

# Stephanie Weirich

School of Engineering and Science, University of Pennsylvania

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## Education

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<b>Cornell University</b> <i>Ph.D., Computer Science</i>	<b>Ithaca, NY</b> 2002
<b>Cornell University</b> <i>M.S., Computer Science</i>	<b>Ithaca, NY</b> 2000
<b>Rice University</b> <i>B.A., Computer Science, magnum cum laude</i>	<b>Houston, TX</b> 1996

## Positions

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<b>University of Pennsylvania</b> <i>Professor</i>	<b>Philadelphia, Pennsylvania</b> <i>July 2015-present</i>
<b>University of Pennsylvania</b> <i>Associate Professor</i>	<b>Philadelphia, Pennsylvania</b> <i>July 2008-June 2015</i>
<b>University of Cambridge</b> <i>Visitor</i>	<b>Cambridge, UK</b> <i>August 2009-July 2010</i>
<b>Microsoft Research</b> <i>Visiting Researcher</i>	<b>Cambridge, UK</b> <i>September-November 2009</i>
<b>University of Pennsylvania</b> <i>Assistant Professor</i>	<b>Philadelphia, Pennsylvania</b> <i>July 2002-July 2008</i>
<b>Cornell University</b> <i>Instructor, Research Assistant and Teaching Assistant</i>	<b>Ithaca, New York</b> <i>August 1996-July 2002</i>
<b>Lucent Technologies</b> <i>Intern</i>	<b>Murray Hill, New Jersey</b> <i>June-July 1999</i>

## Research Interests

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Programming languages, Type systems, Functional programming, Generic programming, Dependent types, Program verification, Proof assistants

## Honors

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- Penn Engineering Fellow, University of Pennsylvania, 2014.
- Institute for Defense Analyses Computer Science Study Panel, 2007.
- National Science Foundation CAREER Award, 2003.
- 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.

## Teaching Experience

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### University of Pennsylvania.....

- CIS 120 - Programming Languages and Techniques I  
Spring 2015, Spring 2014, Spring 2013, Spring 2012, Spring 2011, Fall 2008, Spring 2008,  
Spring 2007
- CIS 500 - Software Foundations  
Fall 2014, Fall 2005, Fall 2004
- CIS 552 - Advanced Programming  
Fall 2015, Fall 2013, Fall 2012, Fall 2011
- CIS 670/700 - Advanced topics in Programming Languages  
Fall 2010, Spring 2009, Fall 2006, Spring 2006, Fall 2002
- CIS 340 - Principles of Programming Languages  
Spring 2004, Spring 2003

### Cornell University.....

- CS 212 - Java Practicum
- CS 213 - C++ Programming
- CS 214 - A Taste of UNIX and C

## Students

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### Dissertation supervision.....

- Richard Eisenberg, anticipated graduation date: Summer 2016.  
*Dependently-Typed Haskell*
- Vilhelm Sjöberg, May 2015.  
*A Dependently Typed Language with Nontermination*  
Current position: Postdoc, Yale University.
- Brent Yorgey, December 2014.  
*Combinatorial Species and Labelled Structures*  
Current position: Assistant Professor, Hendrix College.
- Chris Casinghino, December 2014.  
*Combining Proofs and Programs*  
Current position: Draper Laboratory.
- Dimitrios Vytiniotis, August 2008. *Practical type inference for first-class polymorphism*  
Current position: Microsoft Research, Cambridge UK.
- Geoffrey Washburn, December 2007. *Principia Narcissus: How to avoid being caught by your reflection*  
Current position: Logicblox.

### Dissertation committee member.....

- Peter Michael Osera, Penn, July 2015.
- Daniel Wagner, Penn, June 2014.
- Harley Eades III, University of Iowa, May 2014.
- Julien Cretin, INRIA / University Paris 7, January 2014.

