

Yeliang Zhang

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Education

Ph.D. Electrical and Computer Engineering
The University of Arizona

M.S. Computer Science
The University of Arizona

Working Experience

May 2005 – Aug. 2005

Lawrence Berkeley National Lab, Berkeley, CA

- Eigenvalue software development
- ScaLAPACK and Global Array software development

May 2004 – Sept. 2004

Pacific Northwest National Lab, Richland, WA

- Numerical algorithm development using Global Array
- Performance analysis with Global Array

June 2000 – Now

The University of Arizona, Tucson, AZ

- Development Physics Aware Runtime Manager
- Using PETSc to parallelize hydrology VSACT2D code
- Implemented Virtual Grid in Autonomia Computing Environment
- Optimize FATMAN radiation/hydrodynamics code with different parallel techniques (part of DOE SciDAC project)
- Build runtime management framework for scientific computation with capability of reactively and proactively managing and optimizing application
- Profile and generate performance function on different platform such as SP2, Beowulf cluster, SGI Origin2000
- Develop the underlying mobile agent system for CATALINA (A smart application control and management project) using Java. Investigating performance aspect for distributed application.
- Develop remote agent for Raytheon on RTI (Run-Time Infrastructure)
- Program on distributed computing environment with MPI, RMI and socket
- Develop distributed components, which can be used on large application
- Complete term paper with title “Common Component Architecture for High Performance Distributed System”
- Optimize Zeus-MP code and build module based on CCA

May 1999 – Aug. 1999

American Express Corp, Phoenix, AZ

- E-commerce software development
- Webpage testing

Computer Skills

Global Array (GA), Java, OPNET, CSIM, GrACE (A Framework for Distributed AMR), C++, C, Fortran, SQL, Windows NT, Windows, UNIX, MCP Certificate on Windows2000 Server

Activities:

IEEE, student member

SIAM, member

ACM, member

Publication

S. Chandra, M. Parashar, J. Yang, Yeliang. Zhang, S. Hariri. Investigating Autonomic Runtime Management Strategies for SAMR Applications. International Journal of Parallel Programming, Springer Science+Business Media B.V., 33(2-3):247-259, June 2005.

Yeliang. Zhang, X. S. Li, O. Marques. Towards an Automatic and Application-Based Eigensolver Selection. LACSI Symposium 2005.

Jarek Nieplocha, Manoj Krishnan, Bruce Palmer, Vinod Tipparaju, Yeliang Zhang. Exploiting Processor Groups to Extend Scalability of the GA Shared Memory Programming Model. ACM Computing Frontiers 2005.

Yeliang Zhang, Vinod Tipparaju, Jarek Nieplocha, Salim Hariri. Parallelization of the NAS Conjugate Gradient Benchmark Using the Global Arrays Shared Memory Programming Model. Joint Workshop on High-Performance Grid Computing and High-Level Parallel Programming Models held in conjunction with IPDPS 2005.

Yeliang Zhang, Jingmei Yang, Salim Hariri, Sumir Chandra, Manish Parashar: Autonomic Proactive Runtime Partitioning Strategies for SAMR Applications. IPDPS Next Generation Software Program - NSFNGS - PI Workshop 2004.

Huoping Chen, Salim Hariri, Byoung uk Kim, Yeliang Zhang, Mazin S. Yousif: Self-Deployment and Self-Configuration of Pervasive Network Services. ICPS 2004.

H Zhu, Manish Parashar, Jingmei Yang, Yeliang Zhang, S Rao, Salim Hariri: Self-Adapting, Self-Optimizing Runtime Management of Grid Applications Using PRAGMA. IPDPS 2003.

S. Chandra, Yeliang. Zhang, S. Sinha, M. Parashar, J. Yang, S. Hariri. A Framework for Adaptive Runtime Management of AMR Applications. Proceedings of International Conference On High Performance Computing, Dec. 2002.

Salim Hariri, C.S. Raghavendra, Yonhee Kim, Muhamad Djunaedi, Rinda P. Nellipudi, Ashok Rajagopalan, Prasad Vadlamani, Yeliang Zhang. CATALINA: A Smart Application Control and Management. Active Middleware Services Conference, 2000.

Reference is available upon request