

## Curriculum Vitæ

### Laurie C. Murphy

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#### Positions Held

*Pacific Lutheran University, Tacoma, Washington*

Associate Professor of Computer Science, tenured (2006 to present)

Assistant Professor of Computer Science (2000 to 2006)

Visiting Assistant Professor of Computer Science (1997 to 2000)

*Computer Science Education, Taylor & Francis publishers*

Co Editor-In-Chief (Feb. 2007 to present)

*University of Mississippi, Oxford, Mississippi*

Instructor of Computer and Information Science (1988 to 1997)

*Vanderbilt University, Nashville, Tennessee*

Graduate Research Assistant (1987 to 1988)

Graduate Teaching Assistant (1986 to 1987)

#### Education

M.Sc. Computer Science Vanderbilt University, Nashville, TN

B.Sc. Mathematics Delta State University, Cleveland, MS

#### Conference and Journal Publications

- A. Berglund, A. Eckerdal, A. Pears, P. East, P. Kinnunen, L. Malmi, R. McCartney, J.-E. Mostrm, L. Murphy, M. B. Ratcliffe, C. Schulte, B. Simon, I. Stamoulia, and L. Thomas. Learning Computer Science: Perceptions, Actions and Roles. Forthcoming in the *European Journal of Engineering Education*, July 2009.
- C. Zander, L. Thomas, B. Simon, L. Murphy, R. McCauley, B. Hanks, and S. Fitzgerald. Learning Styles: Novices Decide. Forthcoming in the *Proceedings of the Fourteenth Conference on Innovation and Technology in Computer Science Education (ITiCSE)*, June 2009.
- B. Hanks, L. Murphy, B. Simon, R. McCauley and C. Zander. CS1 Students Speak: Advice for Students by Students. In *Proceedings of the Fortieth SIGCSE Technical Symposium on Computer Science Education*, ACM Press, March 2009.
- B. Simon, B. Hanks, L. Murphy, S. Fitzgerald, R. McCauley, L. Thomas and C. Zander. Saying Isn't Necessarily Believing: Influencing Self-theories in Computing. In *ICER '08: Proceedings of the Third International Computing Education Research Workshop*, Sept. 2008.
- L. Murphy and L. Thomas. Dangers of a fixed mindset: implications of self-theories research for CS education. In *Proceedings of the Thirteenth Conference on Innovation and Technology in Computer Science Education (ITiCSE)*, ACM Press, June 2008.

- R. McCauley, S. Fitzgerald, G. Lewandowski, L. Murphy, B. Simon, L. Thomas, and C. Zander. Debugging: A Review of the Literature from an Educational Perspective. In *Computer Science Education*, special issue on debugging, 18(2), June 2008.
- S. Fitzgerald, G. Lewandowski, R. McCauley, L. Murphy, B. Simon, L. Thomas, and C. Zander. Debugging: Finding, Fixing and Flailing, A Multi-Institutional Study of Novice Debuggers. In *Computer Science Education*, special issue on debugging, 18(2), June 2008.
- L. Murphy, G. Lewandowski, R. McCauley, B. Simon, L. Thomas, and C. Zander. Debugging: The good, the bad, and the quirky a qualitative analysis of novices' strategies. In *Proceedings of the Thirty-Ninth SIGCSE Technical Symposium on Computer Science Education*, ACM Press, March 2008.
- A. Pears, A. Berglund, A. Eckerdal, P. East, P. Kinnunen, L. Malmi, R. McCartney, J.-E. Moström, L. Murphy, M. B. Ratcliffe, C. Schulte, B. Simon, I. Stamoulia, and L. Thomas. What's the problem? teachers' experience of student learning successes and failures. In *Proceedings of Koli Calling, 7th Baltic Sea Conference on Computing Education Research*, November 2007.
- P. Kinnunen, R. McCartney, L. Murphy, and L. Thomas. Through the Eyes of Instructors: A Phenomenographic Investigation of Student Success. In *ICER '07: Proceedings of the 3rd International Computing Education Research Workshop*, 2007.
- L. Murphy, R. McCauley, S. Westbrook, B. Richards, B. Morrison and T. Fossum. Women catch up: gender differences in learning programming concepts. In the *Proceedings of the Thirty-Seventh SIGCSE Technical Symposium on Computer Science Education*, ACM Press, March 2006.
- L. Murphy and D. Wolff. Take a minute to complete the loop: using electronic classroom assessment techniques in computer science labs. *The Journal of Computing Sciences in Colleges*, 21(2), December 2005.
- J. Tenenberg and L. Murphy. Knowing what I know: an investigation of undergraduate knowledge and self-knowledge of Data Structures. *Computer Science Education*, 15(4), December 2005.
- R. McCauley, L. Murphy, S. Westbrook, S. Haller, C. Zander, T. Fossum, K. Sanders, B. Morrison, B. Richards and R. Anderson. What do successful computer science students know? An integrative analysis using card-sort measures and content analysis to evaluate graduating students' knowledge of programming concepts. *Expert Systems*, 22(3):147-159, July 2005.
- K. Sanders, D. Bouvier, S. Fincher, G. Lewandowski, B. Morrison, L. Murphy, M. Petre, J. Tenenberg, L. Thomas, R. Anderson, R. Anderson, S. Fitzgerald, A. Gutschow, S. Haller, M. Jadud, R. Lister, R. McCauley, J. McTaggart, C. Prasad, B. Richards, T. Scott, D. Shinnars-Kennedy, S. Westbrook, and C. Zander. A multi-institutional, multinational study of programming concepts using card sort data. *Expert Systems*, 22(3):121-128, July 2005.
- L. Murphy and J. Tenenberg. Do Computer Science students know what they know?: A calibration study of data structure knowledge. In the *Proceedings of the Tenth Conference on Innovation and Technology in Computer Science Education (ITiCSE)*, ACM Press, 37(3), June 2005.
- L. Murphy, R. McCauley, S. Westbrook, T. Fossum, S. Haller, B. Morrison, B. Richards, K. Sanders, C. Zander and R. Anderson. A multi-institutional investigation of computer science seniors' knowledge of programming concepts. In the *Proceedings of the Thirty-Sixth SIGCSE Technical Symposium on Computer Science Education*, ACM Press, 37(1):510-514, February 2005.

