

**CURRICULUM VITAE  
MACNEIL SHONLE**

University of California, San Diego  
Computer Science and Engineering  
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**EDUCATION**

University of California, San Diego; 2003–2009

PhD, Computer Science (2009)

Dissertation: *A Framework for the Checking and Refactoring of Crosscutting Concepts*

Advised by: William G. Griswold and Sorin Lerner

MS, Computer Science (2006)

Clark University, Worcester, Massachusetts; 1996–2000

BA, Computer Science with a minor in Mathematics (2000)

Magna Cum Laude, with Highest Departmental Honors in Computer Science

**RESEARCH INTERESTS**

Software engineering (particularly refactoring, software design, and programming tools), aspect-oriented programming, programming language design

**PUBLICATIONS**

*Refereed Publications*

10. Sullivan, K., Griswold, W. G., Song, Y., Cai, Y., Rajan, H., Shonle, M., Tewari, N. 2009. Modular Aspect-Oriented Design with XPIs. *Transactions on Software Engineering and Methodology (TOSEM)*.

9. Shonle, M., Griswold, W., and Lerner, S. 2008. Addressing Common Crosscutting Problems with Arcum. In *8th ACM SIGPLAN-SIGSOFT Workshop on Program Analysis for Software Tools and Engineering (PASTE)*, pages 64–69.

8. Shonle, M., Griswold, W., and Lerner, S. 2008. When Refactoring Acts like Modularity: Keeping Options Open with Persistent Condition Checking. In *Second ACM Workshop on Refactoring Tools (WRT)*, 4 pages.

7. Shonle, M., Griswold, W., and Lerner, S. 2007. Beyond refactoring: a framework for modular maintenance of crosscutting design idioms. In *Proceedings of the 6th Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (Dubrovnik, Croatia, September 03–07, 2007)*. ESEC-FSE '07. ACM, New York, NY, 175–184. [Acceptance rate: 16.7%]

6. Shonle, M. 2007. Modular-Like Transformations and Style Checking for Crosscutting Programming Concepts. In *Companion to the Proceedings of the 29th international Conference on Software Engineering (May 20–26, 2007)*. IEEE Computer Society, Washington, DC, (ICSE Doctoral Symposium), pages 95–96. [Acceptance rate: 33.3%]

5. Griswold, W. G., Sullivan, K., Song, Y., Shonle, M., Tewari, N., Cai, Y., and Rajan, H. 2006. Modular Software Design with Crosscutting Interfaces. *IEEE Software*, 23, 1 (Jan. 2006), 51–60.

4. O'Connor, A., Shonle, M., and Griswold, W. 2005. Star diagram with automated refactorings for Eclipse. In *Proceedings of the 2005 OOPSLA Workshop on Eclipse Technology Exchange* (San Diego, California,

October 16–17, 2005). Eclipse '05. ACM, New York, NY, 16–20. [Winner of the best student research paper award.]

3. Sullivan, K., Griswold, W. G., Song, Y., Cai, Y., Shonle, M., Tewari, N., and Rajan, H. 2005. Information hiding interfaces for aspect-oriented design. In *Proceedings of the 10th European Software Engineering Conference Held Jointly with 13th ACM SIGSOFT international Symposium on Foundations of Software Engineering* (Lisbon, Portugal, September 05–09, 2005). ESEC/FSE-13. ACM, New York, NY, 166–175. [Acceptance rate: 15.9%]

2. Shonle, M., Neddenriep, J., and Griswold, W. 2004. AspectBrowser for Eclipse: a case study in plug-in retargeting. In *Proceedings of the 2004 OOPSLA Workshop on Eclipse Technology Exchange* (Vancouver, British Columbia, Canada, October 24–24, 2004). Eclipse '04. ACM, New York, NY, 78–82.

1. Shonle, M., Lieberherr, K., and Shah, A. 2003. XAspects: an extensible system for domain-specific aspect languages. In *Companion of the 18th Annual ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications* (Anaheim, CA, USA, October 26–30, 2003). OOPSLA '03 (Domain-Driven Development track). ACM, New York, NY, 28–37. [Acceptance rate: 30%]

#### *Technical Reports*

2. Shonle, M. “A Framework for the Checking and Refactoring of Crosscutting Concepts.” Ph.D. Thesis, Department of Computer Science and Engineering, University of California, San Diego, June 2009.

1. Shonle, M, Griswold, W., and Lerner, S. 2008. The techniques programmers use to cope with crosscutting using Arcum. UCSD CS2008-0933, December 5, 2008, 12 pages.

#### **TEACHING EXPERIENCE**

Computer Science and Engineering Department, UCSD, La Jolla, CA

Instructor for *Programming Languages: Principles and Paradigms* (CSE130); Summer 2007

Teaching Assistant for *Intro to CS: Java* (CSE8A); Fall 2006

Teaching Assistant for *Intro to CS: Java* (CSE8B); Spring 2006

Teaching Assistant for *Intro to CS and Object-Oriented Programming: Java* (CSE11); Fall 2004

#### **PROFESSIONAL EXPERIENCE**

##### *Member Technical Staff*

Sun Microsystems, Inc., Burlington, Massachusetts; June 2000–June 2003

Software developer for the MPPProf and Prism components of Sun’s HPC ClusterTools.

- Leader of Implementation Team for MPPProf: A Message-Passing Profiler
- Contributor to Prism: a multi-process, multi-threaded parallel-debugger for MPI programs

##### *Consultant for Always Thinking, Inc.*

Subcontract from Microsoft and Emerson Kennedy; Summer 1997

Ported Microsoft Word Internet Assistant (Office '98) to the MacOS.

#### **HONORS AND AWARDS**

Phi Beta Kappa (Clark University, 1999)

Upsilon Pi Epsilon (Northeastern University, 2003)

Clark Achievement Grant

Outstanding Academic Achievement in Computer Science Award (Fall 1998)

IBM Eclipse Innovation Grant 2005, “*Fluid Architecture - Turbocharging Automated Agile-Design Refactorings with Aspect-Oriented Programming*,” advised by W. Griswold, \$23,500.