

# Stephanie Weirich

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## RESEARCH INTERESTS

Programming languages, Type theory, Dynamic type analysis, Functional programming, Metaprogramming, Language-based security.

## EDUCATION

Ph.D. Computer Science, expected May 2002  
Thesis title: Programming with Types  
Advisor: Greg Morrisett  
Cornell University, Ithaca, New York.  
M.S. Computer Science, May 2000  
Cornell University, Ithaca, New York.  
B.A. Computer Science, *magna cum laude*, May 1996  
Rice University, Houston, Texas.

## EXPERIENCE

Cornell University, Ithaca, New York, 1996 – present  
Instructor, CS 212, Java Practicum, Fall 2001  
Intel Fellow, 2000-2001  
Research Assistant, 1999-2000  
Teaching Assistant, CS 611, Advanced Programming Languages, Fall 1998  
Instructor, CS 213, C++ Programming, Fall 1997  
Instructor, CS 214, A Taste of UNIX and C, Fall 1997  
National Science Foundation Graduate Research Fellow, 1996-1999

Lucent Technologies, Bell Labs, Murray Hill, New Jersey, Summer 1999  
Summer Intern, under the supervision of John Reppy

## INVITED TALKS

*Run-Time Type Analysis and Program Verification*. Research, Careers and Computer Science: A Maryland Symposium. University of Maryland, College Park, MD. November 2001.

*Polytypic Programming and Intensional Type Constructor Analysis*. International Federation for Information Processing (IFIP) Working Group 2.8, Åre, Sweden, April 2001.

*Resource Bound Certification*. Harvard University, Boston, MA. February 2001.

*Resource Bound Certification*. IBM Research, Hawthorne, NY. June 2000.

*Type Analysis and Typed Compilation*. Princeton University, Princeton, NJ. June 1999.

## SERVICE

Program committee for ACM International Conference on Functional Programming, 2002.

Program committee for IFIP TC2 Working Conference on Generic Programming, 2002.

Program committee for 2001 Haskell Workshop.

Referee: TOPLAS, Acta Informatica, JFP, HOSC, ICFP, POPL, PLDI, PEPM, FOOL.

## HONORS

Intel Graduate Student Fellowship, 2000–2001.

National Science Foundation Graduate Research Fellowship, 1996–1999.

CRA-W Distributed Mentorship Project Award, 1996.

Microsoft Technical Scholar, 1995–1996.

## PUBLICATIONS

- [1] Stephanie Weirich. Higher-Order Intensional Type Analysis. In Daniel Le Métayer, editor, *Programming Languages and Systems: 11th European Symposium on Programming, ESOP 2002 Held as Part of the Joint European Conferences on Theory and Practice of Software, ETAPS 2002 Grenoble, France, April 8-12, 2002*. To appear.
- [2] Karl Crary, Stephanie Weirich, and Greg Morrisett. Intensional Polymorphism in Type Erasure Semantics. In *Journal of Functional Programming*. To appear.
- [3] Stephanie Weirich. Encoding Intensional Type Analysis. In D. Sands, editor, *Programming Languages and Systems: 10th European Symposium on Programming, ESOP 2001 Held as Part of the Joint European Conferences on Theory and Practice of Software, ETAPS 2001 Genova, Italy, April 2-6, 2001*, volume 2028 of *Lecture Notes in Computer Science*, pages 92–106. Springer, 2001.
- [4] Michael Hicks, Stephanie Weirich, and Karl Crary. Safe and Flexible Dynamic Linking of Native Code. In R. Harper, editor, *Types in Compilation: Third International Workshop, TIC 2000; Montreal, Canada, September 21, 2000; Revised Selected Papers*, volume 2071 of *Lecture Notes in Computer Science*, pages 147–176. Springer, 2001.

- [5] Stephanie Weirich. Type-Safe Cast: Functional Pearl. In *Proceedings of the Fifth ACM SIGPLAN International Conference on Functional Programming*, pages 58–67, Montreal, September 2000.
- [6] Karl Crary and Stephanie Weirich. Resource Bound Certification. In *Twenty-Seventh ACM Symposium on Principles of Programming Languages*, pages 184–198, Boston, MA, January 2000.
- [7] Karl Crary and Stephanie Weirich. Flexible Type Analysis. In *Proceedings of the Fourth ACM SIGPLAN International Conference on Functional Programming*, pages 233–248, Paris, September 1999.
- [8] Greg Morrisett, Karl Crary, Neal Glew, Dan Grossman, Richard Samuels, Frederick Smith, David Walker, Stephanie Weirich, and Steve Zdancewic. TALx86: A Realistic Typed Assembly Language. In *Second ACM SIGPLAN Workshop on Compiler Support for System Software*, pages 25–35, Atlanta, GA, USA, May 1999. Published as INRIA research report number 0228, March 1999.
- [9] Karl Crary, Stephanie Weirich, and Greg Morrisett. Intensional Polymorphism in Type Erasure Semantics. In *Proceedings of the Third ACM SIGPLAN International Conference on Functional Programming*, volume 34 of *ACM SIGPLAN Notices*, pages 301–313, Baltimore, MD, September 1998.
- [10] Cormac Flanagan, Matthew Flatt, Shriram Krishnamurthi, Stephanie Weirich, and Matthias Felleisen. Catching Bugs in the Web of Program Invariants. In *Proceedings of the ACM SIGPLAN Conference on Programming Language Design and Implementation*, pages 23–32, 1996.

## REFERENCES

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