

Pengfei Huang

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EDUCATION

- Master in Computer & Information Science, **University of Pennsylvania**, GPA3.5, 12/2009.
- Master in Computer Software & Theory, **Shanghai Jiao Tong University**, China. GPA3.5, 01/2008.
- Bachelor in Software Engineering, **Tongji University**, China. GPA3.8, Rank 1st, 07/2005.

WORK EXPERIENCE

- **Microsoft Servers and Tools of Business Center**, Software Developer, 02-08/2008, 07-10/2006.
 - 1) Projects: a) Identity Services Framework; b) RESTful web service application, c) Rights Management Services; d) Passive Federation on DreamSpark providing software resources access for students. Developed web services using Access Control Framework & SQL Server, in C/C++/C# of 20000 LoC.
 - 2) Projects: Windows Communication Framework, Rolling Build Testing Toolkit, C/C++/C# 5000 LoC. Developed Windows system service and application to automatically build codes and send reports.
- **IBM Certified Database Administrator**: DB2 Universal Database V8.1 for Linux UNIX and Windows.

RESEARCH EXPERIENCE

- **Facebook Application**: PHP Album Image Creator with User Access Control Comments, 2009.
PHP/Javascript Web Application, SQLite Database, Facebook & Imagemagick APIs, PHP/C++ 2000 LoC.
- **UPenn Computer Graphics Center**, Research Developer, 2008-2009.
 - 1) Project: Real-time Animated Physiological Crowd Simulation and Human Motion Search and Synthesis. Developed real-time physiological crowd animation simulation system in C++ packages of Qt as GUI, OGRE as graphics engine, MySQL as database, using Pure C/C++ 30000 LoC;
 - 2) Developed human motion search/synthesis using PCA and A* algorithms and interactive applications using Qt as GUI, OpenGL as graphics engine, using C/C++ 20000 LoC;
 - 3) Developed distributed POP3/SMTP mailing system on Linux System using Java, 2000 LoC.
- **SJTU Digital Technology Center / Natural Science Foundation of China**, Research Developer, 2005-2008.
Projects: Virtual Surgical System. Developed real-time surgical simulation based on math models, using C++ packages of wxWidgets as GUI, VTK as graphics, on Windows/Linux systems, in C++ 20000 LoC.
- **Tongji ACM International Collegiate Programming Contest Training**, 2003-2004.
Projects: Pure C/C++ coding for all core Algorithms, using Borland C++ Builder on Linux, 20000 LoC.
- **Courses Projects**: MFC RayTracer, MFC Puzzle Game, Oracle+MFC MIS, etc., in C/C++, 20000 LoC.

AWARDS

- **Hewlett-Packard Enterprise Fellowship**, Granted to 12 Excellent Graduate Students, China, 2007/9.
- **Intel Enterprise Fellowship**, Granted to 31 Excellent Graduate Students, China, 2006/11.
- **Excellent College Student**, Top 1% College Graduates, Shanghai, China, 2005/07.
- **Delphi Enterprise Scholarship**, Top 1% Excellent Students, Tongji University, 2005/01.
- **College Scholarship, Excellent Student Awards**, Top 5% Students, Tongji University, 2002-2004.
- **10th Place (2nd Prize) in ACM-ICPC Programming Contest, Asia Regional**, Philippines, 2003/10.

PUBLICATIONS

- [1] X. Li, Pengfei Huang, et al. **Hierarchical Spatial Hashing-based Collision Detection and Hybrid Collision Response in a Haptic Surgery Simulator**. Medical Robotics & Comp. Assisted Surgery, 2008.
- [2] Pengfei Huang, et al. **Virtual Surgery Deformable Modelling Employing GPU Based Computation**. IEEE Computer Society Proceedings of 17th International Conf. on Artificial Reality & Telexistence, 2007.
- [3] Pengfei Huang, et al. **Real-time Simulation for Global Deformation of Soft Tissue Using Deformable Centerline and Medial Representation**, ISBMS, Lecture Notes in Computer Science, 2006.
- [4] S. Zhang, Pengfei Huang, et al. **Real-Time Simulation of Deformable Soft Tissue Based on Mass-Spring and Medial Representation**. ICCV-CVBIA 2005, Lecture Notes in Computer Science, 2005.