

Liang Wang

Center for Visualization and Virtual Environments
Department of Computer Science
University of Kentucky
Lexington, KY 40506-0195, USA
lwangd@cs.uky.edu
1-859-257-1257 (ext 82332)

Education

Ph.D. Student in Computer Science Aug, 2004-Present
University of Kentucky, Department of Computer Science
Advisor: Professor Ruigang Yang

B.S. in Computer Science 2000-2004
Beijing University of Aeronautics and Astronautics

Research Interests

Computer Vision, especially in Stereo Vision and 3D Reconstruction

Journal Publications

Stereo Matching with Color-Weighted Correlation, Hierarchical Belief Propagation and Occlusion Handling

Qingxiong Yang, [Liang Wang](#), Ruigang Yang, Henrik Stewénus and David Nister

To appear in IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI), Accepted March 2008

Detailed Real-Time Urban 3D Reconstruction From Video

M. Pollefeys, D. Nistér, J.-M. Frahm, A. Akbarzadeh, P. Mordohai, B. Clipp, C. Engels, D. Gallup, S.-J. Kim, P. Merrell, C. Salmi, S. Sinha, B. Talton, [L. Wang](#), Q. Yang, H. Stewénus, R. Yang, G. Welch, H. Towles

International Journal of Computer Vision (IJCV), Volume 78, Issue 2 (July 2008), Pages: 143 - 167

BRDF Invariant Stereo using Light Transport Constancy

[Liang Wang](#), Ruigang Yang and James Davis

IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI), September 2007, Vol. 29, No. 9, Pages: 1616-1626

A Performance Study on Different Cost Aggregation Approaches used in Real-time Stereo Matching

Minglun Gong, Ruigang Yang, [Liang Wang](#) and Mingwei Gong

International Journal of Computer Vision (IJCV), Volume 75, Issue 2 (November 2007), Pages: 283 - 296

View-Dependent Textured Splatting

Ruigang Yang, David Guinnip and [Liang Wang](#)

The Visual Computer 22(7): 456-467 2006

Conference Publications

Stereoscopic inpainting: Joint Color and Depth Completion from Stereo Images

Liang Wang, Hailin Jin, Ruigang Yang, and Minglun Gong

IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR), 2008

Fusion of Time-of-Flight Depth and Stereo for High Accuracy Depth Maps

Jiejie Zhu, Liang Wang, Ruigang Yang and James Davis

IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR), 2008(Oral Presentation)

Real-Time Visibility-Based Fusion of Depth Maps

P. Merrell, A. Akbarzadeh, L. Wang, P. Mordohai, J-M. Frahm, R. Yang, D. Nister and M. Pollefeys

IEEE International Conference on Computer Vision (ICCV), 2007 (Oral Presentation)

Light Fall-off Stereo

Miao Liao, Liang Wang, Ruigang Yang and Minglun Gong

IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR), 2007

Exemplar-based Shape from Shading

Xinyu Huang, Jizhou Gao, Liang Wang and Ruigang Yang

International Conference on 3-D Digital Imaging and Modeling (3DIM), 2007 (Oral Presentation)

Real-Time Video-Based Reconstruction of Urban Environments

P. Mordohai, J.-M. Frahm, A. Akbarzadeh, B. Clipp, C. Engels, D. Gallup, P. Merrell, M. Phelps, S. Sinha, B. Talton, L. Wang, Q. Yang, H. Stewenius, R. Yang, G. Welch, H. Towles, D. Nister and M. Pollefeys

To appear in ISPRS 3D ARCH International Workshop, 2007, accepted Mar 2007

High Quality Real-time Stereo using Adaptive Cost Aggregation and Dynamic Programming

Liang Wang, Miao Liao, Minglun Gong, Ruigang Yang and David Nister

Third International Symposium on 3D Data Processing, Visualization and Transmission (3DPVT), 2006 (Oral Presentation)

How Far Can We Go with Local Optimization in Real-Time Stereo Matching

Liang Wang, Mingwei Gong, Minglun Gong and Ruigang Yang

Third International Symposium on 3D Data Processing, Visualization and Transmission (3DPVT), 2006

Towards Urban 3D Reconstruction from Video

A. Akbarzadeh, J.-M. Frahm, P. Mordohai, B. Clipp, C. Engels, D. Gallup, P. Merrell, M. Phelps, S. Sinha, B. Talton, L. Wang, Q. Yang, H. Stewenius, R. Yang, G. Welch, H. Towles, D. Nister and M. Pollefeys

Third International Symposium on 3D Data Processing, Visualization and Transmission (3DPVT), 2006 (Invited paper)

Real-time Global Stereo Matching using Hierarchical Belief Propagation

Qingxiong Yang, [Liang Wang](#), Ruigang Yang, Shengnan Wang, Miao Liao and David Nister
The British Machine Vision Conference (BMVC), 2006

Stereo Matching with Color-weighted Correlation, Hierarchical Belief Propagation and Occlusion Handling

Qingxiong Yang, [Liang Wang](#), Ruigang Yang, Henrik Stewenius and David Nister
IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR), 2006

BRDF Invariant Stereo using Light Transport Constancy

James Davis, Ruigang Yang and [Liang Wang](#)
IEEE International Conference on Computer Vision (ICCV), 2005 (Oral Presentation Acceptance Ratio 3.7%)

Towards the Light Field Display

Ruigang Yang, Shunnan Chen, Xinyu Huang, Sifang Li, [Liang Wang](#) and Chris Jaynes
Virtual Reality workshop on Emerging Display Technologies, 2005

View-Dependent Textured Splatting

David Guinnip, Ruigang Yang and [Liang Wang](#)
The 13th Pacific Conference on Computer Graphics and Applications (Pacific Graphics), 2005 (short paper)

Invention Disclosures

High-Quality Stereovision	Invention disclosure at the University of Kentucky, 2006
Light Attenuation Stereo	Invention disclosure at the University of Kentucky, 2006

Honors and Awards

Thaddeus B. Curtz Memorial Scholarship Award	University of Kentucky, 2007
Shen-fei Scholarship	Beijing Univ. of Aeronautics and Astronautics, 2001
Outstanding Student Scholarship	Beijing Univ. of Aeronautics and Astronautics, 2001

Internships and Research Experience

Summer internship at Adobe Systems Incorporated, Mentor: Hailin Jin May 14th-Aug 18th, 2007

Research Assistant, Center for Visualization and Virtual Environment,
University of Kentucky Aug, 2004-Present

Research Intern, Key Laboratory of Virtual Reality New Technology,
Beijing University of Aeronautics and Astronautics 2003-2004

Programmer Intern, Digital China Corporation Ltd, China

Summer 2003