

# JIA LI

(publish under name Li-Jia Li)

353 Serra Mall, Gates Building, Room 240  
Stanford University  
Stanford, CA 94305-9020

Phone: (217) 721-0580  
Email: [lijiali@cs.stanford.edu](mailto:lijiali@cs.stanford.edu)  
<http://vision.stanford.edu/lijiali/>

## RESEARCH DESCRIPTION

My research interest is in computer vision, in particular in using modern machine learning techniques for solving real-world, large-scale vision problems. Specifically, I have been working on high level image representation and modeling images at multiple depths: object recognition, scene understanding and hierarchical image structure learning. Such research has applications for automatic multimedia library indexing, retrieval and organization, inferring social interaction through seamless sharing photos, educational, and clinical assistive technology, and security systems.

## EDUCATION AND WORKING EXPERIENCE

**Ph. D.** (Sep.2009-Now) in Dept. of Computer Science, Stanford University. Advisor: Prof. Fei-Fei Li

**Ph. D.** (Sep.2008-Transferred with Advisor) in Dept. of Computer Science, Princeton University.

**Ph. D.** (Jun.2006-Transferred with Advisor) in Dept. of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign.

**M.Sc.** (Sep.2003-Oct.2004) in Computer Control & Automation, School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore.

**B.Eng.** (Sep.1998-Jul.2003) in Dept. of Automation, College of Electrical Engineering in University of Science and Technology of China (USTC).

**Teaching Assistant** (Mar.2010-Jun.2010) in Dept. of Computer Science, Stanford University.

**Research Intern** (May.2008-Aug.2008), Computer Vision Research Department, Google Inc., Mountain View, CA. Mentor: Dr. Thomas Leung

## HONORS

**Fellowship**, Princeton University 2008-2009

**1st Place in the Semantic Robot Vision Challenge Software League**, An NSF and AAIL sponsored visual recognition competition. 2007

**Outstanding Student Scholarship**, University of Science and Technology of China. 1998-2001

## IN PRESS

*Illinois-Princeton team takes first place in robot vision competition* in **UIUC ECE Headline News**. August 22, 2007.

*Robots surf the web to learn about the world* in **New Scientist**. August 17, 2007.

*Princeton Wins Robot Vision Competition* in **Princeton CS News**. July 31, 2007.

## PATENT

Method for Implementing a High-Level Image Representation for Image Analysis. Li Fei-Fei, Li-Jia Li and Hao Su, US Patent No. 12/960,467

## PUBLICATIONS

### Book Chapter and Journal Papers

Li Fei-Fei and **Li-Jia Li**. What, Where and Who? Telling the Story of an Image by Activity Classification, Scene Recognition and Object Categorization. *Computer Vision: Recognition, Registration, and Reconstruction - Eds. R. Cipolla, S.Battiato, G.M. Farinella - Studies in Computational Intelligence – Springer-Verlag press*, 2010

**Li-Jia Li** and Li Fei-Fei. OPTIMOL: automatic Object Picture collecTion via Incremental MOdel Learning. *International Journal of Computer Vision (IJCV)*, 2009.

Ziqiang Lang, Stephen A Billings, Rong Yue, and **Jia Li**, Output frequency response functions of nonlinear Volterra systems. *Journal of Automatica*, Vol. 43, pp805-816, 2007

### Conference Papers

**Li-Jia Li**\*, Hao Su\*, Eric. P. Xing and Li Fei-Fei. Object Bank: A High-Level Image Representation for Scene Classification and Semantic Feature Sparsification. *Proceedings of the Neural Information Processing Systems (NIPS)*. Vancouver, British Columbia, Canada, 2010. (\* indicates equal contribution)

Jun Zhu, **Li-Jia Li**, Li Fei-Fei and Eric P. Xing. Large Margin Learning of Upstream Scene Understanding Models. *Proceedings of the Neural Information Processing Systems (NIPS)*. Vancouver, British Columbia, Canada, 2010.

**Li-Jia Li**\*, Hao Su\*, Yongwhan Lim and Li Fei-Fei, Objects as Attributes for Scene Classification. *Proceedings of the 12th European Conference of Computer Vision (ECCV), 1st International Workshop on Parts and Attributes*. Hersonissos, Heraklion, Crete, Greece, 2010.

**Li-Jia Li**\*, Chong Wang\*, Yongwhan Lim, David Blei and Li Fei-Fei. Building and Using a Semantivisual Image Hierarchy. *IEEE Computer Vision and Pattern Recognition (CVPR)*. San Francisco, California, 2010.

