Sri Hari Krishna Narayanan

CONTACT INFORMATION

348D IST building
Department of Computer Science and Engineering
Pennsylvania State University
University Park, PA 16802 USA

Voice: (814) 574-5334
Fax: (814) 865-3176
Email:snarayan@cse.psu.edu
WWW: www.cse.psu.edu/~snarayan

OBJECTIVE

To obtain a full time position where I may apply my skills and develop intellectually at the same time.

EDUCATION

Doctoral Candidate, Dept. of Computer Science and Engineering, 2003-Present
The Pennsylvania State University, University Park, PA, USA.
Dissertation Topic: *Software Based Techniques for Robust Computing on Chip Multiprocessors*
Expected Graduation : August 2008
GPA : 3.72

Bachelor of Engineering, Computer Science and Engineering, 1999 – 2003
Sri Venkateswara College of Engineering, University of Madras, Chennai, India.

RESEARCH SUMMARY

Computers today are all pervasive and touch every facet of our lives. A primary requirement that any user places on such systems is that they work without failure or interruption. A secondary need is that these systems should work as fast as possible. One of the fundamental problems is that performance and robustness are divergent goals. My doctoral research has focussed on reducing this divergence as far as possible using compiler directed software techniques.

SELECTED PUBLICATIONS

Sri Hari Krishna Narayanan, Mahmut Kandemir, A Systematic Approach to Automatically Generate Multiple Semantically Equivalent Program Versions, in the *proceedings of ADA-Europe 2008*.

Sri Hari Krishna Narayanan, Mahmut Kandemir, Richard Brooks, Performance Aware Secure Code Partitioning, in the *proceedings of DATE 2007*.

Sri Hari Krishna Narayanan, Mahmut Kandemir. Compiler-Directed Power Density Reduction in NoC-Based Multi-Core Designs, accepted for publication in the *proceedings of ISQED 2006*.

Sri Hari Krishna Narayanan, Guilin Chen, Mahmut Kandemir, Yuan Xie. Temperature-Sensitive Loop Parallelization for Chip Multiprocessors, in the *proceedings of ICCD 2005*.

RELEVANT COURSE WORK

Core topics in Computer Science and Engineering.
Topics in Computer Architecture.
Compiler Construction.
Software Fault Tolerance.
Parallel Processors and Processing.

EXPERIENCE

Research Assistant, Penn State
June - July 2004; January - July 2005; January 2006 - April 2007; January 2008 - Present
Worked on Information flow security, Fault tolerant computing, Mobile code security and secure code partitioning, Thermal issues in embedded systems and Low power systems.

Teaching Assistant, Penn State
August 2003 - May 2004; August - December 2004; August - December, 2005
Responsibilities consist of conducting recitation, holding office hours and grading for undergraduate courses of about 120 students.

Teaching Intern, Penn State
September 2007 - December, 2007
Co-taught CSE 331- Computer organization and design with Dr. Mary Jane Irwin. Responsibilities included conducting lectures, designing programming assignments and creating examinations.

Givens Associate, Argonne National Laboratory
May, 2007 - August, 2007
Wrote code for a software performance estimation tool. Worked on the development of ADIC, an automatic differentiation tool for C programs. In particular, contributed towards extending ADIC to handle C++ input code.

AWARDS

Best Presentation award for the presentation titled "Secure Execution of Computations on Untrusted Hosts" at the 11^{th} International Conference on Reliable Software Technologies Ada-Europe 2006.
Cash Prize for achieving first place in a class of 66 students, in internal examinations, at Sri Venkateswara College of Engineering, University of Madras.

COMPUTER SKILLS

Engineering Packages: SimpleScalar, Simics, VHDL.
Compiler Tools: Lex, Yacc, Rose, CQUAL.
Theory/Mathematical Packages: Daikon, Omega Library, MatLab, ADIC .
Languages: C, C++. Familiar with Java, ForTran, Perl.
Assembly Languages: MIPS. Familiar with 8085, 8086.
Operating Systems Used: Unix/Linux, Windows, Mac OS X.
Applications: Familiar with Oracle, Visual Basic, Common database, spreadsheet, and presentation software.

VISA STATUS

Indian citizen on an F1 Visa (USA Student Visa).

REFERENCES

Dr. Mahmut Kandemir
Associate Professor,
Computer Science and Engineering, Penn State.
354B, IST Building, Penn State, University Park, PA - 16802
Phone : (814)-863-4888,
kandemir@cse.psu.edu

Further references available on request.