Adrienne M. Decker

adrienne@cse.buffalo.edu

Curriculum Vitae
May 7, 2007

Home: Available upon Request

Office: University at Buffalo
Department of Computer Science and Engineering
201 Bell Hall
Buffalo, NY 14260 – 2000
Phone: (716) 645-3180 ext. 161

EDUCATION

2007 - Ph.D., Computer Science and Engineering, University at Buffalo (SUNY)
Dissertation: ***How Students Measure Up: An Assessment Instrument for Introductory Computer Science***
Advisor: William J. Rapaport

2001 - M.S., Computer Science and Engineering, University at Buffalo (SUNY)
Master's Project: ***ASPAS: A Solution for Providing Application Services***
Advisor: Bina Ramamurthy

2001 - B.S., Computer Science, *Summa Cum Laude*, University at Buffalo (SUNY)

RESEARCH INTERESTS

Computer Science Education, Introductory Computer Science Curriculum, Objects-First Introductory Curriculum, Discrete Mathematics Education and Curriculum, Assessment Issues in Introductory Computer Science

PROFESSIONAL EXPERIENCE

8/2002 - present **Lecturer,** Department of Computer Science and Engineering
University at Buffalo (Buffalo, NY)
Courses Taught: Introduction to Computer Science for Majors I & II, Discrete Structures, Programming Languages, Programming for Non-Majors I & II (Graduate), Programming for Non-Majors I & II (Undergraduate), Great Ideas in Computer Science

5/2001 - 8/2002 **Instructor**, Department of Computer Science and Engineering
University at Buffalo (Buffalo, NY)
Courses Taught: Introduction to Computer Science for Majors I, Programming for Non-Majors (Graduate), Great Ideas in Computer Science

8/2001 - 12/2001 **Instructor**, Dept. of Mathematics/Physics/Computer & Information Sciences
Niagara County Community College (Sanborn, NY)
Courses Taught: Introduction to Computer Systems

ADDITIONAL EXPERIENCE

1/2000 - 5/2001 **Teaching Assistant & Summer Course Grader**
Department of Computer Science and Engineering
University at Buffalo (Buffalo, NY)
Selected as Head Teaching Assistant in the Introduction to Computer Science for Majors I course for Spring 2001 semester

6/1997-1/2000 **Program Director/Assistant Program Director/Youth Program Coordinator**
AMF Thruway Lanes
(Cheektowaga, NY)
--Managed office staff of 4-6 people who coordinated all programs for the center.
--Responsibilities included managing bowler information for center databases, promotions and advertising, scheduling of events, banquet and party planning, organization of center resources for special events.

6/1997-6/1999 **Yearbook Advisor**
Cheektowaga-Sloan Union Free School District
(Cheektowaga, NY)
--Provided instruction to students on yearbook staff about yearbook publication by hosting instructional workshops and individualized assistance in both yearbook production and software applications.
--Improved the production of the yearbook with introduction of new publication software, UltraVision, Adobe Photoshop, PageMaker, and Paint Shop Pro

AWARDS

2007 *Milton Plesur Award for Excellence in Teaching*, University at Buffalo

2005 *Best Overall Paper*, Twenty-first Annual CCSC Eastern Conference
Decker, A., Haydanek S. and Egert C. "When Objects Collide: Abstractions over Common Physics Problems for Capstone Projects in CS1", *The Journal of Computing Sciences in Colleges*, Vol 21 Iss 2, pp. 12-18.

2003 *Best Overall Paper*, Nineteenth Annual CCSC Eastern Conference
Decker, A., "A Tale of Two Paradigms", *The Journal of Computing Sciences in Colleges*, Vol 19 Iss 2, pp. 238-246.

2003 *Best Paper Finalist*, Nineteenth Annual CCSC Eastern Conference
Decker, A., "A Tale of Two Paradigms", *The Journal of Computing Sciences in Colleges*, Vol 19 Iss 2, pp. 238-246.

PUBLICATIONS

BOOKS

1. **Decker A.** *Instructor's Manual with Solutions for Walter Savitch's Absolute Java 2nd Edition,* Addison-Wesley, Electronic Supplement, 2005.

