl/Tk  
Berkeley sockets

### Development Tools

Eclipse IDE  
Harlequin LISPWorks  
Allegro Common LISP  
Unix command-line tools

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## Teaching

### Instructor

Human-Computer Interaction for Computer Scientists  
Spring 2007  
Human-Computer Interaction Institute, Carnegie Mellon University, Pittsburgh PA

### Teaching Assistant

Introduction to Human-Computer Interaction Methods  
Fall 2005  
Human-Computer Interaction Institute, Carnegie Mellon University, Pittsburgh PA

## Service & Community

Women@SCS Graduate Student Council Member, 2002-present  
Member of SCS Graduate Women Mentoring Program, 2007-present  
Contributing Editor of SCS Guide to Living in Pittsburgh, 2007-present  
Coordinator of CMU HCII Ph.D. Defense Toasts, 2006-2007  
Coordinator of CMU HCII Ph.D. Biweekly Lunch Seminars, 2005-2007  
Organizing Member of Technology Night for Girls at Pittsburgh's CyberConXion, in association with CMU's Entertainment Technology Center, 2005-2006  
CMU HCII Admissions Committee, 2003  
Drexel Mathematics and Computer Science Society, 1997-2002

## Honors & Awards

National Science Foundation Graduate Research Fellowship, 2002-2005  
Delaware Valley Technical Recruiters Network Annual Award for Computer Science, 2001  
Computing Research Association's National Outstanding Undergraduate Award, 2001  
AT&T Labs Internet Platforms Technology Organization Research Fellowship, 2000  
National Science Foundation Research Experience for Undergraduates Supplement, 1999  
1999 Award for Outstanding Industry, Leadership, and Academics in Computer Science  
Drexel University Honors Program, March 1998 to 2002  
Drexel College of Arts & Sciences Dean's List, 1997 to 2002

## Selected Publications

Anthony, Lisa; Yang, Jie; Koedinger, Kenneth R. (2007) "Adapting Handwriting Recognition for Applications in Algebra Learning." Proceedings of the ACM Workshop on Educational Multimedia and Multimedia Education (EMME'2007), Augsburg, Germany, pp. 47-56.

Anthony, Lisa; Yang, Jie; Koedinger, Kenneth R. (2007) "Benefits of Handwritten Input for Student Learning Algebra Equation Solving." Proceedings of the International Conference on Artificial Intelligence in Education (AIED'2007), Los Angeles, CA, pp. 521-523.

Anthony, Lisa; Yang, Jie; Koedinger, Kenneth R. (2006) "Towards the Application of a Handwriting Interface for Mathematics Learning." IEEE Conference on Multimedia and Expo (ICME'2006), Toronto, Canada, pp. 2077-2080.

Anthony, Lisa; Yang, Jie; Koedinger, Kenneth R. (2005) "Evaluation of Multimodal Input for Entering Mathematical Equations on the Computer." ACM Conference on Human Factors in Computing Systems (CHI 2005), Portland, OR, pp. 1184-1187.

Anthony, Lisa; Corbett, Albert; Wagner, Angela Z.; Stevens, Scott M.; Koedinger, Kenneth R. (2004) "Student Question-Asking Patterns in an Intelligent Algebra Tutor." Proceedings of the International Conference on Intelligent Tutoring Systems, Maceio, Brazil, pp. 455-467.

Anthony, Lisa. (2002) "Evolving Board Evaluation Functions for a Complex Strategy Game." Master's thesis, Department of Computer Science, Drexel University.

Anthony, Lisa; Regli, William C.; John, Jon E.; Lombeyda, Santiago V. (2001) "An Approach to Capturing Structure, Behavior and Function of Artifacts in CAD." Transactions of the ASME, the Journal of Computing and Information Science in Engineering 1(2), pp. 186-192.

## Representative Coursework

Introduction to HCI Methods  
Advanced Topics in User Interface Technology  
Cognitive Modeling & Intelligent Tutoring Systems  
Cognitive Systems  
Machine Learning  
Interface & Interaction Design  
Cognitive Psychology  
Psychology of HCI  
Graphical User Interfaces  
Systems Architecture  
Software Engineering  
Software Design  
Concurrent Programming  
Artificial Intelligence  
Knowledge-Based Agents