K. Blaha and L. Murphy. Targeting Assessment: How to Hit the Bull's Eye. *The Journal of Computing in Small Colleges*, 17(2):106-115, December 2001.

### Grants and Awards

Received, with David Wolff, an Northwest Academic Computing Consortium (NWACC) Proof of Concept Grant to fund "Scaffolding active programming instruction with theoretically grounded screencasts and annotated worked examples", 2008-09.

Received PLU Regency Advancement Award to fund "An Investigation of Novice Pair Debugging", 2008-09.

Received NSF funding to attend DEBUG summer research workshop, May 2007.

Named an "Inspirational Woman" by the PLU Women's Center, 2006.

Received NSF travel grant to attend ICER '06, Sept. 2006.

Received, with David Wolff, a Collaborative Research Experiences for Undergraduates (CREU) grant from the Computing Research Association's Committee on the Status of Women in Computing Research (CRA-W) to fund "Electronic Assessment Tools for Introductory Computer Science: Enabling Feedback from the Laboratory to the Classroom", 2004-05.

Received NSF funding to attend Bootstrapping summer workshops, 2002-03.

Received CRA-W travel grant to attend SIGCSE and CRA-W workshop, March 2002.

Received, with Kenneth Blaha, a PLU Center for Teaching and Learning Grant, "Project Based Peer-Mentoring", 2001.

### Professional Activities

#### *Professional Societies:*

Association for Computing Machinery (ACM)

Special Interest Group for Computer Science Education (ACM-SIGCSE)

Consortium for Computing Sciences in Colleges - North West (CCSC-NW)

#### *Panels and Invited Talks:*

Invited presentation, "Debugging Computer Science Education", PLU Faculty Scholarship Dinner, October 2007

Presenter with J. Tenenberg *et al*, "Building a Disciplinary Commons using Course Portfolios", Pacific Northwest Higher Education Teaching and Learning Conference, Vancouver, WA, May 2006.

K-12 Outreach panel participant, CCSC-NW Conference, University of Washington, Bothell, October 2005

Invited member of a panel on Teaching Positions at Teaching Oriented Universities given to University of Washington (Seattle) CE and EE graduate students, May 2004.