2. **Decker A.** *Instructor's Manual with Solutions for Walter Savitch's Absolute Java,* Addison-Wesley, Electronic Supplement, 2004.

JURIED/PEER REVIEWED PUBLICATIONS

1. Alphonce, C., Caspersen M., and **Decker A.** (2007) "Killer 'Killer Examples' for Design Patterns", *Proceedings of the 38th SIGCSE Technical Symposium on Computer Science Education*, Covington, KY. pp. 228 – 232.

2. **Decker A.,** Egert C., and Ventura, P. (2006) "Through the Looking Glass: Reflections on Using Undergraduate Teaching Assistants in CS1", *Proceedings of the 37th SIGCSE Technical Symposium on Computer Science Education*, Houston, TX. pp. 46 - 50.

3. **Decker, A.**, Haydanek, S. and Egert, C. (2005) "When Objects Collide: Abstractions over Common Physics Problems for Capstone Projects in CS1", *Journal of Computing Sciences in Colleges,* Vol 21 Iss 2, pp. 12-18.

4. Ventura, P., Egert, C., and **Decker A.** (2004) "Ancestor Worship in CS1: Reexamining the Introduction of Arrays", *2004 OOPSLA Educator's Symposium*, Vancouver, BC, pp. 68 - 72.

5. **Decker, A.** and Ventura, P. (2004) "Claim this Class for Computer Science: A Non-Mathematician's Discrete Structures Course", *Proceedings of the SIGCSE Technical Symposium on Computer Science Education*, Norfolk, VA, pp. 442 – 446.

6. **Decker, A.** (2004) "How Students Measure Up: Creation of an Assessment Tool for CS1", *SIGCSE 2004 Doctoral Consortium: held in conjunction with the SIGCSE 2004 Technical Symposium on Computer Science Education*, Norfolk, VA. http://www.metrostate.edu/~fitzgesu/DC04/Decker.html

7. **Decker, A.** (2003) "A Tale of Two Paradigms", *The Journal of Computing Sciences in Colleges*, Vol 19 Issue 2, pp. 238-246.

8. **Decker, A.** (2003) "I Want to be a Computer Scientist When I Grow Up: Evaluating the Skills Necessary for Computer Science", *SIGCSE 2003 Doctoral Consortium: held in conjunction with the SIGCSE 2003 Technical Symposium on Computer Science Education*, Reno, NV. http://www.radford.edu/~sigcse/DC03/participants/decker.html.

OTHER PUBLICATIONS

1. **Decker, A.** (2007) "How Students Measure Up: An Assessment Instrument for Introductory Comptuer Science." Doctoral Dissertation.

WORKSHOPS AND SPECIAL SESSIONS

WORKSHOP ORGANIZATION COMMITTEE

1. Alphonce, C., Börstler, J., Caspersen, M., **Decker, A.**, and Kölling, M. *Process in OO Pedagogy: A "Killer" Workshop*, Workshop: OOPSLA 2007, Montreal, Canada, [To be presented October 21-25, 2007].

2. Alphonce, C., Caspersen, M., **Decker, A.**, and Trask, B. *Fifth "Killer Examples" for Design Patterns Workshop*, Workshop: *OOPSLA 2006*, Portland, OR, October 22-26, 2006.

3. Alphonce, C., Caspersen, M., Wong, S. and **Decker, A.** *Fourth "Killer Examples" for Design Patterns and Objects First Workshop*, Workshop: *OOPSLA 2005*, San Diego, CA, October 16-20, 2005.

DOCTORAL CONSORTIUM PARTICIPANT

1. **Decker, A.** (2004) "How Students Measure Up: Creation of an Assessment Tool for CS1", *SIGCSE 2004 Doctoral Consortium: held in conjunction with the SIGCSE 2004 Technical Symposium on Computer Science Education*, Norfolk, VA. http://www.metrostate.edu/~fitzgesu/DC04/Decker.html

2. **Decker, A.** (2003) "I Want to be a Computer Scientist When I Grow Up: Evaluating the Skills Necessary for Computer Science", *SIGCSE 2003 Doctoral Consortium: held in conjunction with the SIGCSE 2003 Technical Symposium on Computer Science Education*, Reno, NV. http://www.radford.edu/~sigcse/DC03/participants/decker.html.