- Michael Greenberg, Penn (chair), December 2013.
- Hongbo Zhang, Penn, Master's thesis, December 2013.
- Karl Mazurak, Penn (chair), May 2013.
- Jianzhao Zhao, Penn, April 2013.
- Aaron Bohannon, Penn, February 2012.
- Jean-Philippe Bernardy, Chalmers ("Faculty Opponent"), Gothenburg, Sweden, June 2011.
- Jeffrey Vaughan, Penn, December 2009.
- Boris Yakobowski, INRIA / University Paris 7, December 2008.
- Dan Dantas, Princeton University, August 2007.
- Stephen Tse, Penn, August 2007.
- Wahnghong Nam, Penn, December 2006.
- Joeseph Vanderwaart, Carnegie Mellon University, August 2006.
- Vladimir Gapayev, Penn, January 2006.

#### Visiting PhD student supervision.....

- Antoine Voizard, École Normale Supérieure, Paris. Mar-Aug 2014.
- Steven Keuchel, University of Ghent, Sep 2013-Mar 2014.
- Arthur Charguéraud (co-supervised with Benjamin Pierce), INRIA, 2007.

#### Independent study.....

- Doctoral: Antoin Voizard, Kenny Foner, Fall 2015. Antal Spector-Zablosky, Spring 2013. Jennifer Paykin, Fall 2012. Richard Eisenberg, Justin Hsu, Spring 2012. Richard Eisenberg, Hongbo Zhang. Fall 2011. Brent Yorgey, Peter-Michael Osera, Vilhelm Sjöberg. Fall 2008-Spring 2009. Chris Casinghino, Spring 2008. Andrew Hilton (co-advised), Karl Mazurak, Jeff Vaughan, Fall 2004. Liang Huang, Spring 2004.
- Masters: Dominik Bollman, Spring 2016. Simon Wimmer, Summer 2015.
- Undergraduate Senior Design Project: Lewis Ellis, Max Scheiber, Ashutosh Goel, and Jeff Grimes (Honorable Mention). Tiernan Garsys, Taylor Mandel, Lucas Peña, and Noam Zilberstein (Third place). 2014-2015. Kaycee Anderson, Juan Jose Lopez, Caroline Ho, and Johanna Martens (Honorable Mention), 2013-2014.
- Undergraduate Research: Matthew Weaver Spring-Fall 2015. Leondra Morse, Summer 2015 (CRA-DREU). Mitchell Stern, Spring 2014. Hamidhasan Ahmed, Spring 2014, Summer 2013. Sneha Popley, Summer 2008 (CRA-DREU). Stephanie Simon, Summer 2008. David Gorski, Fall 2006. Parshant Mittal, Atish Davda, Fall 2005. Neal Parikh, Summer 2004.

## Research Community Service

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#### Journal Service.....

- Editor of Journal of Functional Programming, 2011-2015
- Guest Editor (with Zhenjiang Hu, Shin-Cheng Mu), Progress in Informatics. Special Issue on Advanced Programming Techniques for Construction of Robust, General and Evolutionary Programs, March 2013.
- Guest Editor (with Benjamin Pierce), Journal of Automated Reasoning. Special Issue on the POPLmark Challenge. October 2012.
- Editorial Board, Foundations and Trends in Programming Languages, 2012-present.
- Nomination committee, SIGPLAN CACM Research Highlights, 2009-2011.

## Conference and Workshop Leadership.....

- Dagstuhl seminar “Language Based Verification Tools for Functional Programs” (16131), April 2016, co-organizer.
- Dependently-Typed Programming Workshop (DTP) 2013, program chair and organizer.
- Shonan Village Dependently-Typed Programming, 2011, co-organizer.
- Types in Language Design and Implementation Workshop, 2011, general chair.
- International Conference on Functional Programming (ICFP) 2010, program chair.
- Haskell Symposium 2009, program chair.
- Workshop on Mechanizing Metatheory, 2006-2009, co-organizer.
- Workshop on Mechanizing Metatheory, 2006, program chair.

