Joseph Lawrance

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TEACHING **Taught** C, Compilers, Computer Architecture, Data Structures, Object-Oriented Programming, Programming Languages, Senior Seminar, Software Engineering, and Unix System Administration.
Improved teaching evaluations year over year, surpassing the department average.
Mentored work study undergraduates (Nick Allevato, Ben Greenier, Dominic Laudate, Mike Spallino, and Ryan Steinmetz), and undergraduate researchers (Kyle Rector, Andrew Stucky, Nick Schultz).
Tutored students in Mathematics and Computer Science.

SERVICE **Enhanced** the Computer Science curriculum by reducing credits from 141 to 128, simplifying math and science elective requirements, and upgrading course prerequisites.
Redesigned the tracking sheet layout to enhance usability and include registration advice.
Created the Computer Science minor.

SCHOLARSHIP **Co-authored** over twenty peer-reviewed publications.
Co-chaired PPIG 2010 and served on the Program Committee for DEFECTS 2008.
Studied professional programmers in the lab (twice) and in the field (for seven months).
Presented invited talks at Harvard University, Brown University, MIT, Universidad Carlos III de Madrid, University of Nebraska-Lincoln, and Westfield State College.
Reviewed submissions for ACM CHI 2008-2014, IEEE ISI 2011-2012, and TOCHI 2014.
Launched `http://apiusability.org`.

PROGRAMMING **Bash, JavaScript**: Wrote Starter Upper, a script for git classroom setup automation.
Java: Maintained and refactored Logisim, a free open source digital circuit simulator.
Java: Wrote PFIG (Programmer Flow Information Gatherer), an Eclipse plugin.
Java: Wrote a spreadsheet testing/fault-localization tool.
PHP: Added Mechanical Turk deployment to cWeed, a rapid prototyping tool for economic games.

EMPLOYMENT **Assistant Professor**, Wentworth Institute of Technology, Boston, MA. September 2010-Present
Postdoctoral Associate, Massachusetts Institute of Technology. September 2009-August 2010
Research Assistant, Oregon State University. June-September 2004, June 2005-June 2009
Intern, IBM Research, Hawthorne, NY. June 2006-November 2008
Instructor, Oregon State University. June-August 2008
Teaching Assistant, Oregon State University. September-December 2004, March-June 2005
Intern, Microsoft. January-March 2005

EDUCATION **Ph.D., Computer Science**, Oregon State University. Information foraging in debugging. 2009
M.S., Computer Science, Oregon State University. How well do professionals test with code coverage visualizations? An empirical study. 2005
B.A., Math & Computer Science, Lawrence University, Appleton, WI. Psychology minor. 2003

AWARDS AFOSR grant and NSF supplement from 2009-2012.
IBM Invention achievement award, 2009.
IBM Ph.D. Scholarship, 2008-2009.
Best paper award honorable mention, ACM CHI 2008.

MISCELLANEOUS **Interests** include writing software to enhance the classroom experience.
Member of Association for Computing Machinery.

REFEREES

Margaret Burnett, Professor, School of EECS, Oregon State University.	(541) 737-2539
Rachel Bellamy, Manager, Software Productivity Group, IBM Research.	(914) 784-7587
Seikyung Jung, Assistant Professor, Bridgewater State University.	(541) 231-5863

Journal and Magazine Articles

1. Fleming, S., Scaffidi, C., Piorkowski, D., Burnett, M., Bellamy, R., Lawrance, J. and Kwan, I. An Information Foraging Theory Perspective on Tools for Debugging, Refactoring, and Reuse Tasks, ACM Transactions on Software Engineering and Methodology, Volume 22 Number 2, Article 14, March 2013.
2. Lawrance, J., Bogart, C., Burnett, M., Bellamy, R., Rector, K. and Fleming, S. How Programmers Debug, Revisited: An Information Foraging Theory Perspective, IEEE Transactions on Software Engineering, Volume 39 Number 2, February 2013.
3. Jung, S. and Lawrance, J. Web Information Retrieval and Filtering course to Undergraduates using Open Source Programming. ACM Inroads Magazine. Volume 2 Issue 3, September. New York, NY: ACM Press. 2011.
4. Ko, A. J., Abraham, R., Beckwith, L., Blackwell, A., Burnett, M., Erwig, M., Lawrance, J., Scaffidi, C., Lieberman, H., Myers, B., Rosson, M. B., Rothermel, G., Shaw, M. and Wiedenbeck, S. The State of the Art in End-User Software Engineering, ACM Computing Surveys 43(3), Article 21, April 2011.
5. Dagit, J., Lawrance, J., Neumann, C., Burnett, M., Metoyer, R. and Adams, S. Using Cognitive Dimensions: Advice from the Trenches, Journal of Visual Languages and Computing, 17(4), 302-327, August 2006.
6. Robertson, T. J., Lawrance, J. and Burnett, M. Impact of High-Intensity Negotiated-Style Interruptions on End-User Debugging, Journal of Visual Languages and Computing, 17(2), 187-202, April 2006.