CONFERENCE PRESENTATIONS

1. Gardner, J., McSkimming, B., Wang, G. - with Faculty Advisors Alphonce, C., and **Decker A.** (2007) "Green: A Software Design Tool Developed for Students by Students", A poster presented at the *University at Buffalo's Celebration of Academic Excellenc*e, April 19, 2007, Buffalo, NY.

2. Alphonce, C., Caspersen M., and **Decker A.** (2007) "Killer 'Killer Examples' for Design Patterns", A paper presented at the *38th SIGCSE Technical Symposium on Computer Science Education*, March 9, 2007, Covington, KY.

3. Alphonce, C., Caspersen, M., **Decker, A.** and Trask, B. (2006) "Fifth Killer Examples for Design Patterns and Objects First Workshop Results", A poster presented at *OOPSLA 2006*, October 22-26, 2006, Portland, OR.

4. **Decker, A.** and Alphonce, C. "Does CS1 Have to Be So Syntactical?" (2006) A poster presented at *OOPSLA 2006 Educator's Symposium*, October 23, 2006, Portland, OR.

5. **Decker A.,** Egert C., and Ventura, P. (2006) "Through the Looking Glass: Reflections on Using Undergraduate Teaching Assistants in CS1", A paper presented at the *37th SIGCSE Technical Symposium on Computer Science Education*, March 2, 2006, Houston, TX.

6. Alphonce, C., Caspersen, M., **Decker, A.**, Kosa, M., and Wong, S. (2006) "*Objects First, Design Patterns Second: Lessons Learned from the 'Killer Examples' for Design Patterns and Objects First Workshops"*, A poster presented at the *37th SIGCSE Technical Symposium on Computer Science Education*, March 3, 2006, Houston, TX.

7. Alphonce, C., Caspersen, M., Wong, S. and **Decker, A.** (2005) "Fourth Killer Examples for Design Patterns and Objects First Workshop Results", A poster presented at *OOPSLA 2005*, October 16-20, 2005, San Diego, CA.

8. **Decker, A.**, Haydanek, S. and Egert, C. (2005) "When Objects Collide: Abstractions over Common Physics Problems for Capstone Projects in CS1", A paper presented at the *CCSC 21st Annual Eastern Conference*, October 14, 2005, Iona College, NY.

9. Ventura, P., Egert, C., and **Decker A.** (2004) "Ancestor Worship in CS1: Reexamining the Introduction of Arrays", A paper presented at the *2004 OOPSLA Educator's Symposium*, October 26, 2004, Vancouver, BC.

10. **Decker, A.** and Ventura, P. (2004) "Claim this Class for Computer Science: A Non-Mathematician's Discrete Structures Course", A paper presented at *the 35th SIGCSE Technical Symposium on Computer Science Education*, March 6, 2004, Norfolk, VA.

11. **Decker, A.** (2003) "A Tale of Two Paradigms", A paper presented at the *CCSC 19th Annual Eastern Conference*, October 18, 2003, Montclair State University, NJ.

PANEL SESSION PARTICIPATION

1. Egert, C., Ventura, P., and **Decker, A.** "Putting the 'Fun' Back in Fundamentals: Using Games to Teach Object-Oriented Design Early", Panel Session: Computer Gaming, *ASEE St. Lawrence Section Conference 2005*, Binghamton University, Binghamton, NY, April 8-9, 2005.

INVITED TALKS

1. "Teaching Java to Novices", *Guest Speaker – SUNY Fredonia First Annual High School Programming Competition (*Chairperson: Karen Ehrlich*)*, Fredonia, NY, December 19, 2003

