Jie Liu

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General Information

※ **Education**: Visiting graduate student at Visualization Research Group, School of EECS,

        Peking University (2007/12–2009/03);

        M.S. student at Department of Geographic Information System, Nanjing University. (2005 - 2008);

        Undergraduate student at Department of Urban and Resources, Nanjing University.(2001 - 2005);

※ **Research**: Computer Graphics and Scientific Visualization;

※ **Awards**:   Third prize of National Post-Graduate Mathematical Contest in Modeling, (2008);

        Outstanding Intern Award of Ultizen game studio, (2007);

        Haichen Scholarship（2006）; Outstanding League Member of Graduate School（2006）;

Technical Skills

※ Very skillful in C/C++ programming, skillful in VB/VB.net programming and Python;

※ Solid knowledge of Computer Graphics, skillful in OpenGL programming, experience in GPU programming and rendering;

※ Skillful in Win32 SDK and GDI programming, experience in Linux/Unix programming;

※ Knowledge of Html and JavaScript programming, experience in deployment of online map service;

※ Good understanding of algorithms, Computer Operation System, and Architectures.

Academic Activities And Projects

2007/12–2009/03 Research Assistant, Visualization Group, Peking University

※My research mainly focuses on the Computer Graphics, Scientific Visualization and its volume rendering algorithms.

※I have finished several interesting works including novel volume rendering techniques, and visualization of Bio-chemical reaction network dynamics which could be considered as an InfoVis research.

※My current works focus on concurrent exploration of multi-variable large data set of earthquake, collaborating with University of Tennessee; and visualization and analysis of traffic flow network, supported by Ministry of Communications of China.

2007/07-2007/09 Internship, Ultizen game studio (top five Chinese game corporation), Shanghai

※My job was a C++ game programmer, and got involved in two projects, WanPai and 51com. I worked on the main UI of the game and also wrote several inner software to help other team members. I received the Outstanding Intern Award at the end of the internship.

2006/08-2007/07 Research Assistant, Department of GIS, Nanjing University

※ *Project: Analysis of the Electromagnetic Environment of Nanjing*, National Science Foundation Supported and collaborating with Department of Physics of Nanjing University. It was to collect the electromagnetic information in the downtown and analyze the dataset.

※ My job was to visualize the dataset in 3D virtual environment. I organized the scalar field dataset into volumes and implemented a hardware accelerated volume rendering algorithm and also a novel 3D terrain rendering algorithm.

2006/03-2006/10 Research Assistant / Project member, Department of GIS, Nanjing University

※ *Project: Ecological Function Zone Planning and the GIS Integration*, supported by the Municipal Protection

Bureau of Nanjing. It was to make planning for ecological function zone, and integrate the GIS.
※ My job was to write a module of the system which manages the danger sources. I also worked on the online map services.

2005/11-2005/12 Research Assistant / Project member, Department of GIS, Nanjing University

※ *Project: Land Using Planning of Foshan City and the GIS Integeration.* The project was to make new land using planning and integrate GIS.

※ My job was to manage the related data and wrote several chapters for the planning. I also performed trainings to employees of our partner company for the development with MapObject SDK.

2004/09-2004/10 Internship, Wujiang Municipal Bureau of Land and Resources, Suzhou, China

※As an intern student, I participated in the project of Land Using Planning for Wujiang City. My job was to collect, refine, and manage the land using data, and produce maps with GIS. I also shortly worked as an intern in Bureau of Land and Resources of High-tech Zone of Suzhou during this period.

2004/03-2004/05 Group member, Department of Urban and Resources, Nanjing University

※*Course Project: Virtual Pukou Campus of Nanjing University.* The project is to build virtual environment of Pukou campus of Nanjing University. My role was a modeling artist to model teaching buildings. This project leads me to the Computer Graphics.

Practices And Services

※ 2008/11 Poster presentation at MPR'08 conference, Beijing;
※ 2008/06 Volunteer of Visualization Workshop 2008 at Peking University, Beijing;
※ 2007/05 Contact person of alumni in the 50th anniversary of Department of Geographic Information System;
※ 2007/05 Student Member of international GeoInformatics conference 2007;
※ 2006/06 Member of marker group of National College Entrance Examination;
※ 2005/06 Undergraduate member of marker group of National College Entrance Examination;
※ 2001/09–2002/09 Union Minister of the Propaganda Department of the Department of Urban and Resources, Nanjing University;

Publications

※ **Jie Liu**, Yi Wang, He Xiao, You Jia, Visualizing Dynamics of the Bio-chemical Network, *PacificVis09*, 2009 (under review);
※ Xiaoru Yuan, **Jie Liu**, Interference Inspired Volume Rendering, *IEEE/EG ISVG08*, 2008 (submitted);
※ **Jie Liu**, Jiechen Wang, Yuji Zhou, A Survey Of Geo-referenced Data Visualization Technologies For GIS , *CPGIS07*, 2007;
※ Jiechen Wang, **Jie Liu**, Chenhui Qian, Implementation of Area Boundary Vectorization and Area Structure Information Extraction for Bianry Raster Data. *Bulletin of Science and Technology*, vol (6): 4, 2007;
※ Jiechen Wang, Yikang Rui, **Jie Liu**, Run-length encoding system about area: representation, implement and applications in GIS. *Science of Surveying and Mapping*, vol (4): 9, 2007;