Tianqiang Liu

Personal

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Education

JULY 2015 Ph.D. in Computer Science, Princeton University.

JUNE 2012 Master of Arts in Computer Science, Princeton University.
GPA: 4.0/4.0

JULY 2010 Bachelor in Computer Science, Tsinghua University, Beijing, China.
GPA: 92.3/100, Rank: 3/137

Work and Research Experience

Software Engineer at Google. Mountain View, CA
Project: Street View App. AUG 2015 - NOW

Intern at Adobe Research. San Francisco, CA
Project: Style Compatibility For 3D Furniture Models. JUN 2014 - SEP 2014

- Developed an algorithm to learn a compatibility metric for 3D shape styles.
- Designed novel interactive scene creation tools that are enabled by the compatibility metric.
- Published in ACM Transactions on Graphics (Proc. SIGGRAPH 2015).

Intern at Adobe Research. Cambridge, MA
Project: Composition-Aware Scene Optimization for Product Images. JUN 2012 - AUG 2012

- Designed a tool that facilitates the creation of product images by automatically refining scene layouts.
- Published in Computer Graphics Forum (Proc. Eurographics 2015).

Research Assistant at Princeton University Princeton, NJ
Project: Creating Consistent Scene Graphs Using a Probabilistic Grammar. APR 2013 - JUN 2014

- Developed an algorithm that analyzes 3D scenes by parsing with a grammar learned from examples.
- Our algorithm outperforms previous methods for automatic scene segmentation and annotation.
- Published in ACM Transactions on Graphics (Proc. SIGGRAPH Asia 2014).

Project: Finding Surface Correspondences Using Symmetry Axis Curves. SEP 2010 - APR 2012

- Developed an algorithm that finds correspondences between 3D surfaces using symmetry.
- Our algorithm outperforms previous methods in both efficiency and robustness.
- Published in Computer Graphics Forum (Proc. Symposium on Geometry Processing 2012).

Undergraduate Research Assistant at Tsinghua University Beijing, China
Project: Video Enhancement Using Fast Bilateral Filtering. FEB 2010 - MAY 2010

- Developed a method to improve both accuracy and speed for intra- and inter-frame video denoising.

Project: Efficient Affinity-based Edit Propagation Using K-D tree. MAR 2009 - APR 2009

- Developed an algorithm that leverages K-D tree in high-dimensional affinity space for approximately solving the edit propagation problem.

Skills

- Algorithm design.
- C++, Python, Java, OpenGL, PHP, Matlab.

Publications

[5] **Style Compatibility For 3D Furniture Models**
Tianqiang Liu, Aaron Hertzmann, Wilmot Li, Thomas Funkhouser
ACM Transactions on Graphics (Proc. SIGGRAPH), 2015

[4] **Composition-Aware Scene Optimization for Product Images**
Tianqiang Liu, Jim McCann, Wilmot Li, Thomas Funkhouser
Computer Graphics Forum (Proc. Eurographics), 2015

[3] **Creating Consistent Scene Graphs Using a Probabilistic Grammar**
Tianqiang Liu, Siddhartha Chaudhuri, Vladimir Kim, Qi-Xing Huang, Niloy Mitra, Thomas Funkhouser
ACM Transactions on Graphics (Proc. SIGGRAPH Asia), 2014

[2] **Finding Surface Correspondences Using Symmetry Axis Curves**
Tianqiang Liu, Vladimir Kim, Thomas Funkhouser
Computer Graphics Forum (Proc. Eurographics Symposium on Geometry Processing), 2012

[1] **Efficient Affinity-based Edit Propagation Using K-D Tree**
Kun Xu, Yong Li, Tao Ju, Shi-Min Hu, Tianqiang Liu
ACM Transactions on Graphics (Proc. SIGGRAPH Asia), 2009

Academic Services

Program Committee: Pacific Graphics 2015
Reviewer: SIGGRAPH 2015, SIGGRAPH Asia 2015, SGP 2015, CAD/Graphics 2013, TVCG, Computer Graphics Forum, IJCV, Computers & Graphics

Honors

2009 First-Class National Scholarship of China.
2008 Goldman Sachs Global Leaders Scholarship (26 winners in China / 135 winners in the world).
2007 First-Class National Scholarship of China.
2005 Silver Medal in Chinese Physics Olympiad (29th overall).