
Christopher A. Bogart

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Research Interests:

I am interested in the human-computer interaction challenges involved in helping users to comprehend, develop, and maintain software. I am particularly interested in studying how humans clarify complex ideas and instructions among themselves as inspiration for new ways of enhancing human-computer interaction in software engineering.

In my current PhD research I am studying the work practices of scientific modelers (specifically cognitive modelers: psychologists who model cognition in order to understand human behavior). My approach involves designing a tool that can capture and make explicit the changing, task-specific “evaluation abstractions” that are implicit in a modeler’s exploration of model output. The research has involved qualitative and quantitative empirical methods, language design, and implementation of an experimental tool (an Eclipse plugin implemented in Scala) to support modelers at the Air Force Research Laboratory who use the ACT-R and RML cognitive modeling languages.

Education:

Oregon State University, Ph.D. in progress (est. graduation June 2013), Computer Science
Colorado State University, 1992, M.S. Computer Science, GPA 4.0
Colorado State University, 1988, B.S. Computer Science, Honors, GPA 4.0
Minors in Mathematics and Psychology

Employment History:

Dec. 2008-Present	Graduate Research Assistant, Oregon State University
Summers 2009-12	Intern, Air Force Research Laboratory, Mesa AZ & Dayton OH
Summer 2011	Instructor, Intro to Usability Engineering, Oregon State University
Sept. 2007-Dec. 2008	Graduate Teaching Assistant, Oregon State University
Summer 2008	User experience intern, Microsoft, Seattle WA
2003-2007	Software Engineer and Consultant, SKLD, Denver CO
2001-2003	Software Engineer and Consultant, Avaya, Thornton CO
1990-2001	Various software engineering contracts
1999	Basic computer skills course developer, Boulder, CO
1989-1990	Assistant English Teacher, Iruma, Japan

Training:

ACT-R Summer school, July 2010

Awards and Honors:

Oregon State University Graduate Laurels Scholarship, 2012
Oregon Lottery Graduate Scholarship, 2012
Phi Beta Kappa, 1988
Patricia Mohilner Memorial Scholarship, 1987
National Merit Scholar, 1984

Languages:

English (native); Spanish (written and basic conversational)

Invited Talks:

“How Do People Debug F#?”, Microsoft, Seattle, WA, December 15, 2008

Journal Articles:

- C. Scaffidi, C. Bogart, M. Burnett, A. Cypher, B. Myers, and M. Shaw, “Using traits of web macro scripts to predict reuse,” *Journal of Visual Languages and Computing* 21(5), December 2010.
- J. Lawrance, C. Bogart, M. Burnett, R. Bellamy, K. Rector, and S. D. Fleming, “How programmers debug, revisited: an information foraging theory perspective,” *IEEE Transactions on Software Engineering* 39(2), 2013, 197-215.
- D. Whitley, T. Starkweather, and C. Bogart, “Genetic algorithms and neural networks: Optimizing connections and connectivity,” *Parallel Computing*, vol. 14, 1990, pp. 347-361.

Conference Papers:

- C. Bogart, M. Burnett, S. Douglass, H. Adams, R. White, “Designing a debugging interaction language for cognitive modelers: an initial case study in Natural Programming Plus”. *ACM CHI, 2012*, pp. 2469-2478.
- D. Piorkowski, S. Fleming, C. Scaffidi, C. Bogart, M. Burnett, B. John, R. Bellamy, C. Swart, “Reactive Information Foraging: An empirical investigation of theory-based recommender systems for programmers”. *ACM CHI, 2012*, pp. 1471-1480.
- D. Piorkowski, S. D. Fleming, C. Scaffidi, L. John, C. Bogart, B. E. John, M. Burnett, and R. Bellamy, “Modeling Programmer Navigation: A head-to-head empirical evaluation of predictive models,” *IEEE Symposium on Visual Languages and Human-Centric Computing*, 2011, pp. 109-116.
- C. Bogart, M. Burnett, S. Douglass, D. Piorkowski, and A. Shinsel, “Does my model work? Evaluation abstractions of cognitive modelers,” *IEEE Symposium on Visual Languages and Human-Centric Computing*, 2010, pp. 49-58.
- J. Lawrance, M. Burnett, R. Bellamy, C. Bogart, and C. Swart, “Reactive Information Foraging for Evolving Goals,” *ACM CHI*, 2010, pp. 25-34.
- C. Scaffidi, C. Bogart, M. Burnett, A. Cypher, B. Myers, and M. Shaw, “Predicting Reuse of End-User Web Macro Scripts,” *IEEE Symposium on Visual Languages and Human-Centric Computing*, 2009, pp. 93-100.
- N. Subrahmaniyan, M. Burnett, and C. Bogart, “Software visualization for end-user programmers: trial period obstacles,” *ACM Symposium on Software Visualization*, 2008, pp. 135-144.
- V. Grigoreanu, J. Cao, T. Kulesza, C. Bogart, K. Rector, M. Burnett, and S. Wiedenbeck, “Can feature design reduce the gender gap in end-user software development environments,” *IEEE Symposium on Visual Languages and Human-Centric Computing*, 2008, pp. 149-156.
- C. Bogart, M. Burnett, A. Cypher, and C. Scaffidi, “End-user programming in the wild: A field study of CoScripter scripts,” *IEEE Symposium on Visual Languages and Human-Centric Computing*, 2008, pp. 39-46.

Other Papers:

- M. Burnett, C. Bogart, J. Cao, V. Grigoreanu, T. Kulesza, and J. Lawrance, “End-user software engineering and distributed cognition,” *ICSE Workshop on Software Engineering for End-User Programmers*, Vancouver, BC, 2009.
- C. Scaffidi, C. Bogart, M. Burnett, A. Cypher, B. Myers, and M. Shaw, “Characterizing reusability of end-user web macro scripts,” *International Workshop on Recommendation Systems for Software Engineering*, ACM, 2008.
- C. Bogart, “Rhetorical end-user programming,” *IEEE Symposium on Visual Languages and Human-Centric Computing*, Graduate Consortium Paper, 2008, pp. 260-261.