

Suriya Subramanian

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RESEARCH INTERESTS

Compilers, Programming languages, Managed languages, Computer Architecture
I am currently working on Dynamic Software Updates for Java

EDUCATION

PhD in Computer Sciences (expected Dec. 2009) **August '03 - Present**

Thesis: Dynamic Software Updates: A VM-centric Approach
Advisor: Prof. Kathryn S. McKinley
Department of Computer Sciences
The University of Texas at Austin

Master of Science in Computer Sciences **August '03 - May '06**

Department of Computer Sciences
The University of Texas at Austin

Bachelor of Engineering in Computer Sciences **August '99 - May '03**

Anna University
College of Engineering, Guindy, Chennai, India

CONFERENCE PUBLICATIONS

Suriya Subramanian, Michael Hicks, Kathryn S. McKinley: "Dynamic Software Updates: A VM-centric Approach," In Programming Language Design and Implementation (PLDI), 2009 (20% acceptance rate).

Suriya Subramanian, Kathryn S. McKinley: "HeDGE: Hybrid Dataflow Graph Execution in the Issue logic," The 4th International Conference on High Performance and Embedded Architectures and Compilers (HiPEAC), 2009 (28% acceptance rate).

Mohan G Kabadi, Natarajan Kannan, Palanidaran Chidambaram, Suriya Subramanian, and Ranjani Parthasarathi: "Dead-Block Elimination in Cache: A Mechanism to Reduce I-Cache Power Consumption in High Performance Microprocessors," 9th International Conference on High Performance Computing (HiPC), pages 79-88, 2002 (39% acceptance rate).

TECHNICAL REPORTS

Suriya Subramanian, Michael Hicks, Kathryn S. McKinley: "Dynamic Software Updates in Java: A VM-Centric Approach," The University of Texas at Austin, Department of Computer Sciences, TR-08-38, 2008.

Suriya Subramanian, Kathryn S. McKinley: "HeDGE: Hybrid Dataflow Graph Execution in the Issue logic," The University of Texas at Austin, Department of Computer Sciences, TR-08-42, 2008.

- AWARDS
- TA Excellence Award - Honorable Mention, Department of Computer Sciences, UT (Fall 2007)
 - Dean's Excellence Award from the College of Natural Sciences, UT (2003)
 - Microelectronics and Computer Development Fellowship, UT (2003-2004)
 - NCERT National Talent Search Scheme Scholarship, India (1997-2003)
 - Dr. MGR Quiad-e-milleth Endowment Scholarship, Anna University (1999-2003)
- TALKS
- “Dynamic Software Updates: A VM-centric Approach”
 - ACM SIGPLAN 2009 Conference on Programming Language Design and Implementation (PLDI), Trinity College, Dublin, 2009/6/16
 - DaCapo Research Meeting, Tufts University, Boston, 2009/5/1
 - Programming Lunch series, The University of Texas at Austin, 2009/4/24
 - Parasol Seminar, Texas A&M University, 2009/4/17
 - DaCapo Research Meeting, University of Massachusetts Amherst, 2008/1/3
 - Programming Lunch series, The University of Texas at Austin, 2007/12/12
 - “HeDGE: Hybrid Dataflow Graph Execution in the Issue logic”
 - The 4th International Conference on High Performance and Embedded Architectures and Compilers (HiPEAC 2009), Paphos, Cyprus, 2009/1/28
 - 8th Annual Austin CAS Conference, IBM Campus, Austin, TX, 2007/3/2
 - “Compiler Controlled Speculation for Power Aware ILP Extraction in Dataflow Architectures”
 - Talk on behalf of Muhammad Umar Farooq at the 4th International Conference on High Performance and Embedded Architectures and Compilers (HiPEAC 2009), Paphos, Cyprus, 2009/1/28
- EXPERIENCE
- Graduate Research Assistant** **Jan '07 - Present**
Graduate Research Assistant with Dr. Kathryn McKinley. Worked on supporting Dynamic Software Updates in Java.
 - Teaching Assistant** **Aug '07 - Dec '07**
Teaching Assistant for “Advanced Compiler Techniques,” instructor Dr. Keshav Pingali, (Fall 2007), Department of Computer Sciences, The University of Texas at Austin. Responsibilities included holding office hours, conducting tutorial sessions, designing and grading assignments. The Department of Computer Sciences awarded me a **TA Excellence Award - Honorable Mention**.
 - Graduate Intern** **May '06 - Aug '06**
Internship in the ICC Compiler group at Intel, Santa Clara. Mentor: David Sehr. I worked on “Threading support by compiler instrumentation.” I added a compiler phase to ICC to statically instrument memory instructions. These instrumented instructions make calls to a runtime system, that helps detect dependences that inhibit parallelism. To demonstrate the utility of this approach, we worked on instrumenting and parallelizing ICC.
 - Graduate Research Assistant** **May '04 - December '06**
Member of the TRIPS compiler team. Worked on array layout and loop reordering optimizations in the Scale compiler for improving memory accesses to the banked L-1 data cache in the TRIPS processor. I also worked on profiling of memory accesses, and feeding this data back to the TRIPS scheduler, to help place memory operations on the grid in an efficient manner. During this time, I also implemented the PowerPC/Linux backend for the Scale compiler.

Teaching Assistant**Jan '05 - May '05**

Teaching Assistant for "Introduction to Operating Systems (Honors)," instructor Dr. Mike Dahlin (Spring 2005), Department of Computer Sciences, The University of Texas at Austin. Responsibilities included holding office hours and grading programming assignments.

Teaching Assistant**Aug '04 - Dec '04**

Teaching Assistant for "Graduate Compilers," instructor Dr. Kathryn McKinley, (Fall 2004), Department of Computer Sciences, The University of Texas at Austin. Responsibilities included holding office hours, grading homeworks, setting up infrastructure, preparing programming assignments and automated testing of assignments.

Systems administrator**Aug '01 - May '03**

System administrator for the host `cs.annauniv.edu`, School of Computer Science and Engineering, Anna University. Responsibilities included installing operating system, creating user accounts, managing user e-mail, managing user web space, data backup, etc.

**OTHER
ACTIVITIES**

Action Center Co-ordinator, Vibha Austin, a non-profit focussing on underprivileged children.

CITIZENSHIP

India, Visa: F-1

REFERENCES

Available upon request.