## Program Committee Membership (conference/symposium).....

- European Symposium on Programming (ESOP) 2017.
- Principles and Practice of Declarative Programming (PPDP) 2016.
- Symposium on Trends in Functional Programming (TFP '16).
- International Conference on Functional Programming (ICFP) 2015.
- Certified Proofs and Programs (CPP) 2015.
- Principles of Programming Languages (POPL) 2014.
- Functional and Logic Programming (FLOPS) 2014.
- Typed Lambda Calculi and Applications (TLCA) 2013.
- Asian Symposium on Programming Languages and Systems (APLAS) 2012.
- International Symp. on Principles and Practice of Declarative Programming (PPDP) 2012.
- Certified Proofs and Programs (CPP) 2011.
- European Symposium on Programming (ESOP) 2011.
- Verified Software, Tools, Theory and Experiments (VSTTE) 2010.
- International Conference on Functional Programming (ICFP) 2007.
- International Conference on Aspect-Oriented Software Development (AOSD) 2007.
- Principles of Programming Languages (POPL) 2006.
- European Symposium on Programming (ESOP) 2006.
- Programming Language Design and Implementation (PLDI) 2004.
- International Conference on Functional Programming (ICFP) 2002.

## Program Committee Membership (workshop).....

- Implementation of Functional Languages (IFL) 2015.
- Coq Workshop 2015.
- Logical Frameworks and Meta Languages Theory and Practice (LFMTP) 2013.
- Trends in Functional Programming in Education (TFPIE) 2013.
- Grace Hopper Conference, Panels, Workshops, and Presentations 2012.
- Programming Languages meets Program Verification Workshop (PLPV) 2010.
- IFIP TC2 Working Conference Domain Specific Languages 2009.
- Proof Carrying Code Workshop 2008.
- Haskell Workshop 2007.
- Workshop on Types in Language Design and Implementation (TLDI) 2007.
- ML Workshop 2006.
- MetaOCaml Workshop, 2005.
- Foundations of Object-Oriented Languages Workshop (FOOL) 2005.
- MetaOCaml Workshop, 2004.

- Foundations of Global Ubiquitous Computing Workshop (FGUC) 2004.
- IFIP TC2 Working Conference on Generic Programming 2002.
- Haskell Workshop 2001.

#### Steering Committee Membership.....

- Haskell Symposium, 2008-2012
- ICFP, 2009-2012
- TLDI, 2010-present
- PLPV, 2012-present
- WGP, 2012-present
- PLMW, 2012-present

#### Technical Society Membership.....

- Association for Computing Machinery, 1998-present
- ACM SIGPLAN, 1998-present
- ACM SIGLOG, 2014-present
- IFIP Working Group 2.8 (Functional Programming), 2003-present
- IFIP Working Group 2.11 (Program Generation), 2007-2012

#### Other.....

- NSF panel: February 2016, June 2014, October 2012, December 2011, March 2008, December 2004.
- Haskell' language standard committee, 2005-2010.
- TYPES forum moderator: 2003-2009.
- PLDI External Review Committee: 2013, 2011, 2009
- POPL External Review Committee: 2015, 2012.
- Ad hoc reviews: JFP, HOSC, Acta Informatica, TOPLAS, SCP, ICFP, POPL, PLDI, ECOOP, LCTES, ICALP, FOOL, ML, Haskell, PEPM, NSF

### Department, School and University Service

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- Undergraduate Chair, CIS, 2014-present.
- Penn Forum for Women Faculty, 2016-present.
- Faculty advisor to CommuniTech (Penn undergraduate service organization). 2012-present.
- Faculty advisor to AΩE International Engineering and Technical Science Sorority. 2012-present.
- University committee on the Facilities, 2011-2014. Chair 2013-2014, 2012-2013.
- Graduate student admissions chair, 2013-2014, 2012-2013.
- Diversity hiring committee chair, 2012-2013.
- CIS seminar series coordinator, 2011-2012.
- Faculty Council, 2010-2012.
- Academic Performance Committee, 2004-present.
- Penn CIS Undergraduate Women's club (WiCS), 2002-present.
- Penn CIS Graduate Women's club (CISters), 2002-present.
- CIS seminar organizer, 2011-2012.
- CIS 120 reform, 2009-2010.
- Back-up Care Committee, 2009.
- Senior Design Project Judge, 2006.

