

Hongwei Li

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Skills

- 8 years of research experience in computer graphics.
- Research interests include real-time rendering, sampling, scientific visualization.
- Recent research focus is mobile HMI.
- Strong knowledge in real-time rendering; excellent at OpenGL, OpenGL ES, WebGL and GLSL.
- 12 years in C++ and C; 1 year in Java; familiar with OpenMP, SSE, ARM Neon and OpenCL.
- Hands-on experience in OpenGL driver development.
- Familiar with engineering project management and Scrum practice; Scrum master.
- Hands-on experience in large-scale mobile system and engine development.
- Excellent spoken and written English.

Education

Sep. 2010 – April 2011

Postdoc (joint project), Department of Electrical & Computer Engineering, NUS, Singapore

Visiting Scholar, Internet Graphics Group, Microsoft Research Asia (MSRA), Beijing, China

- A new approach for efficient Bidirectional texture function (BTF) acquisition (A joint project with MSRA).

Aug. 2006 - Aug. 2010

PhD, Computer Science and Engineering, Hong Kong University of Sci. and Tech. (HKUST), Hong Kong

- Advisors: Dr. Pedro V. Sander and Dr. Chi-Wing Fu.
- Area of study: Computer Graphics.
- GGA : 9.93 (A-).

Sep.2004 – June 2006

Master, Computer Science and Engineering, Zhejiang University, P. R. China

- Advisor: Prof. Sanyuan Zhang and Prof. Xiuzi Ye
- Area of study: Computer-Aided Design.

Sep. 2000 - June 2004

B.E., Computer Science and Engineering, Zhejiang University, P. R. China

- Mixed class, Chu Kochen Honors College.
- Overall GPA 3.69/4.00, Major GPA 3.88/4.00, Top 5%.

Sep. 1997 – June 2000

High School diploma, Ningbo Xiaoshi High School, P.R. China

- Admission to Zhejiang University without national entrance examination.

Work Experience

Apr. 2012 – May 2013

Member of Technical Staff, Graphics Technology Initiatives, Advanced Micro Devices(Shanghai)Co. Ltd

- Research
 - General graphics rendering problems, high performance computing
 - Product prototyping, conference and exhibition demo development
 - Arrange internal workshop and seminar to promote research results
- Marketing technical support
 - Back up marketing and sales team in business negotiation and marketing actions
 - Product validation and proposal

- University relationship
 - Being visiting lecturer of undergraduate and postgraduate courses
 - Speaker of computer graphics courses and academic seminars
 - Enhancing the company's relationship with universities and academic institutions.

Apri. 2012 – May 2013

Manager, Rightware Oy, Shanghai, China

- Project management; oversee customer project work flow from requirement collection to final delivery and quality guarantee. The team includes 6 engineers and 2 designers.
Rightware Kanzi is a cutting-edge UX design tool empowering mobile and automotive user interface development.
 - Konka K-1 3D Android launcher
 - Gionee Mushroom Android 3D live wallpaper
 - Kanzi engine porting to Qualcomm QRD 8x65 platform (joint project with Qualcomm QRD team).
 - QRD 3D live wallpapers (Crystal and Bubble).
 - Kanzi engine MIPS porting for Actions-semi.
 - Desay car cluster system.
 - Kanzi demo projects
- Technical pre-sales for Kanzi products; worked closely with VP of sales in customer contact; built relationship with domestic major players.
 - Lenovo
 - Gionee who purchased a couple of software licenses by my suggestions.
 - Desay
- Lead engineer
 - Architect and reviewer of all China projects.
 - Set up the entire development workflow of China team; code check-in, code review, automation testing and Scrum practice.
 - Technical contact window of China company; communicate with clients at all stages of product development from kick-start to shipping; work closely with sales and CEO.

Apri. 2011 – March 2012

Senior Engineer, AMD Design and Research Center, Shanghai, China

- OpenGL driver development (Windows and Linux)
 - Improving desktop and WebGL driver stability and performance, writing testing programs, giving feedback to developer community about questions on AMD OpenGL driver; proposing OpenGL extensions to internal discussion board; having ownership of internal development tools.
- First runner-up in AMD internal OpenCL contest.
- OpenGL training
 - drafting training documents in English, documenting the driver architecture, teaching training courses for new members.

