

## Yong, Suan Hsi

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### Educational Background

University of Wisconsin-Madison.

Ph.D. in Computer Science, August 2004

M.S. in Computer Science, December 1999

Concentration: Programming Languages and Compilers

Minor: Mathematics

Angelo State University, San Angelo, Texas.

B.Sc. in Computer Science and Physics, May 1997

### Employment History

Aug 2004 – present: Senior Software Scientist, GrammaTech Inc.

Jan 1998 – Aug 2004: Research Assistant, University of Wisconsin.

Research work on points-to analysis, run-time type-checking, and a security tool. Advisor: Susan Horwitz.

May 1999 – Aug 1999: Summer Intern, Microsoft Research.

Research work on points-to analysis. Advisor: Manuvir Das.

Aug 1997 – Dec 1997: Teaching Assistant, University of Wisconsin.

Lab consultant for introductory programming class.

Sep 1995 – May 1997: Student Assistant, Angelo State University.

Prepare (graphitize) samples for AMS carbon-dating.

May 1996 – Aug 1996: Summer Intern, MIT Haystack Observatory.

Write Java program to display incoherent-scatter radar data.

### Selected Publications

- S. Yong and S. Horwitz. Using Static Analysis to Reduce Dynamic Analysis Overhead. *Formal Methods in System Design*, 27(3):313-334, November 2005, Springer Netherlands.
- S. Yong. Runtime Monitoring of C Programs for Security and Correctness. Ph.D. Thesis, Computer Sciences Department, University of Wisconsin-Madison, August 2004.
- S. Yong and S. Horwitz. Pointer-Range Analysis. *Static Analysis Symposium (SAS)*, Verona, Italy, August 2004.
- S. Yong and S. Horwitz. Protecting C Programs from Attacks via Invalid Pointer Dereferences. *European Software Engineering Conference and ACM SIGSOFT International Symposium on the Foundations of Software Engineering (ESEC/FSE '03)*, Helsinki, Finland, September 2003.
- S. Yong and S. Horwitz. Reducing the Overhead of Dynamic Analysis. *Second Workshop on Runtime Verification (RV'02)*, Copenhagen, Denmark, July 2002, Electronic Notes in Theoretical Computer Science, 70(4): 159-179.
- A. Loginov, S. Yong, S. Horwitz, and T. Reps. Debugging via Run-Time Type Checking. In H. Hussmann, editor, *Fundamental Approaches to Software Engineering (FASE 2001)*, Genoa, Italy, April 2001, LNCS 2029, Springer, pp. 217-232.
- S. Yong, S. Horwitz, and T. Reps. Pointer Analysis for Programs with Structures and Casting. In *Proceedings of the 1999 ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI 99)*, Atlanta GA, May 1999, pp. 91-103.

<b>Research Interest</b>	<p>My area of concentration is Programming Languages and Compilers, specializing in program analysis, both static and dynamic. My dissertation work is on instrumenting programs for debugging and security, using static analysis to improve the efficiency and coverage of the instrumentation.</p> <p>Research interests also include points-to analysis, model checking, and programming language design.</p>
<b>Talks</b>	<p>Static Analysis Symposium (SAS), Verona, Italy, August 2004.  European Software Engineering Conference/FSE, Helsinki, Finland, Sep. 2003.  European Joint Conference on Theory and Practice of Software (ETAPS), Genoa, Italy, April 2001.  Istituto di Elaborazione della Informazione, National Research Council (CNR), Pisa, Italy, March 2001.  IBM T.J. Watson Research Center, Hawthorne, New York, July 2000.  Conference on Programming Language Design and Implementation (PLDI), Atlanta, Georgia, May 1999.  Programming Languages Seminars, University of Wisconsin-Madison.</p>
<b>Advanced Courses in Other Areas</b>	<p>Advanced Computer Architecture;  Advanced Operating Systems; Distributed Systems;  Computer Graphics and Animation;  Topics in Database Management Systems;  Foundations of Mathematics (Logic); Introductory Topology.</p>
<b>Languages</b>	<p>C, C++, Java, ML; HTML, Perl, PHP, SQL.</p>
<b>Other Work</b>	<p>Vance Integral Edition (<a href="http://www.vanceintegral.com">www.vanceintegral.com</a>):  Webmaster and database manager for volunteer-run project to publish the Complete Works of Jack Vance in 44 volumes.  Programming Languages (PL) Group, University of Wisconsin-Madison:  Organize PL seminar and PL reading groups; maintain webpages.  Reviewed Papers for:  Formal Methods in System Design (FMSD), 2003.  Principles of Programming Languages (POPL), 2001.  5th International Euro-Par Conference on Parallel Processing, 1999.  Member of Association for Computing Machinery (ACM),  Special Interest Group on Programming Languages (SIGPLAN)  Miscellaneous Activities:  Hoofers Outing and Sailing Clubs, Malaysian Students Association,  SACM Hockey Club/Intramural Hockey, Wisconsin Marching Band.</p>
<b>Honors</b>	<p>1998 Dept. of Computer Sciences Summer Research Assistantship,  University of Wisconsin-Madison  1997 Distinguished Student Award, College of Sciences,  Angelo State University  1996-1997 Carr Research Fellowship, Angelo State University  1995 ACM Regional Programming Contest, 2nd place (Div II)</p>
<b>References</b>	<p>Available upon request</p>