- Freshman Advisor, 2003.
- Graduate Admissions Committee, 2003-2004.
- Curriculum Committee, 2002-2003.

## Outreach

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- Workshop organizer: (with Ron Garcia) ICFP Programming Languages Mentoring Workshop (ICFP-PLMW 2015) Vancouver, BC, September, 2015
- SRC@ICFP student research competition, selection committee. 2015, 2014.
- Workshop co-founder: (with Kathleen Fisher and Ron Garcia) Programming Language Mentoring Workshop (PLMW 2012) Philadelphia, PA, January 24, 2012.
- Programming Contest co-organizer:
  - 2004, Seventh Annual ICFP programming contest
  - 2000, Third Annual ICFP Programming Contest
- Panelist/Speaker:
  - The “Computers”, April 2015
  - WICS high school day for girls, April 2015, April 2014, April 2013, April 2012
  - Teaching Haskell in Academia and Industry (panel). Haskell Symposium, September 2013
  - Graduate Student Professional Seminars March 2013, March 2012
  - SWE Graduate Section Inspiration Lunch Talk, April 20, 2012
  - Philadelphia Area Aspirations in Computing Award presentation, March 21, 2012
  - Penn AWE Pre-Orientation Aug 2011
  - CRA-W/CDC Programming Languages Summer School, UT Austin, May 2007.
  - Women in Science and Engineering Conference, Princeton, February 2006.
- Type Theory Podcast, “Episode 4: Stephanie Weirich on Zombie and Dependent Haskell”

## Funding

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### Current.....

1. *SPARCS: Synthesis of Platform-aware Attack-Resilient Control Systems*  
Lee (PI), Sokolsky, Pappas, Michael, Mangharam, Weirich, Alur, Tabuada. DARPA, \$5.5 million total, 8/2012-8/2017.
2. *CIF: Small: Rich-Type Inference for Functional Programming*  
Weirich (PI). NSF 1319880, \$450,000, 9/2013-8/2016.
3. *CCF-SHF Small: Beyond Algebraic Data Types: Combinatorial Species and Mathematically-Structured Programming*  
Weirich (PI). NSF 1218002, \$325,840, 8/2012-8/2015.
4. *SHF: Small: Dependently-Typed Haskell*  
Weirich (PI). NSF 1116620, \$496,785, 8/2011-8/2015.
5. *SHF: Small: Dependently-Typed Haskell REU* Weirich (PI). NSF 1116620, \$6,000, 8/2011-8/2015.

### Pending.....

1. *Collaborative Research: Expeditions in Computing: The Science of Deep Specification.*  
Weirich, Pierce, Zdancewic (Penn), Appel (Princeton), Shao (Yale), Chlipala (MIT). Suc-

successful preproposal, submitted full proposal to NSF. \$10 million total, 10/2015-9/2020.

2. *Student travel support for ICFP 2015*. Weirich. NSF \$20,000.
3. *CIF: Small: Rich-Type Inference for Functional Programming REU* Weirich. NSF, \$7,000.