Invited speaker on Teaching CS1 and CS2 for the Education and Educational Technology Graduate Seminar at the University of Washington (Seattle), May 2003

Accreditation panel participant, CCSC-NW Conference, Pacific Lutheran University, Tacoma, Washington, October 2001

Active and Cooperative Learning panel organizer and participant, CCSC-NW Conference, Seattle Pacific University, October 2002

Panels and Tutorials Chair, CCSC-NW Conference, 2001-2002

**Conferences, Workshops and Courses Attended:**

How People Learn - an educational theory course at Evergreen State College, Fall 2006 and Winter 2007 quarters

DEBUG research group summer workshop, Federal Way, WA, May 2007 and May 2008

ICER - International Computing Education Research Workshop (2005, 2006, 2007)

Statistics Bootcamp for Computer Science Education Researchers, Georgia Tech University, Atlanta, GA, September 2007

PhICER - Second International Workshop on Phenomenography in Computing Education Research, University of Kent, Canterbury, UK, September 2006

Teaching with Lego Robots SIGCSE workshop, Cincinnati, Ohio, March 2007

Disciplinary Commons, a course portfolio workshop for regional community college and four-year faculty, September 2005 to June 2006.

Member and facilitator of a PLU Wild Hope Faculty Study Seminar, 2006.

PLU Center for Teaching and Learning (CTL) workshop on learning styles, 2003-04

Bootstrapping Research in Computer Science Education (NSF/DUE 0122560)

Initial Workshop, Port Townsend, WA, June 1 - 6, 2002

Capstone Workshop, Port Townsend, WA, June 7 - 12, 2003

SIGCSE Technical Symposium (2000, 2002, 2003, 2005, 2007-2009)

CCSC-NW (1999-2005)

Group and Cooperative Learning SIGCSE workshop, Cincinnati, Ohio, March 2002

CRA-W Managing the Academic Career for Faculty Women at Computer Science and Engineering Institutions, SIGCSE Workshop, February 27, 2002

Bridging the Digital Divide: Women and Girls in Technology Symposium, South Seattle Community College, July 2001

CSAC/CSAB Accreditation Training, Austin, Texas, March 2000

**Reviewing:**

Ph.D. Student Research: SIGCSE 2008 Doctoral Consortium Discussant

, Grant Proposals: NSF Course Curriculum and Laboratory Improvement (CCLI) Phase I, invited reviewer, Washington, D.C., July 2007

Conference Papers: SIGCSE (2004-09), ITiCSE (2005-07), CCSC-NW (2001-06, 09), ICER Program Committee (2007 and 2009)

Journal Manuscripts: invited reviewer for *Computer Science Education* (4 articles 2004-06)

Textbooks:

Glass, G. and K. Ables, *Unix for Programmers and Users*, 3rd ed., Prentice-Hall, 2003.

Lewis, J. and W. Loftus, *Java Software Solutions*, 4th ed., Addison-Wesley, 2005

**Courses Taught at Pacific Lutheran University:**

Introduction to Computer Science (Java), Data Structures (Java & C++), Programming Language Concepts, Design & Analysis of Algorithms, Unix System Design, Programming Virtual Worlds with Alice, Solve it with the Computer, Computerized Information Systems

**Courses Taught at The University of Mississippi:**

Computer Programming I, Computer Programming II, File Systems, Computer Organization and Assembly Language, C++ Programming, Automata Theory, Computer Simulation, Algorithms, Formal Language Theory, Computer Science Survey, Personal Computer I, Special Topics: Unix and C for Engineers (Graduate Engineering Program - Jackson, MS)

## Service

### ***University Service and Activities at Pacific Lutheran University:***

- Member, Wild Hope Project Coordinating Team (2007–present)
- Human Participants Review Board Division of Natural Sciences Designate(2005–06, 2007–08)
- Member, Campus Life Committee (2004–06)
- CSCE Departmental Library Liaison (2002–06)
- Member, Division of Natural Sciences Administrative Associate Search Committee (2004)
- Member, CSCE CS1/CS2 Outcomes Committee (2003)
- First-Year Advisor (2002-03, 2003-04)
- Member, Mathematics Faculty Search Committee (2002)
- Chair, Division of Natural Sciences Systems Administrator Search Committee (2001)
- Development of new special topics course, Unix System Design (2000)
- Chair, CSCE Faculty Search Committee (2000)

### ***Recent Community Service:***

- Workshop presenter, “Programming in Scratch”, Washington Middle School sixth grade girls’ sci-tech classes, January 2008
- Workshop presenter, “The Wonder of Alice”, *Expanding Your Horizons*, a math, science and technology conference for middle-school girls sponsored by IGNITE and UW-Tacoma, March 2005 and March 2006
- Volunteer chaperone, *Expanding Your Horizons*, March 2004
- Volunteer sail car competition judge, *MESA (Math Engineering and Science) Day*, a science competition designed to encourage minority middle and high school students to become interested in mathematics, science and engineering, 2004–2005
- Guest speaker, *Tech Specs: Inviting Young Women Into Technology*, an Intel sponsored after-school program for high schools girls. Olympia High School, May 2002.