

RESUME

PERSONAL INFORMATION

Name: Bin Bao

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RESEARCH INTERESTS

Compiler optimization, program analysis, parallel programming models

EDUCATION

- University of Rochester, Rochester, NY, USA
PhD student in Computer Science, September 2007 – present

- Institute of Computing Technology, Chinese Academy of Sciences (ICT, CAS), Beijing, China
Master in Computer System and Architecture, September 2004 – July 2007

- University of Science and Technology of China (USTC), Hefei, Anhui, China
Bachelor in Software Engineering, September 1999 – July 2004

RESEARCH EXPERIENCE

IBM Centers for Advanced Studies, Toronto, Ontario, Canada

- Compiler Optimizations for MPI Programs, September 2008 – December 2008
Studied literature about optimizations for MPI programs and found out several potential research topics. Implemented and improved the overlapping of communication and computation algorithm.

Advanced Compiler Technology Lab, ICT, CAS

- Open64 Project, September 2005 – May 2007
Analyzed performance bottlenecks for numeric computation programs. Enhanced software prefetching and software pipelining. Investigated the interaction between prefetching and other loop optimizations, such as loop tiling. Updated Fortran front end in the compiler.

- Shangri-La Project, February 2004 – January 2005
Designed and implemented local memory access optimization for Intel IXP Network Processor. Improved loop unrolling optimization to suit packet processing.

INTERSHIP EXPERIENCE

NVIDIA Corporation, Santa Clara, CA

- CUDA Compiler, June 2008 – August 2008

Merged the Open64 part in CUDA compiler with the latest Open64 trunk. Ported Loop Nest Optimizer in Open64 to GPU architecture. Studied the impact of Loop Nested Optimizer to general programs running on GPU.

PUBLICATIONS

Reducing Code Size through Storage Assignment for Restricted Indexed Addressing Mode, Bin Bao, Chengyong Wu, Zhaoqing Zhang, *the 4th Workshop on Optimizations for DSP and Embedded Systems, March 2006*

AWARDS AND HONORS

2008 IBM Centers for Advanced Studies (CAS) Fellowship

1999-2003 Outstanding Student Scholarship in each academic year