#### Completed.....

1. *SHF: Large: Collaborative Research: TRELLYS:Community-Based Design and Implementation of a Dependently Typed Programming Language*  
Weirich (Penn), Stump (University of Iowa), Sheard (Portland State University). NSF 0910786, \$2.1 million total. 2009-2014.
2. *Student Travel Support for Programming languages Mentoring Workshop (PLMW 2012)*  
Weirich (PI). NSF \$15,900, 11/2011.
3. *Networks Opposing Botnets*  
Smith (PI), Pierce, Zdancewic, Loo, Weirich, Felton, Rexford, Walker, Morrisett, Welsh. ONR, \$400,000 (Penn), 2009-2012.
4. *Computer Science Study Panel, Phase II*  
Weirich (PI), Zdancewic. DARPA, \$500,000, 2008-2010.
5. *Collaborative Research: CT-T: Manifest Security*  
University of Pennsylvania. Pierce (PI), Weirich, Zdancewic. Carnegie Mellon University. Pfenning (PI), Harper, Cray. NSF \$1 million total, 2007-2011.
6. *A Practical Dependently-Typed Functional Programming Language*  
Weirich (PI). NSF, \$200,000. 2007-2009.
7. *Computer Science Study Panel, Phase I*  
Weirich. DARPA, \$99,411. 2007-2008.
8. *CRI: Machine Assistance for Programming Languages Research*  
Weirich (PI), Pierce, Zdancewic. NSF \$200,000, 2006-2008.
9. *CAREER: Type-Directed Programming in Object-Oriented Languages*  
Weirich (PI), NSF CCF-0347289: \$400,000, 2003-2008.

#### Invited Talks and Technical Presentations

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1. *TBA*  
Typelevel Summit, Philadelphia, PA, March 2-3, 2016.
2. *Dynamic Typing in GHC*  
Compose :: Conference, Brooklyn, NY, February 4-5, 2016.
3. *Visible Type Application*.  
Microsoft Research, Cambridge, UK, November 6, 2015.
4. *Visible Type Application*.  
University of Kent, November 5, 2015.

5. *Depending on Types*.  
Code Mesh 2015, London, November 4, 2015.
6. *From System F to Typed Assembly Language*, by Morrisett, Walker, Crary, Glew.  
Papers We Love, Philadelphia. Philadelphia, PA, October 6, 2015
7. *Towards Dependently Typed Haskell*  
WG 2.8, Kefalonia, Greece, May 24, 2015
8. *Pi-Forall: How to use and implement a dependently-typed language*.  
Technical Keynote, Compose Conference. New York, January 30, 2015
9. *Programming up-to Congruence*  
ACM Symposium on Principles of Programming Languages (POPL '15). Mumbai, India, January 16, 2015
10. *Depending on Types*.  
Computer Science Colloquium Series, Indiana University. Bloomington, Indiana, October 17, 2014
11. *Programming Languages Panel*.  
Cornell CS 50th Anniversary Symposium. Ithaca, New York, October 2, 2014
12. *Depending on Types*.  
Keynote address, International Conference on Functional Programming (ICFP). Gothenburg, Sweden, September 3, 2014
13. *Programming Up-to Congruence, Again*.  
WG 2.8, Estes Park, Colorado, August 12, 2014
14. *Combining Proofs and Programs*.  
Certification of High-level and Low-level programs. Paris, France, July 7, 2014
15. *Why You Should Care About Dependent Types*.  
Programming Languages Mentoring Workshop. San Diego, CA, January 21, 2014
16. *Programming Up-to Congruence*.  
WG 2.8, Aussios, France, October 14, 2013
17. *The Pleasure and Pain of Advanced Type Systems*.  
Invited speaker, Facebook Faculty Summit. Menlo Park, CA, August 6, 2013
18. *Paradoxical Typecase*.  
WG 2.8, Anapolis, MD, November 7, 2012
19. *A POPLmark Retrospective: Using Proof Assistants in Programming Language Research*.  
Invited speaker, LFMTTP 2012: 7th International Workshop on Logical Frameworks and Meta-languages: Theory and Practice, Copenhagen, Denmark, September 9, 2012
20. *Dependently-typed programming in GHC*.  
Invited speaker, FLOPS 2012: Eleventh International Symposium on Functional and Logic Programming, Kobe, Japan, May 25, 2012



