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Abhinav Bhatele

Objective

To obtain a summer internship that will give me an insight into the work in industry and enhance my skills.

Educational Qualifications

Doctor of Philosophy in Computer Science,   2005-Present
University of Illinois at Urbana Champaign   CGPA : 3.77/4.0
Bachelor of Technology in Computer Science and Engineering,   2001-2005
Indian Institute of Technology, Kanpur   CPI : 9.1/10.0

Research Experience

Graduate Research Assistant, Parallel Programming Laboratory, UIUC

Working with Prof. Laxmikant V. Kale in the Parallel Programming Group at UIUC since August 2005.

- I work on molecular dynamics applications called NAMD and LeanCP written in Charm++. My work is related to topology sensitive mapping and load-balancing.

Summer Intern, IBM T J Watson Research Center, NY, USA

Worked with Guojing Cong at the Advanced Computing Technology Center (IBM Research) from May 2006 to July 2006

- Developed a tool for automatic and detailed profiling of programs at finer levels like functions and individual statements.

Summer Intern, INRIA Labs, Nancy, France

Worked with Prof. Dominique Mery and Stephan Merz in the MOSEL group as a summer intern from May 2004 to July 2004

- Developed a GUI for TLC and Xprove: TLC is a model checker and Xprove is a theorem prover being developed at INRIA Labs.

Summer Intern, IIT Kanpur, India

Worked with Prof. Shashank K. Mehta at IIT Kanpur as a summer intern from May 2003 to July 2003

- Studied a Picoblaze microprocessor design in VHDL (developed by Xilinx) and implemented and tested it using Verilog.

Recent Publications

1. **Abhinav Bhatele**, Guojing Cong, *A Selective Profiling Tool: Towards Automatic*

Performance Tuning, IPDPS 2007

2. Eric Bohm, **Abhinav Bhatele**, Laxmikant V. Kale, Mark E. Tuckerman, Sameer Kumar, John A. Gunnels, Glenn Martyna, *Fine grained parallelization of the Car-Parrinello ab initio MD method on Blue Gene/L,* IBM Journal of Research and Development, 2007

3. Sameer Kumar, Chao Huang, Gengbin Zheng, Eric Bohm, **Abhinav Bhatele**, Jim Phillips, Gheorghe Almasi, Hao Yu, Laxmikant V. Kale, *Achieving Strong Scaling with NAMD on Blue Gene/L,* IBM Journal of Research and Development, 2007

Relevant Courses

Graduate – Advanced Computer Architecture (CS533), Formal Methods of Computation (CS475), Parallel Programming Methods (CS498lvk), Programming Languages and Compilers (CS421), Advanced Topics in Compiler Construction (CS526), Social Computing (CS598kgk)

Undergraduate – Advanced Compiler Optimizations (CS738), Computer Architecture (CS422), Compilers (CS335), Computer Networks (CS425), Operating Systems (CS330), Algorithms II (CS345), Theory of Computation (CS340), Data Structures and Algorithms (CS210), Discrete Mathematics (CS201)

Programming Skills

Languages: Charm++, C, C++, JAVA, Verilog, VHDL, Scheme, ML, Ocaml
Platforms: Most flavours of Windows and Linux
Tools: Lex, Yacc, LaTeX, Make, Perl

Awards and Achievements

- Awarded the **Student Benefit Fund Scholarship** for excellent performance in academics in 2002
- Awarded the **Academic Excellence Award** at IIT Kanpur for the year 2001-2002
- Received a certificate of merit in the Indian National Physics Olympiad 2001
- Received a certificate of merit in the Indian National Chemistry Olympiad 2001
- Adjudged the best student and awarded the **Gold Medal** in 2000 in high school for excellent academic performance
- Received the **SAIL Scholarship** in high school in 1999 for Grade 10th performance.

References

Prof. Laxmikant V. Kale (kale@cs.uiuc.edu), Professor, Dept. Of Computer Science, UIUC
Dr. Glenn J. Martyna (martyna@us.ibm.com), Researcher, IBM T J Watson Research, NY
Dr. Celso L. Mendes (celso@cs.uiuc.edu), Research Scientist, Dept. of CS, UIUC
Prof. Sanjeev K. Aggarwal (ska@iitk.ac.in), Professor, Dept. Of Computer Science, IITK