

## Li Guan

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### Education

**Ph.D.** Computer Science, UNC-Chapel Hill, U.S.A., 2009 (Expected)

**M.S.** Computer Science, UNC-Chapel Hill, U.S.A., 2007

**B.Eng.** Computer Science and Technology, Zhejiang University, P.R.China, 2004

### Research Experience

#### Academic Guest

Prof. Marc Pollefeys

Research on the topic of “Multi-view Multi-object Dynamic Scene Analysis”. Automatic 3D reconstruction and tracking.

Sep. 2007 – present  
Computer Science, ETH Zürich, Switzerland

#### Research Assistant

Prof. Marc Pollefeys

Research on the topic of “Multi-view Dynamic Scene Analysis”. CUDA GPU acceleration of the reconstruction algorithm.

Sep. 2006 – Aug. 2007  
UNC-Chapel Hill, U.S.A.

#### Research Assistant

Prof. Marc Pollefeys

Investigation of “Visual Hull with Occlusion”. Work with NSF project “3D Medical Consulting”.

Sep. 2004 – May 2006  
UNC-Chapel Hill, U.S.A.

#### Main Vision Group Team Member

Prof. Rong Xiong

Restoration of Robocup pitch image with variational image registration techniques.

Sep. 2003 – Jun. 2004  
Robocup Zhejiang Univ. (F180), P.R.China

#### Exchange Student

Prof. Bernd Fischer

Study the variational methods of medial image registration.

Oct. 2003 – Nov. 2003  
Institute of Math., Univ. of Luebeck, Germany

#### Research Assistant

Prof. Jiaoying Shi

Development of the system of “Selective Reliable Multi-cast Protocol for Distributed Virtual Environment Systems”. Research in the area of “Image Matting” as my bachelor’s topic.

Mar. 2002 – Jun. 2004  
CAD and CG National Key Lab, P.R.China

### Employment

#### Summer Intern

Dr. Hector Gonzalez-Banos

Construction of camera network, general sensor network, vision-based reconstruction for humanoid

Jun. 2005 – Aug. 2005

Honda Research Institute, CA, U.S.A.

robots. Design and implementation of cross-platform generic sensor network protocol the “SensorTalk” (Patented).

**System Designer, part time**

Dr. Weidong Geng

Foot shape acquisition using multi-camera setup. 3D reconstruction for personalized shoe design.

Mar. 2004 - Jun. 2004

Zhejiang University, Hangzhou, P.R.China

**Teaching**

*3D Photography*, jointly with Prof. Marc Pollefeys, Graduate Course, Dept. Computer Science, ETH Zürich, Switzerland, Fall 2007

**Patent**

Hector Gonzalez-Banos, Joel Wormer, **Li Guan**, *SensorTalk*, H1053071 US02, Honda.

**Publications**

**Li Guan**, Jean-Sebastien Franco, Marc Pollefeys, *Multi-Object Shape Estimation and Tracking from Silhouette Cues*, IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR), Anchorage, Jun. 2008

**Li Guan**, Jean-Sebastien Franco, Marc Pollefeys, *3D Object Reconstruction with Heterogeneous Sensor Data*, 4th International Symposium on 3D Data Processing, Visualization & Transmission (3DPVT), Atlanta, Jun. 2008 (Oral presentation)

**Li Guan**, Jean-Sebastien Franco, Marc Pollefeys, *3D Occlusion Inference from Silhouette Cues*, IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR), Minneapolis, Jun. 2007 (Oral presentation, 4.8% acceptance rate)

**Li Guan**, Sudipta Sinha, Jean-Sebastien Franco, Marc Pollefeys, *Visual Hull Construction in the Presence of Partial Occlusion*, 3rd International Symposium on 3D Data Processing, Visualization & Transmission (3DPVT), Chapel Hill, Jun. 2006 (Oral presentation)

**Li Guan**, *Sensor-Based Cooperative Multi-Robot 3D Environment Reconstruction*, Integrative Paper, Apr. 2006, UNC Chapel Hill (Fulfilling Master’s Degree requirement)

**Li Guan**, Chengguo Guo and Rong Xiong, *Robocup Field Distortion Calibration with Variational Image Registration*, International Symposium on Intelligent Multimedia, Video & Speech Processing (ISIMP), Hong Kong, Oct. 2004

**Li Guan**, *Algorithms of Object Extraction in Digital Images based on Alpha value*, Bachelor Thesis, CAD & CG National Key Lab, Zhejiang University, Hangzhou, Jun. 2004 (Excellent Thesis Award)

**Membership & Service**

IEEE student member, 2008, 2007, 2005

Student volunteer 3rd International Symposium on 3D Data Processing, Visualization & Transmission (3DPVT), Chapel Hill, Jun. 2006

Review of AVSS 2008, ACCV 2007, ICCV 2007

**Honors and Awards**

Scholarship from Department of Computer Science, UNC-Chapel Hill, 2004 – 2009

Meritorious Winner, Mathematical Contest in Modeling, U.S.A, 2004

Outstanding Graduation, Zhejiang University, 2004 (Honor to 15 students each year)

Chu Kechen Honors Scholarship, Zhejiang University, 2003 (Honor to 10 students each year)  
Second National Prize, China Undergraduate Math Contest in Modeling, 2003

## Reference

### **Prof. Marc Pollefeys**

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### **Dr. Hector Gonzalez-Banos**

Honda Research Institute USA, Inc.  
800 California Street, Suite 300  
Mountain View, CA 94041, U.S.A.  
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Email: hhg@ai.stanford.edu

### **Prof. Jiaoying Shi**

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### **Prof. Dr. Bernd Fischer**

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