TEACHING

Courses Taught at University at Buffalo

Session	***Course*** ** Course with multiple sections and multiple instructors. TAs would be split among all instructors for course.	***Class Size***	***Teaching Asst.*** *U* = Undergraduates *G* = Graduate
Spring 2007	Introduction to Computer Science for Majors I (CSE 115 Sections A & B)	46 + 43 = 89	3 *(U – Teaching)* 2 *(G – Grading)*
Spring 2007	Computer Science for Non-Majors I (CSE 503)	6	Same as above
Spring 2007	Introduction to Discrete Structures (CSE 191)	77	2 *(G)*
Fall 2006	Introduction to Computer Science for Majors I (CSE 115 Section C) [co-taught with another instructor]**	61	4 *(U–Teaching)* 4 *(G–Grading)*
Fall 2006	Introduction to Computer Science for Majors II (CSE 116)	39	2 *(G)*
Fall 2006	Introduction to Discrete Structures (CSE 191 A & B)	35 + 45 = 80	3 *(G)*
Spring 2006	Introduction to Computer Science for Majors I (CSE 115 Sections A & B)	62 + 65 = 127	3 *(U–Teaching)* 2 *(G–Grading)*
Spring 2006	Computer Science for Non-Majors I (CSE 503)	9	Same as above
Spring 2006	Introduction to Discrete Structures (CSE 191)	67	2 *(G)*
Fall 2005	Introduction to Computer Science for Majors I ** (CSE 115 Section C)	49	4 *(U–Teaching)* 2 *(G–Grading)*
Fall 2005	Introduction to Discrete Structures (CSE 191)	38 + 51 = 89	3 *(G)*
Spring 2005	Introduction to Computer Science for Majors I (CSE 115 Sections A & B)	68 + 44 = 112	5 *(U-Teaching)* 1 *(G–Grading)*
Spring 2005	Computer Science for Non-Majors I (CSE 503)	2	Same as above
Spring 2005	Introduction to Discrete Structures (CSE 191)	65	2 *(G)*
Fall 2004	Introduction to Computer Science for Majors I ** (CSE 115 Section D)	48	5 *(U-Teaching)* 3 *(G–Grading)*
Fall 2004	Introduction to Discrete Structures (CSE 191 Section A & B)	118	3 *(G)*
Spring 2004	Introduction to Computer Science for Majors I (CSE 115 Sections A & B)	74 + 54 = 128	4 *(U-Teaching)* 2 *(G–Grading)*
Spring 2004	Computer Science for Non-Majors I (CSE 503)	14	Same as above
Spring 2004	Introduction to Discrete Mathematics (CSE 191)	55	1 *(G)*
Fall 2003	Introduction to Computer Science for Majors II (CSE 116 Sections A & B)	45 + 33 = 78	2 *(G)*
Fall 2003	Computer Science for Non-Majors II (CSE 504)	1	Same as above
Fall 2003	Introduction to Computer Programming I (CSE 113 Section B)	68	2 *(G)*
Spring 2003	Introduction to Discrete Mathematics (CSE 191)	73	2 *(G)*
Spring 2003	Introduction to Computer Programming II (CSE 114 Sections A & B)	46 + 67 = 113	3 *(G)*
Fall 2002	Introduction to Computer Science for Majors I ** (CSE 115 Sections C & D)	75 + 80 = 155	5 (*U – Teaching)* 1 *(G - Teaching)* 2 *(G - Grading only)*

Fall 2002	Computer Science for Non-Majors I (CSE 503)	18	Same as above
Fall 2002	Great Ideas in Computer Science I (CSE 111)	183	4 *(G)*
Summer 2002	Programming Languages (CSE 305)	38	0
Spring 2002	Great Ideas in Computer Science I (CSE 111)	89	2 *(G)*
Spring 2002	Computer Science for Non-Majors II (CSE 504)	8	1 *(G)*
Fall 2001	Introduction to Computer Science for Majors I ** (CSE 115 Section A)	96	10 *(G)*
Summer 2001	Introduction to Computer Science for Majors I (CSE 115)	31	0

Courses Taught at Niagara County Community College

Session	***Course***	***Class Size***	***Teaching Asst.***
Fall 2001	Introduction to Computer Systems	18	0

Teaching Assistantships and Course Grading Assignments at University at Buffalo

Session	***Course***	***Class Size (approx.)***	***Course Type***
Spring 2001 (Head TA)	Introduction to Computer Science for Majors I (CSE 115)	100	Undergraduate
Fall 2000 (TA)	Introduction to Computer Programming II (CSE 114)	100	Undergraduate
Summer 2000 (Lab Assist.)	Introduction to Computer Literacy (CSE 101)	25	Undergraduate
Summer 2000 (Grader)	Introduction to Computer Science for Majors II (CSE 116)	44	Undergraduate
Summer 2000 (Grader)	Introduction to Computer Science for Majors I (CSE 115)	43	Undergraduate
Summer 2000 (Grader)	Introduction to Computer Programming I (CSE 113)	27	Undergraduate
Spring 2000 (TA)	Introduction to Computer Programming I (CSE 113)	100	Undergraduate

PROFESSIONAL DEVELOPMENT

2007 – Teaching Objects First in an Enlightening, Exciting Manner: David Gries - Presenter (Workshop held at SIGCSE 2007).