21. *Binders Unbound.*  
The 16th ACM SIGPLAN International Conference on Functional Programming, ICFP 2012  
Tokyo Japan, September 21, 2011
22. *Combining Proofs and Programs.*  
Dependently Typed Programming, Shonan Seminar 007, Shonan Village, Japan, September  
16, 2011
23. *Combining Proofs and Programs.*  
Joint invited speaker for Rewriting Techniques and Applications (RTA 2011) and Typed  
Lambda Calculi and Applications (TLCA 2011) Novi Sad, Serbia, June 1, 2011
24. *Combining Proofs and Programs in Trellys.*  
Plenary Address, MFPS 27. Pittsburgh, PA. May 26, 2011
25. *Generic Binding and Telescopes.*  
WG 2.8, Marble Falls, TX. March 11, 2011
26. *Generative Type Abstraction and Type-level Computation.*  
ACM Symposium on Principles of Programming Languages (POPL '11). Austin, TX, Jan-  
uary 2011
27. *ICFP 2010 Program Chair's Report.*  
Baltimore, MD. September 27, 2010
28. *Dependent Types and Program Equivalence.*  
University of Strathclyde. Glasgow, Scotland. April 30, 2010
29. *Generic Programming with Dependent Types.*  
IFIP 2.11, St. Andrews, Scotland. March 1-3, 2010
30. *Dependent Types and Program Equivalence.*  
University of Nottingham. Nottingham, England. February 5, 2010
31. *Trellys Status Report.*  
PLPV Discussion. Madrid, Spain. January 19, 2010
32. *A POPLmark Retrospective: Using Proof Assistants in Programming Language Research.*  
University of Cambridge Computer Laboratory Wednesday Seminars. Cambridge, England.  
December 2, 2009
33. *Dependent Types and Program Equivalence.*  
Semantics Lunch, University of Cambridge Computer Laboratory. Cambridge, England.  
November 2, 2009
34. *Haskell Symposium 2009 Program Chair's report.*  
Edinburgh, Scotland. September 3, 2009
35. *Doing Dependent Types Wrong Without Going Wrong.*  
IFIP WG 2.8, Frauenchiemsee, Germany, June 2009

36. *Adventures in Dependently-Typed Metatheory.*  
IFIP WG 2.11, Mountain View CA. April 15, 2009
37. *Engineering Formal Metatheory*  
Computer Science Colloquium, City University of New York Graduate Center. New York, NY. February 2, 2009
38. *First-class Polymorphism for Haskell.*  
IFIP WG 2.8, Park City, UT. June 19, 2008
39. *Engineering Formal Metatheory.*  
Princeton University, Princeton NJ, USA. November 19, 2007
40. *Machine Assistance for Programming Language Research.*  
Cornell University, Ithaca, NY, USA. October 12, 2007
41. *Formal Reasoning About Programs and Programming Languages.*  
National Security Agency. Fort Meade, MD, USA.  
July 20, 2007
42. *Engineering Aspects of Formal Metatheory.*  
Harvard University, Boston MA, USA. June 1, 2007
43. *Dependently-Typed Languages.*  
Working session summary. IFIP WG 2.11, Portland, OR, October 2006
44. *Simple Unification-Based Type Inference for GADTs.*  
International Conference on Functional Programming (ICFP). Portland, OR. September 2006
45. *RepLib: A Library for Derivable Type Classes.*  
Haskell Workshop. Portland, OR. September 2006
46. *Parametricity and GADTs.*  
IFIP Working Group 2.8 (Functional Programming). Boston, MA. July 2006
47. *Practical Type Inference for Advanced Type Systems.*  
International Federation for Information Processing (IFIP) Working Group 2.11, Dagstuhl, Wadern, Germany. January 2006
48. *Boxy Types: Inference for Higher-rank Types and Impredicativity.*  
International Federation for Information Processing (IFIP) Working Group 2.8, Kalvi Manor, Estonia. October 2005
49. *A Core Language for Generalised Algebraic Datatypes.*  
International Federation for Information Processing (IFIP) Working Group 2.8, West Point, USA. November 2004
50. *A Design for Type-directed Java.*  
Programming Languages Seminar, Yale University, New Haven, CT. October 1, 2004