May 2004 - Feb. 2005

Software Engineer, R&D Department, Onewave Technologies, Hangzhou, China

- User login module for VOD server (TV cable network of Hangzhou)
 - Programmer; drafted and implemented a TCP-based communication protocol.
- Stream content caching module for a VOD stream server.
 - Project leader; in charge of the module design and development process control.
 - Developed the caching module based on UDP under Linux.
- Dual-config module of DNS server
 - Programmer; improved the configuration module of an open source DHCP server to enable real-time configuration loading.

Dec. 2003 - April 2004

Research Intern, Bell Labs Research China (BLRC), Beijing, China

- VMS (voice message system) black box testing
 - Tester; wrote Perl script to analyze its log.
- uIM, text message gateway between GSM and internet
 - Programmer; designed the system and developed the first prototype under Linux.

June 2003 – Nov 2003

Software Engineer, China Netcom (Hangzhou) & ZJU Embedded System Lab, China

- Set-top box system
 - Programmer; modified the Mozilla browser for Set-top box; customized the Linux kernel and user environment for Set-top box.

Publications

Hongwei Li, Li-Yi Wei, Pedro V. Sander and Chi-Wing Fu. *Anisotropic blue noise sampling*. To appear at ACM Transactions on Graphics (TOG), (ACM SIGGRAPH Asia 2010), Dec 2010

Hongwei Li, Diego Nehab, Li-Yi Wei, Pedro V. Sander and Chi-Wing Fu. *Fast Capacity Constrained Voronoi Tessellation*. Poster, ACM The ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (I3D), Feb.2010

Kui-Yip Lo, Chi-Wing Fu and **Hongwei Li**. *3D Polyomino Puzzle*. ACM Transactions on Graphics (TOG), (ACM SIGGRAPH Asia 2009), Vol.28, no. 5, 2009

Hongwei Li, Li-Yi Wei, Pedro V. Sander and Chi-Wing Fu. *Anisotropic Poisson disk sampling*. HKUST Report, HKUST-CS-09-02, April 2009

Hongwei Li, Chi-Wing Fu and Andrew J. Hanson. *Visualizing Multiwavelength Astrophysical Data*. In IEEE Transactions on Visualization and Computer Graphics (TVCG), (Proceedings of IEEE Visualization 2008), vol.14, No.6, pp. 1555-1562, Nov 2008

Hongwei Li, Kui-Yip Lo, Chi-Wing Fu, and Mang-Kang Lenung. *Dual Poisson-Disk Tiling: An Efficient Method for Distributing Features on Arbitrary Surfaces*. In IEEE Transactions on Visualization and Computer Graphics (TVCG), Vol 14, No.5, pp. 982-998, 2008

Hongwei Li, Chi-Wing Fu, Yinggang Li, and Andrew J. Hanson. *Visualizing Large-Scale Uncertainty in Astrophysical Data*, In IEEE Transactions on Visualization and Computer Graphics (TVCG), (Proceedings of IEEE Visualization 2007), Vol.13, No.6, pp.1640-1647, Nov, 2007

Kui-Yip Lo, **Hongwei Li**, Chi-Wing Fu, and Tien-Tsin Wong. *Interactive Reaction-Diffusion on Surface Tiles*. In Pacific Graphics 2007, oral paper, Maui, Hawaii, pp. 65-74, Nov. 2007.

Services

2009,2011, 2012, 2013

Reviewer

- GMOD 2013.
- IEEE Pacific Graphics 2012.
- ACM SIGGRAPH 2012.
- IEEE Visualization 2009.
- ACM SIGGRAPH 2011.

2003-2004

Administrator, 88 Bulletin Board System, Zhejiang University,

- Administrated the Linux development section.
- Organized the member meeting, invited guest to talk and gave talks myself.

2002-2003

Director assistant of network department, university student union, Zhejiang University,

- Created student union website; daily maintainence of website server.

2001-2002

Vice president of network department, Chu Kechen college student union, Zhejiang University

- Consultant for the network problem of students.
- Created school student union website.

Awards

- Zhejiang University, Second-class Scholarship, Oct 2003
- Zhejiang University, "Three Goods" Student, Oct 2003
- Zhejiang University, Third-class Scholarship, Dec 2002
- Zhejiang University, Scholarship for Freshman, Dec 2000

Portfolio (Project demo)

[Download](#) (avi, ~42MB file size, Storm player is required)

Watch online http://v.youku.com/v_show/id_XMjQwNzg0NDUy.html