Conference Papers

7. Lawrance, J., Jung, S. and Wiseman, C. Git on the Cloud in the Classroom, ACM SIGCSE 2013. Denver, Colorado, March 2013, 639-644. (37.8% acceptance rate)
8. Lawrance, J., Burnett, M., Bellamy, R., Bogart, C. and Swart, C. Reactive Information Foraging for Evolving Goals, ACM CHI 2010. Atlanta, Georgia, April 2010, 25-34. (22% acceptance rate)
9. Lawrance, J., Bellamy, R., Burnett, M. and Rector, K. Can Information Foraging Pick the Fix? A Field Study, IEEE VL/HCC, September 2008, 57-64. (28.6% acceptance rate)
10. Lawrance, J., Bellamy, R., Burnett, M. and Rector, K. Using Information Scent to Model the Dynamic Foraging Behavior of Programmers in Maintenance Tasks, ACM CHI 2008, Florence, Italy, April 2008, 1323-1332. (22% acceptance rate) (**Best Paper Honorable Mention**, awarded to 30 of the 714 submitted papers)
11. Lawrance, J., Bellamy, R., and Burnett, M. Scents in Programs: Does Information Foraging Theory Apply to Program Debugging? IEEE VL/HCC 2007, Coeur d'Alène, Idaho, September 2007, 15-22. (32% acceptance rate)
12. Lawrance, J., Abraham, R., Burnett, M. and Erwig, M. Sharing Reasoning to Improve Fault Localization in Spreadsheets, IEEE VL/HCC 2006, Brighton, United Kingdom, September 2006, 35-42. (25% acceptance rate)
13. Beckwith, L., Kissinger, C., Burnett, M., Wiedenbeck, S., Lawrance, J., Blackwell, A. and Cook, C. Tinkering and Gender in End-User Programmers' Debugging, ACM CHI 2006, Montréal, Quebec, Canada, April 2006, 231-240. (23% acceptance rate)
14. Lawrance, J., Clarke, S., Burnett, M. and Rothermel, G. How well do professional developers test with code coverage visualizations? An empirical study, IEEE VL/HCC 2005, Dallas, Texas, September 2005, 53-60. (31% acceptance rate)

Minor Papers

15. Lawrance, J. and Jung, S. Quick Git Setup Tutorial, CCSCNE 2015 (under review).
16. Lawrance, J. and Jung, S. Git on the cloud workshop, Journal of Computing Sciences in Colleges, Volume 28, Issue 6, June 2013, 14-15.
17. Torosyan, R. and Lawrance, J. Making Feedback and Grading More Natural Using Google Docs and Forms, New England Faculty Development Consortium, November 2012.
18. Wiseman, C., Lawrance, J. and Suresh, D. Rapidly Gauging Student Comprehension with Online Tools, New England Faculty Development Consortium, June 2012.
19. Burnett, M., Bogart, C., Cao, J., Grigoreanu, V., Kulesza, T. and Lawrance, J., End-User Software Engineering and Distributed Cognition, SEEUP Workshop at ICSE, May 2009, 9-19.
20. Lawrance, J., Bogart, C., Burnett, M., Bellamy, R., and Rector, K. How People Debug, Revisited: An Information Foraging Theory Perspective, IBM TR RC24783, April 2009.
21. Lawrance, J. Using Programming by Demonstration to Reorganize User Interfaces, Graduate Student Consortium at IEEE VL/HCC, Brighton, United Kingdom, September 2006, 238-239.
22. Lawrance, J., Burnett, M., Abraham, R. and Erwig, M. Toward Sharing Reasoning to Improve Fault Localization in Spreadsheets, WEUSE II Workshop at ACM CHI 2006.
23. Burnett M., Dagit, J., Lawrance, J., Beckwith, L. and Kissinger, C. Experiences with Cognitive Dimensions, Cognitive Dimensions 10th Anniversary Workshop at IEEE VL/HCC 2005.
24. Lawrance, J., Clarke, S., Burnett, M. and Rothermel, G. How Well Do Professional Developers Test with Code Coverage Visualizations? An Empirical Study, Oregon State University TR 2005-86, March 2005.