

### Contact

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### Education

- Fall 1998 – Spring 2003* Doctor of Philosophy, School of Information and Computer Sciences, University of California, Irvine. Thesis: *Component-Oriented Programming Languages: Why, What, and How?* Advisor: Prof. Dr. Michael Franz.
- Fall 1998 – Fall 2000* Master of Science (Concentration in Computer Systems and Networking), Department of Information and Computer Science, University of California, Irvine.
- Fall 1990 – Winter 1997* Diplom-Informatiker (Concentration in Technical and Industrial Applications), Department of Computer Science and Mathematics, Munich University of Applied Sciences, Germany. Thesis: *On the Future Development of the Programming Language Oberon-2*. Advisor: Prof. Dr. Klaus Köhler.

### Experience

- Fall 2008 – present* Director, Johns Hopkins Gaming Lab, Department of Computer Science, Whiting School of Engineering, The Johns Hopkins University.
- Summer 2008 – present* Senior Lecturer, Department of Computer Science, Whiting School of Engineering, The Johns Hopkins University.
- Spring 2006 – present* Director of Internship Programs and Career Center Liaison, Department of Computer Science, Whiting School of Engineering, The Johns Hopkins University.
- Fall 2005 – Summer 2008* Lecturer, Department of Computer Science, Whiting School of Engineering, The Johns Hopkins University.
- Fall 2002 – Spring 2005* Lecturer, Department of Computer Science and Engineering, Bourns College of Engineering, University of California, Riverside.
- Fall 2002 – Spring 2003* Research Programmer, Prof. Dr. Brett Fleisch, Department of Computer Science and Engineering, Bourns College of Engineering, University of California, Riverside.
- Fall 1998 – Summer 2002* Research Associate, Prof. Dr. Michael Franz, Department of Information and Computer Science, University of California, Irvine.

- Summer 2001* Instructor, Department of Information and Computer Science, University of California, Irvine.
- Fall 1998 – Winter 1999* Teaching Assistant, Department of Information and Computer Science, University of California, Irvine.
- Summer 1998* Consultant and Software Engineer, Development Processes, Internet and Databases. CO-COSS GbR, Munich, Germany.
- Winter 1998 – Spring 1998* Visiting Researcher, Prof. Dr. Michael Franz, Department of Information and Computer Science, University of California, Irvine.
- Spring 1997 – Fall 1997* Software Engineer, Machine Control (Newsroom Equipment and Systems). NEXUS informatics GmbH, Munich, Germany.
- Fall 1993 – Winter 1994* Technical Intern, Software Configuration Management. Sisymed Software GmbH, Munich, Germany.
- Fall 1991 – Winter 1992* Technical Intern, Satellite Systems (Design and Image Analysis). DASA Daimler-Benz Aerospace AG, Munich, Germany.

## Teaching

- Foundations* 600.102: Foundations of Computer Science (Spring 2008, Fall 2005); 600.120: Intermediate Programming (Fall 2009, Fall 2008, Spring 2008, Spring 2007, Fall 2006); 600.107/108: Introduction to Programming (Spring 2009, Summer 2008, Summer 2006).
- Intermediate* 600.226: Data Structures (Fall 2008, Fall 2007, Fall 2006, Spring 2006, Fall 2005); 600.255/256: Introduction to Video Game Design (Spring 2009); 600.211: Unix Systems Programming (Fall 2009, Spring 2008, Spring 2007, Fall 2005); CS 14: Introduction to Data Structures and Algorithms (Winter 2003, Fall 2002).
- Languages* 600.328: Compilers and Interpreters (Spring 2009, Fall 2007, Spring 2007, Spring 2006); CS 152: Compiler Design (Spring 2005, Winter 2005, Fall 2004, Spring 2004, Winter 2004, Winter 2003); CS 181: Principles of Programming Languages (Winter 2004, Fall 2003); ICS 142: Compilers and Interpreters (Summer 2001).
- Software* CS 180: Introduction to Software Engineering (Spring 2005, Fall 2004, Spring 2004, Fall 2003, Spring 2003); CS 100: Software Construction (Winter 2005, Fall 2004, Spring 2004, Winter 2004, Fall 2003, Spring 2003).
- Projects* 600.355: Video Game Design Project (Fall 2009); 600.392: Senior Design Project (Fall 2008, Fall 2007, Fall 2006, Spring 2006); CS 179E: Project in Compiler Design (Spring 2005, Winter 2005).
- Voluntary Seminars* Structure and Interpretation of Computer Programs (Spring 2006); Design Patterns Study Group (Fall 2005, Spring 2004); Intensive Programming Workshop (Winter 2005, Fall 2003).

## Publications

- June 2009* Michael Reese, Joan Freedman, Peter H. Fröhlich: *Playing Together: Establishing an Interdisciplinary, Interinstitutional Gaming Initiative*. Proceedings of the New Media Consortium Annual Conference, June 2009.