2006 – Attended OOPSLA Educator's Symposium [Educator's Symposium Scholarship Recipient]

2005 – Attended OOPSLA Educator's Symposium [Educator's Symposium Scholarship Recipient]

2004 – Attended OOPSLA Educator's Symposium [Educator's Symposium Scholarship Recipient]

2004 – Designing with Patterns: John Vlissides – Presenter (Tutorial held at OOPSLA 2004).

2004 – Java Generics: Angelika Langer – Presenter (Tutorial held at OOPSLA 2004).

2002 – Attended SIGCSE 2002 Conference.

SUPERVISED STUDENT RESEARCH PROJECTS

2006 - present **Green UML Tool Development**
Students [Current]: Josh Gardner, Brian McSkimming, Gene Wang (Undergraduates)
Supervision and guidance of the students providing the continual development of the Green UML Tool. Currently implemented as a plug-in to the Eclipse development environment, this tool is an open-source UML diagramming tool used by students in UB's CSE 115 and CSE 116 course. It is also available for download and is being used outside the university.

2007 (ongoing) **Undergraduate Research in Computer Science Education**
Student: Kari Bancroft (Undergraduate)
Initial development of a study to see what effect visualizations have on the learning experience for students in undergraduate computer science courses has taken place so far. A formal study will commence in the Fall 2007 semester.

2007 (ongoing) **Game Design and Implementation: NES Platform**
Student: Mark Zorn (Graduate)
Exploration of the technologies used in the original 8-bit Nintendo gaming system. Student developed an understanding of the language, compiler, and limitations of this early gaming technology while creating a game in this environment.

2006 **Game Design and Implementation: Microsoft Platform**
Student: Jason Abofsky (Undergraduate)
Using Visual Studio, C++, DirectX and some basic graphics and gaming algorithms, a prototype game was developed as a sequel to work previously done by the student. This adventure-style game takes its main character Dabu through various worlds where he is required to pick up items and face off against menacing villians.

2006 **Survey of Projects for Discrete Structures**
Student: Benjamin Robboy (Undergraduate)
Creation of survey of published projects and activities for Discrete Structures courses created by student using published resources and websites. A prototype project was constructed to allow students to better explore the applications of the material in Discrete Structures to the computing field. Project assigned to students in Fall 2006 semester.

2006 **CSE 115 Course Materials for Instructors and Teaching Assistants**
Students: W. Clark Dever, Michael Kozelsky, Jimmie Perrin (Undergraduates)
Creation of reference materials for CSE 115 course including complete set of lecture notes, guidelines for teaching assistants with sample lesson plans and exploration of web technologies for improving course web site.

2004 - 2005 **CSE 115 Physics Package**
Student: Sara Haydanek (Undergraduate)
Creation of a Physics API in Java that is integrated with NGP (Graphics Package used in CSE 115) and provides a framework for students for doing basic collision detection, gravity, and friction within their programs for CSE 115. Used for the first time in Spring 2005 for the final lab of CSE 115. Paper submitted and accepted to CCSC Eastern Conference 2005 and won Best Paper Award at conference.

PERSONAL RESEARCH PROJECTS

2005 **An API for APV**
Additional Project Completed while pursuing PhD
Design for an object-oriented API for active and passive vision tasks. The main work of the project was an architectural document that outlined the various components (objects) needed for an API to support basic computer vision tasks in both 2D and 3D environments.

2000 - 2001 **ASPAS: A Solution to Providing Application Services**
Masters Project
Designed and implemented an application server framework for use by an application service provider. Created a cross-platform model that allows application services to be written as either COM or EJB components to communicate with several heterogeneous clients using SOAP. A Java user interface was written for user interaction with the service.