51. *2004 ICFP Programming Contest Results.*  
(Presented jointly with Benjamin Pierce and Steve Zdancewic) International Conference on Functional Programming, Snowbird, UT. September 20, 2004
52. *A Core Language for Generalised Algebraic Datatypes.*  
Dagstuhl Seminar 04381: Dependently Typed Programming, Wadern, Germany. September 12, 2004
53. *A Design for Type-Directed Java.*  
Microsoft Research Lab, Cambridge, UK. August 31, 2004
54. *A Design for Type-Directed Java.*  
Workshop on Object-Oriented Developments (WOOD '04). London, UK, August 2004
55. *Unifying Nominal and Structural Ad-hoc Polymorphism.*  
International Federation for Information Processing (IFIP) Working Group 2.8, Coffs Harbour, Australia. January 2003
56. *Unifying Nominal and Structural Ad-hoc Polymorphism.*  
Computer Science Colloquium, City University of New York Graduate Center. New York, NY. October 30, 2003
57. *Boxes Go Bananas: Parametric Higher-Order Abstract Syntax in System F.*  
Laboratory for Secure Systems Seminar, Stevens Institute of Technology. Hoboken, NJ. May 5, 2003
58. *Run-time type analysis in Haskell with an Awful Lot of Newtypes.*  
International Federation for Information Processing (IFIP) Working Group 2.8, Crans-Montana, Switzerland. January 2003
59. *Polytypic Programming and Intensional Type Analysis.*  
New Jersey Programming Languages Seminar. University of Pennsylvania, Philadelphia, PA. September 20, 2002
60. *Programming with Types.*  
OHSU/Oregon Graduate Institute, Beaverton, OR. February 11, 2002
61. *Programming with Types.*  
University of Oregon, Eugene, OR. February 15, 2002
62. *Programming with Types.*  
University of Pennsylvania, Philadelphia, PA. February 19, 2002
63. *Programming with Types.*  
University of Virginia, Charlottesville, VA. February 28, 2002
64. *Programming with Types.*  
University of Maryland, College Park, MD. March 4, 2002
65. *Programming with Types.*  
Northeastern University, Boston, MA. March 13, 2002

66. *Programming with Types*.  
University of California, San Diego, CA. March 15, 2002
67. *Programming with Types*.  
Purdue University, West Lafayette, IN. March 25, 2002
68. *Programming with Types*.  
University of Michigan, Ann Arbor, MI. March 27, 2002
69. *Programming with Types*.  
University of Texas, Austin, TX. April 2, 2002
70. *Higher-order Intensional Type Analysis*.  
European Symposium on Programming (ESOP '02). Grenoble, France, April 2002
71. *Programming with Types*.  
University of Colorado at Boulder, CO. April 16, 2002
72. *Programming with Types*.  
Pennsylvania State University, State College, PA. April 19, 2002
73. *Programming with Types*.  
Massachusetts Institute of Technology, Boston, MA. April 25, 2002
74. *Programming with Types*.  
Rice University, Houston TX. April 29, 2002
75. *Run-Time Type Analysis and Program Verification*.  
Research, Careers and Computer Science: A Maryland Symposium. University of Maryland,  
College Park, MD. November 2001
76. *Polytypic Programming and Intensional Type Constructor Analysis*.  
International Federation for Information Processing (IFIP) Working Group 2.8, Are, Sweden.  
April 2001
77. *Encoding Intensional Type Analysis*.  
European Symposium on Programming (ESOP '01). Genova, Italy. April 2001
78. *Resource Bound Certification*. Harvard University, Boston, MA. February 2001
79. *Functional Pearl: Type-Safe Cast*. International Conference on Functional Programming.  
Montreal, Canada. September 2000
80. *Resource Bound Certification*. IBM Research, Hawthorne, NY. June 2000
81. *Resource Bound Certification*. ACM Symposium on Principles of Programming Languages  
(POPL '00). Boston, MA, USA. January 2000
82. *Flexible Type Analysis*.  
International Conference on Functional Programming (ICFP '99). Paris, France, September  
1999