**Li-Jia Li**, Richard Socher and Li Fei-Fei. Towards Total Scene Understanding: Classification, Annotation and Segmentation in an Automatic Framework. *IEEE Computer Vision and Pattern Recognition (CVPR)*. Miami, Florida, 2009.

**Li-Jia Li**, Richard Socher and Li Fei-Fei. Towards Total Scene Understanding: Classification, Annotation and Segmentation in an Automatic Framework. *IEEE 1st International Workshop on Visual Scene Understanding (ViSU)*. Miami, Florida, 2009.

**Li-Jia Li**, Richard Socher and Li Fei-Fei. Toward Total Scene Understanding: Data-driven Learning

Meets Detailed Image Modeling. Keynote, IS&T/SPIE Electronic Imaging, California, 2010.

Jia Deng, Wei Dong, Richard Socher, **Li-Jia Li**, Kai Li and Li Fei-Fei. ImageNet: A Large-Scale Hierarchical Image Database. *IEEE Computer Vision and Pattern Recognition (CVPR)*. Miami, Florida, 2009.

**Li-Jia Li** and Li Fei-Fei. What, where and who? Classifying event by scene and object recognition. *IEEE Intern. Conf. in Computer Vision (ICCV)*. Rio de Janeiro, Brazil, 2007.

**Li-Jia Li**, Gang Wang and Li Fei-Fei. OPTIMOL: automatic Object Picture collecTion via Incremental MOdel Learning. *IEEE Computer Vision and Pattern Recognition (CVPR)*, Minnesota, 2007.

**Li-Jia Li**, Juan Carlos Niebles and Li Fei-Fei. OPTIMOL: a framework for Online Picture collecTion via Incremental MOdel Learning. *Association for the Advancement of Artificial Intelligence (AAAI) 2007 Robot Competition and Exhibition*, Vancouver, British Columbia, Canada, July 22-26, 2007.

**Jia Li**, Ziqiang Lang, Stephen A. Billings, Geof R. Tomlinson, Analytical study of the frequency response function of a nonlinear spring damper system. *The 11th Annual Conference of CACSUK*, Sheffield, United Kingdom, 2005.

Hai Jiang, Er Meng Joo, **Jia Li**, Nonlinear weighted discriminant analysis. *The 12th European Signal Processing Conference*, Vienna, Austria, 2004.

## PROFESSIONAL ACTIVITIES

### Organization Committee

Volunteer Chair IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2010

Co-organizer IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 1st International Workshop on Visual Scene Understanding, 2009

### Program Committee

IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2009-2011

Neural Information Processing Systems (NIPS), Workshop on Topic Models: Text and Beyond, 2009

IEEE International Conference in Computer Vision (ICCV), 2009

IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 1st International Workshop on Visual Scene Understanding, 2009

ACM European Conf. in Computer Vision (ECCV), 2008-2010

### Panelist

*Beyond Isolated Objects*, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 1st International Workshop on Visual Scene Understanding, 2009

### Journal Reviewer

Pattern Recognition and Artificial Intelligence (Since Aug., 2009)

Pattern Recognition (Since May, 2009)

Proceedings of the IEEE (Since Apr., 2009)

IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI) (Since Aug., 2008)

## **Conference Reviewer**

Neural Information Processing Systems (NIPS), (Since Jun., 2010)  
ACM European Conference in Computer Vision (ECCV) (Since Mar., 2008)  
IEEE International Conference in Computer Vision (ICCV) (Since Mar., 2007)  
ACTA Conference on Computer Graphics and Imaging (CGIM) (Since May, 2007)  
IEEE International Conference on Pattern Recognition (ICPR) (Since Mar, 2006)  
IEEE Computer Vision and Pattern Recognition (CVPR) (Since Jan., 2006)

## **INVITED TALKS AND SEMINARS**

*-Object Bank: An Object-Level Image Representation for High-Level Visual Tasks*, Guest lecture at IEEE RAS SCV Chapter, Mountain View, CA, Sep., 2010

*-Total Scene Understanding: Data-driven Learning Meets Detailed Image Modeling*, Keynote, Multimedia Content Access: Algorithms and Systems IV conference, San Jose, CA, Jan., 2010

*-Total Scene Understanding: Classification, Annotation and Segmentation in an Automatic Framework*, PAIL seminar series, Stanford University, Aug., 2009

*-Semantic image understanding and its application*, Computational Vision Group Seminar, California Institute of Technology, Aug., 2008

*-Semantic image understanding and its application*, Computer Vision Group Seminar, University of California, Berkeley, Aug., 2008

*-Semantic image understanding and its application*, PIXL & PICASso Lunch Seminar Series, Princeton University, Apr., 2008

## **Reference Available Upon Request**