- June 2008 [Peter H. Fröhlich](#): *Ethics Considered Harmful*. ACM SIGCAS Computers and Society Newsletter, Volume 38, Issue 2, Pages 21–23, June 2008.
- May 2008 [Peter H. Fröhlich](#): *Just say “A Class implements a Data Type”*. Letter to the Editor, Communications of the ACM, Volume 51, Number 1, Page 9, May 2008.
- July 2007 [Anwar Adi](#), [Wael Adi](#), [Martin Schüler](#), and [Peter H. Fröhlich](#): *Demo of Open Counting: A Paper-Assisted Voting System with OMR-Based Public Counting*. Proceedings of the [University Voting Systems Competition](#), Portland, Oregon, July 2007.
- November 2006 [Anwar Adi](#), [Wael Adi](#), [Martin Schüler](#), and [Peter H. Fröhlich](#): *Secure Paper-Assisted Voting System with OMR-Based Counting and Open Verification Scheme*. Proceedings of the [International Symposium on System and Information Security](#), Sao Paulo, Brazil, November 2006.
- April 2005 [Peter H. Fröhlich](#), [Andreas Gal](#), and [Michael Franz](#): *Supporting Software Composition at the Programming-Language Level*. Science of Computer Programming, Special Issue on New Software Composition Concepts, Volume 56, Numbers 1–2, Pages 41–57, April 2005.
- December 2003 [Wolfram Amme](#), [Matthew Beers](#), [Niall Dalton](#), [Michael Franz](#), [Peter H. Fröhlich](#), [Vivek Haldar](#), [Andreas Hartmann](#), [Peter S. Housel](#), [Fermin Reig](#), [Jeffery von Ronne](#), [Christian H. Stork](#), and [Sergiy Zhenochin](#): *Making Mobile Code Both Safe and Efficient*. In J. Lala (Ed.): *OASIS: Foundations of Intrusion Tolerant Systems*, IEEE Computer Society Press, Los Alamitos, CA, Pages 337–358, December 2003.
- October 2003 [Peter H. Fröhlich](#), [Andreas Gal](#), and [Michael Franz](#): *Supporting Software Composition at the Programming-Language Level*. Technical Report 03-22, [School of Information and Computer Sciences](#), University of California, Irvine, October 2003.
- March 2003 [Peter H. Fröhlich](#): *Component-Oriented Programming Languages: Why, What, and How?* PhD Thesis, [School of Information and Computer Sciences](#), University of California, Irvine, March 2003.
- June 2002 [Peter H. Fröhlich](#): *Inheritance Decomposed*. In Andrew Black, Erik Ernst, Peter Grogono, and Markku Sakkinen (Eds.): *Proceedings of The Inheritance Workshop at ECOOP*, Malaga, Spain, June 2002. Technical Report 12-2002, Information Technology Research Institute (ITRI), University of Jyväskylä, Finland, June 2002.
- [Andreas Gal](#), [Peter H. Fröhlich](#), and [Michael Franz](#): *An Efficient Execution Model for Dynamically Reconfigurable Component Software*. In Jan Bosch, Clemens Szyperski, and Wolfgang Weck (Eds.): *Proceedings of The International Workshop on Component-Oriented Programming (WCOP)*, Malaga, Spain, June 2002.
- March 2002 [Peter H. Fröhlich](#), [Andreas Gal](#), and [Michael Franz](#): *On Reconciling Objects, Components, and Efficiency in Programming Languages*. Technical Report 02-12, [Department of Information and Computer Science](#), University of California, Irvine, March 2002.
- October 2001 [Peter H. Fröhlich](#) and [Michael Franz](#): *On Certain Basic Properties of Component-Oriented Programming Languages*. In David H. Lorenz, Vugranam C. Sreedhar (Eds.): *Proceedings of the First OOPSLA Workshop on Language Mechanisms for Programming Software Components*, Tampa Bay, FL, October 2001. Technical Report NU-CCS-01-06, College of Computer Science, Northeastern University, Boston, MA, October 2001.
- June 2001 [Wolfram Amme](#), [Niall Dalton](#), [Michael Franz](#), [Peter H. Fröhlich](#), [Vivek Haldar](#), [Peter S. Housel](#), [Jeffery von Ronne](#), [Christian H. Stork](#), and [Sergiy Zhenochin](#): *Project*

transPROSE: *Reconciling Mobile-Code Security With Execution Efficiency*. Proceedings of the Second DARPA Information Survivability Conference and Exposition (DISCEX II), Anaheim, CA, June 2001.