83. *Type Analysis and Typed Compilation*.  
Princeton University, Princeton, NJ. June 1999
84. *Intensional Polymorphism in Type-Erasure Semantics*.  
International conference on Functional Programming (ICFP '98). Baltimore, MD, USA,  
September 1998

## Tutorials

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- *How to write a great research paper: Simon's seven easy steps*  
Programming Languages Mentoring Workshop. Mumbai, India, 2015
- *How to give a good research talk*  
Programming Languages Mentoring Workshop. Mumbai, India, 2015
- *Designing Dependently-Typed Programming Languages*.  
Oregon Programming Languages Summer School: Types, Logic, and Verification. Eugene  
OR, USA. June 2014
- *Designing Dependently-Typed Programming Languages*.  
Oregon Programming Languages Summer School: Types, Logic, and Verification. Eugene  
OR, USA. July 2013
- *Computational Flags*  
Swarthmore CATALYST Conference for 7th/8th graders, April 2015, March 2012
- *Generic Programming with Dependent Types*.  
Spring School on Generic and Indexed Programming. Oxford, England. March 2010
- *Coq for Programming Language Metatheory*.  
Oregon Programming Languages Summer School on Logic and Theorem Proving in Pro-  
gramming Languages. University of Oregon, July 2008
- *Using Proof Assistants for Programming Language Research or, How to write your next  
POPL paper in Coq*.  
POPL Tutorial, Jan 2008
- *Getting started in PL design research*.  
CRA-W/CDC Programming Languages Summer School. UT Austin, May 2007
- *Career paths: How to get started in academia or industry*.  
CRA-W/CDC Programming Languages Summer School. UT Austin, May 2007

## Refereed Conference and Workshop Publications

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- [1] Steven Keuchel, Stephanie Weirich, and Thomas Tom Schrijvers. Infragen: Binder boiler-plate at scale. In *European Symposium on Programming (ESOP)*, April 2016. To appear.
- [2] Richard A. Eisenberg, Stephanie Weirich, and Hamidhasan G. Ahmed. Visible type application (extended version). In *European Symposium on Programming (ESOP)*, April 2016. To appear.
- [3] Wenrui Meng, Junkil Park, Oleg Sokolsky, Stephanie Weirich, and Insup Lee. Verified ros-based deployment of platform-independent control systems. In *Seventh NASA Formal Methods Symposium*, Pasadena, CA, 2015.
- [4] Vilhelm Sjöberg and Stephanie Weirich. Programming up to congruence. In *POPL 2015: 42nd ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages*,

pages 369–382, Mumbai, India, January 2015. An extended version is also available in the Technical Reports section below.

- [5] Joachim Breitner, Richard A. Eisenberg, Simon Peyton Jones, and Stephanie Weirich. Safe zero-cost coercions for Haskell. In *The 19th ACM SIGPLAN International Conference on Functional Programming*, ICFP '14, pages 189–202, September 2014.
- [6] Richard A. Eisenberg, Dimitrios Vytiniotis, Simon Peyton Jones, and Stephanie Weirich. Closed type families with overlapping equations. In *POPL 2014: 41st ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages*, pages 671–683, San Diego, CA, USA, January 2014.
- [7] Chris Casinghino, Vilhelm Sjöberg, and Stephanie Weirich. Combining proofs and programs in a dependently typed language. In *POPL 2014: 41st ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages*, pages 33–45, San Diego, CA, USA, 2014.
- [8] Stephanie Weirich, Justin Hsu, and Richard A. Eisenberg. System FC with explicit kind equality. In *Proceedings of The 18th ACM SIGPLAN International Conference on Functional Programming*, ICFP '13, pages 275–286, Boston, MA, September 2013.
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