Scott McPeak

565 Soda Hall
University of California, Berkeley
Berkeley, CA 94720-1776

510-642-9542
URL: www.cs.berkeley.edu/~smcpeak
email: smcpeak (at) cs (dot) berkeley (dot) edu

Research Interests

- Formal verification: data structure specification languages, inference analyses, theorem proving techniques
- Software quality: tools, languages, development methodology
- Parsing: GLR parsing, disambiguation techniques, implementation of static semantics

Education

- Ph.D. in Computer Science: UC Berkeley, May 2005 (expected). Advisor: George Necula
- M.S. in Computer Science: UC Berkeley, May 2003. Thesis: "Elkhound: A Fast, Practical GLR Parser Generator".
- B.S. in Electrical Engineering and Computer Science: UC Berkeley, May 1996.

Publications

- CCured: Type-Safe Retrofitting of Legacy Software
  George C. Necula, Jeremy Condit, Matthew Harren, Scott McPeak, Westley Weimer
  In ACM Transactions on Programming Languages and Systems (TOPLAS), to appear, 2004.
- CCured in the Real World
  Jeremy Condit, Mathew Harren, Scott McPeak, George C. Necula, Westley Weimer
  In Proceedings of the ACM SIGPLAN 2003 Conference on Programming Language Design and Implementation (PLDI03), June 2003.
- CIL: Intermediate Language and Tools for Analysis and Transformation of C Programs
  George C. Necula, Scott McPeak, S. P. Rahul, Westley Weimer.
  In Proceedings of Conference on Compiler Construction (CC02), March 2002.
- CCured: Type-Safe Retrofitting of Legacy Code
  George C. Necula, Scott McPeak, Westley Weimer.
  In Proceedings of the 29th ACM Symposium on Principles of Programming Languages (POPL02), January 2002.
- Elkhound: A Fast, Practical GLR Parser Generator
  Scott McPeak, George C. Necula.
  In Proceedings of Conference on Compiler Constructor (CC04), April 2004.
  An expanded technical report is UCB/CSSD-2-1214.
- An Improved Adaptive Multi-Start Approach to Finding Near-Optimal Solutions to the Euclidean TSP
  Dan Bonachea, Eugene Ingerman, Joshua Levy, Scott McPeak.
  In Proceedings of Genetic and Evolutionary Computation Conference (GECCO), 2000.

Awards

- First place, ACM International Collegiate Programming Contest, February 1996.
- NSF Graduate Student Fellowship, March 1996.

Professional Activities

- Student Member, Association for Computing Machinery
- Refereed submissions to: POPL 2005, CGO 2004, TSE, Elsevier SCP, TOPLAS, AIOOL 2005.

Teaching Experience

- UC Berkeley, Spring 1996, TA for CS 152: Computer Architecture
- UC Berkeley, Spring 2001, GSI for CS 164: Compilers

References

- George Necula (research advisor)
  Computer Science Department
  University of California, Berkeley
  783 Soda Hall
  Berkeley, CA 94720-1776
  510-642-1481
  `necula (at) cs (dot) berkeley (dot) edu`

- Rastislav Bodik
  Computer Science Department
  University of California, Berkeley
  773 Soda Hall
  Berkeley, CA 94720-1776
  510-642-2488
  `bodik (at) cs (dot) berkeley (dot) edu`

- Alex Aiken
  Computer Science Department
  411 Gates
  353 Serra Mall
  Stanford University
  Stanford, CA 94305-9025
  650-725-3359
  `aiken (at) cs (dot) stanford (dot) edu`