REVIEWING

CONFERENCES

2003 – 2007	Paper Reviewer–SIGCSE Technical Symposium on Computer Science Education
2004 – 2007	Paper Reviewer – CCSC Eastern Conference
2005 – 2007	Paper Reviewer – Conference on Innovation and Technology in Computer Science Education (ITiCSE)

WORKSHOPS

2007	Process in OO Pedagogy: A "Killer" Workshop, OOPSLA 2007.
2006	Fifth "Killer Examples" for Design Patterns Workshop, OOPSLA 2006.
2005	Fourth "Killer Examples" for Design Patterns and Objects First Workshop: OOPSLA 2005

PUBLISHER-SOLICITED REVIEWS OF BOOKS, BOOK PROPOSALS, AND CHAPTERS

1. Sanders, B. and Cumaranatunge, C. (2007) *ActionScript 3.0 Design Patterns*. O'Reilly Publishers, Technical Reviewer for entire manuscript.

2. Gersting, J. (2007) *Mathematic Structures for Computer Science*, Sixth Edition. W.H. Freeman & Co. Publishers, Entire Book Reviewed by Chapter.

3. Dale, N. and Weems. C. (2006) *Programming and Problem Solving with Java*, Second Edition. Jones & Barlett Publishers, Entire Book Reviewed by Chapter.

4. Koffman, E. *Objects, Abstraction, Data Structures and Design: Using Java*. John Wiley & Sons Publishing, Single chapter review.

5. Carrano, F. and Savitch, W. (2005) *Data Structures and Abstractions with Java*. Prentice Hall Publishers, Entire Book Reviewed by Chapter.

6. Hahn, H. *Harley Hahn's Student Guide to Unix*, Third Edition. McGraw-Hill Publishing, Potential Audience/TOC Review.

7. Henry, M. *Discrete Math for Students*. McGraw-Hill Publishing, Recommendations on Book Proposal under consideration for publication.

8. Savitch W. (2003) *Absolute Java*. Addison-Wesley, Book/Chapter Reviews.

9. Wu, C.T. (2003) *An Introduction to Object-Oriented Programming with Java (3rd Edition)*. McGraw-Hill, Book/Chapter Reviews.

10. Cohoon, J. and Davidson, J. (2004) *Java Program Design*, McGraw-Hill, Book/Chapter Reviews.

11. Kamin, S., Mickunas, M.D., and Reingold E. (2002) *Pan Introduction to Computer Science Using Java (2nd Edition)*, McGraw-Hill, Book/Chapter Reviews

SERVICE

University at Buffalo – Computer Science and Engineering

Advisor/Supervisor Roles

1/2004 – present	Supervisor, CSE 115 Undergraduate Teaching Assistants
1/2005 – present	Advisor, Undergraduate Chapter of the ACM Student Club
1/2005 – present	Supervisor, CSE Undergraduate Lab Assistants
1/2006 – present	Supervisor, CSE Student Mentors

Committee Chairmanships (Hiring Committees)

2007	CSE Student Mentors
2007	CSE 115 Undergraduate Teaching Assistants
2006	CSE Student Mentors
2006	CSE 115 Undergraduate Teaching Assistants
2005	CSE 115 Undergraduate Teaching Assistants
2004	CSE 115 Undergraduate Teaching Assistants

Committee Chairmanships (Other Committees)

2004	CSE Video Committee (sub-committee of UGAC)
2002 – 2003	Discrete Structures Committee (sub-committee of UGAC)

Committee Service

2002 – present	Undergraduate Affairs Committee (UGAC)
2004 – 2005	Computer Science Curriculum Committee (sub-committee of UGAC)

Miscellaneous Service

2006	University at Buffalo Faculty-to-Faculty Articulation Conference
2006	Engineering Discovery Day (CSE Presentation)
2006	CSE Freshmen Orientation (Group Discussion)
2006	Reviewer, CSE Graduate Conference
2006, 2007	University at Buffalo Preview Day (CSE Presentation)
2005, 2006	University at Buffalo Open House (CSE Presentation)

PROFESSIONAL AFFILIATONS

Association for Computing Machinery (ACM) and its special interest group:
SIGCSE – Computer Science Education
Consortium for Computing Sciences in Colleges (Eastern region)