- January 2001 Wolfram Amme, Niall Dalton, Michael Franz, Peter H. Fröhlich, Vivek Haldar, Peter S. Housel, Jeffery von Ronne, Christian H. Stork, and Sergiy Zhenochin: *Project transPROSE: Reconciling Mobile-Code Security With Execution Efficiency*. Technical Report 01-01, Department of Information and Computer Science, University of California, Irvine, January 2001.
- September 2000 Peter H. Fröhlich and Michael Franz: *Stand-Alone Messages: A Step Towards Component-Oriented Programming Languages*. In Jürg Gutknecht and Wolfgang Weck (Eds.): *Modular Programming Languages* (Proceedings of the Fifth Joint Modular Languages Conference, Zurich, Switzerland, September 2000). Lecture Notes in Computer Science, Volume 1891, Pages 90–103, Springer-Verlag, September 2000.
- July 2000 Peter H. Fröhlich: *Component-Oriented Programming Languages: Messages vs. Methods, Modules vs. Types*. In Wolfgang Goerigk (Ed.): *Programming Languages and Computing Concepts* (Proceedings of the 17th Workshop on Programming Languages and Computing Concepts, Bad Honnef, Germany, May 2000). Technical Report 2007, Department of Computer Science and Applied Mathematics, Christian-Albrechts-University, Kiel, Germany, July 2000.
- June 2000 Peter H. Fröhlich and Michael Franz: *Stand-Alone Messages: A Step Towards Component-Oriented Programming Languages*. Technical Report 00-18, Department of Information and Computer Science, University of California, Irvine, June 2000.
- April 2000 Michael Franz, Peter H. Fröhlich, and Thomas Kistler: *Towards Language Support for Component-Oriented Real-Time Programming*. Proceedings of the Fifth International Workshop on Object-Oriented Real-Time Dependable Systems (Monterey, California, November 1999). IEEE Computer Society Press, April 2000.
- November 1999 Peter H. Fröhlich and Michael Franz: *Component-Oriented Programming in Object-Oriented Languages*. Technical Report 99-49, Department of Information and Computer Science, University of California, Irvine, November 1999 (Revised December 1999).
- March 1997 Peter H. Fröhlich: *Projekt Froderon: Zur weiteren Entwicklung der Programmiersprache Oberon-2 (Project Froderon: On the Future Development of the Programming Language Oberon-2)*. Diploma Thesis, Department of Computer Science and Mathematics, Munich University of Applied Sciences, Germany, March 1997.

## References

- Prof. Dr. Scott Smith Department of Computer Science <http://www.cs.jhu.edu/~scott/>  
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- Prof. Dr. Thomas Payne Department of Computer Science and Engineering <http://www.cs.ucr.edu/~thp/>  
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<i>Prof. Dr. Clemens Szyperski</i>	Connected Systems Division Microsoft  One Microsoft Way Redmond, WA 98052	<a href="http://research.microsoft.com/~cszypers/Clemens.Szyperski@microsoft.com">http://research.microsoft.com/~cszypers/ Clemens.Szyperski@microsoft.com</a>  +1 (425) 706-3312 (phone) +1 (425) 936-7329 (fax)
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## Funding

- July 2008 – May 2009* Chris Hoehn-Saric Curriculum Enhancement Grant, Center for Educational Resources, The Johns Hopkins University, *Video Game Design: An Interdisciplinary Approach*. Funded with approximately \$35,000.
- July 2001 – June 2004* National Science Foundation, CCR-0105710: Program in Operating Systems and Compilers, *Design and Implementation of Component-Oriented Programming Languages*. Collaborated with Prof. Dr. Michael Franz on the grant proposal. Funded with approximately \$180,000.

## Service

- March 2008* Session Chair, Paper Session on Networking, SIGCSE'08 Technical Symposium on Computer Science Education, Portland, OR, March 14, 2008.
- November 2007 – present* Faculty Advisor, Local Student Chapter of Amnesty International, The Johns Hopkins University.
- November 2003 – May 2005* Vice President of Communications, American Federation of Teachers, Local 1966, University of California, Riverside.
- December 2001 – January 2002* Volunteer for “Ask-A-Scientist Night” high school outreach program organized by Prof. Dr. Lidia C. Yoshida.
- January 2000 – January 2002* Executive Committee Member, Graduate Students in Information and Computer Science (GSICS), Department of Information and Computer Science, University of California, Irvine.
- September 1994 – June 1996* Student Representative, Departmental Governing Council, Department of Computer Science and Mathematics, Munich University of Applied Sciences, Germany.

## **Societies**

- May 2006 – present* Upsilon Pi Epsilon (UPE, ΥΠΙΕ), Johns Hopkins University Chapter
- May 1998 – present* Institute for Electrical and Electronic Engineers (IEEE)
- April 1998 – present* Association for Computing Machinery (ACM)
- January 1992 – present* Gesellschaft für Informatik (GI), German Association for Computer Science
- January 1992 – present* Verein Deutscher Ingenieure (VDI), Association of German Engineers