

Curriculum Vitae

Xizhi Li

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Research Interests

The long-term goal is human-level AI. Interested in using intermediate technologies as well as hypothetical frameworks to bridge the gap between the biological mind and man-made systems. Also interested in applied AI such as multi-agent system, semantic web and virtual environment simulation. Relevant researches include 3D computer game engine, new programming methodologies, human computer interface and networked virtual environment.

Education

7/2001 – present **Zhejiang University (ZJU)**
Department of Computer Science.
Affiliated with ChuKechen Honors College, a program for outstanding students.
Bachelor Degree expected in July 2005.

Research and Engineering Experience

2/2004 – present **Neural Parallel Language (NPL)**: Proposed and implemented a neural network based programming paradigm where both the coding and compiling process are carried out in a distributed manner and environment with rich HCI enabled interface. *See also [2] [3].*
ParaEngine: Designed and implemented a modern 3D computer game engine -- ParaEngine. Its framework is based on a modified version of the Simulation Theory on human brain. The analogy of human cognition to simulation system has been applied to the proposed game engine to construct distributed Internet games. *See also [1] [4] [12]*
Parallel World Game: Architect and chief developer. This Internet 3D Role Playing Game is built on top of the ParaEngine and Neural Parallel Language.

7/2004 – 8/2004 **MicroWindows Program Development and Embedded Device Simulation Platform**: Independent developer. Developed the software development and debugging environment for the Wearable DVD hardware platform with emulated GUI and remote controller. Project accomplished at Shenzhen Tech-Innovation International. *See also [11].*

12/2003 – 2/2004 **Microprocessor and Peripherals for Motion Control System**: System designer and chief developer. This is a verilog implementation optimized for FPGA with reduced MIPS instruction set and specialized I/O controls. It is part of the One-chip Motion Control System in corporation with the International Rectifier Corp. and the High Density Servo Control System at Harbin Institute of Technology. *See also [7] [13].*

2/2003 – 1/2004 **Web Agent Framework**: Project leader and chief developer. It aims to create visible human relationships on the network using agent technologies. *See also [6].*
Multi-Agent System and Its Applications: Performed general research at Artificial Intelligence Institute of Zhejiang University under the supervision of Prof. Qinming He. [5]

9/2003 – 1/2004 **Funding Interface for HDIS**: Project leader, architect and chief developer in a team of twenty members. Developed a finance management system for the Home Design and Improvement System (HDIS) using secure client/server architecture.

9/2002 – 9/2003 **Three personal software projects** at University Clubs of Microsoft Research Asia. (1) **Plane**

Plot: A 2.5-D pipeline modeling tool. (2) **Directory Robot:** A software agent that builds a customizable website from users' disk files and folders. (3) **Web Agent Framework:** Further research was performed on this multi-agent system application. See above.

7/2002 – 9/2002

Survey of the Civic Water Pipeline System in Harbin: Technical leader in the Summer Practitioner Team. Developed a water pipeline modeling tool.

Publications

- [1] Xizhi Li. Synthesizing Real-time Human Animation by Learning and Simulation. (to be submitted)
- [2] Xizhi Li. DHCI: an HCI Framework in Distributed Environment. 11th International Conference on Human-Computer Interaction (accepted for presentation)
- [3] Xizhi Li. Using Neural Parallel Language in Distributed Game World Composing. In the Proceedings of IEEE Distributed Framework of Multimedia Applications 2005.
- [4] Xizhi Li. ParaEngine: A Game Engine Framework for Distributed Internet Games. (submitted)
- [5] Xizhi Li. An HCI Template for Distributed Applications. International Conference on Computational Intelligence 2004.
- [6] Xizhi Li, Qinming He. WAF: an Interface Web Agent Framework. International Conference on Information Technology 2004.
- [7] Xizhi Li, Tiejai Li. ECOMIPS: An Economic MIPS CPU Design on FPGA. In the Proceedings of IEEE International Workshop on System On Chips 2004.
- [8] Xizhi Li and Hao Lin. A Proposal of Evaluation Framework for Higher Education. (submitted as student's track)
- [9] Xizhi Li. How Much Is Shaded. Journal of Intermediate Physics. Vol.6. 2001. (In Chinese)
- [10] Xizhi Li. Four Methods to the Wheel Velocity Calculation. New City Delivery. Dec. 2000. (In Chinese)

- Selected Project Documentation

- [11] Xizhi Li. "A Cross-Platform Simulation Framework for Embedded Devices". Sept. 2004 (32 pages)
- [12] Xizhi Li. "ParaEngine Reference Book". Aug. 2004. (700 pages)
- [13] Xizhi Li. "ECOMIPS: Design Book and User Manual of 32bits MIPS CPU IP Core". Dec. 2003 (96 pages)

Technical Skills

Advanced programming: Proficient in Object-Oriented Methodology, Visual C++, MFC, C# and .NET; rich experience in DirectX, OpenGL and UML; extensive knowledge in Java.

Web design tools and web server technology: ASP, ASP.NET, web service and XML.

Software: SQL server, Microsoft Access and their programming interface; Matlab; 3dsmax.

Hardware: Hardware Description Language (HDL), Electronic Design Automation (EDA) tools, FPGA and embedded system design.

Honors and Awards

From Zhejiang University:

- 2001,2002,2003,2004 Student Scholarships.
- 2004 Special Contribution Award in the Shakespeare Festival.
- 2004 Second Class Prize Winner in the ChuKechen College's English Writing Competition.
- 2002 Two silver medals in Men's Long Jump and Triple Jump in Zhejiang University Games.
- 2002 Outstanding Volunteer Work Honors.
- 2002 Outstanding Student Award.
- 2002 Special Contribution Award from the ChuKechen College. The only recipient of the year.

Before college:

1999,2000,2001 Student scholarships in high school.
1999,2000 First Class Prize Winner in National English Contest.
1999,2000 Provincial Second Class Prize Winner in National Physics Contest

Extracurricular Activities

2004 Built the official website for 2004 Shakespeare Festival in Zhejiang University.
2003 Gave several public presentations on Web Agent Framework in the Microsoft School Club at Zhejiang University.
2003 Participated in the Zhejiang University Math Modeling Competition.
2002, 2003 Participated in the ACM Competitions in Zhejiang University.
2001 Hosted English Saloon in ChuKeChen College, Zhejiang University.
2001,2002 Participated in Men's Long Jump and Triple Jump in Zhejiang University Games.

End of Curriculum Vitae
